Appendix to:

EFSA (European Food Safety Authority), 2017. Conclusion on the peer review of the pesticide risk assessment of the active substance oxasulfuron, EFSA Journal 2017;15(3):4722, doi:10.2903/j.efsajournal.publication.15110en

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Appendix A – List of end points for the active substance and the representative formulation

Identity, Physical and Chemical Properties, Details of Uses, Further Information (Regulation (EU) N° 283/2013, Annex Part A, points 1.3 and 3.2)

| Active substance (ISO Common Name) | Oxasulfuron |
|-----------------------------------|-------------|
| Function (e.g. fungicide)         | Herbicide   |
| Rapporteur Member State           | Italy       |
| Co-rapporteur Member State        | Austria     |

Identity (Regulation (EU) N° 283/2013, Annex Part A, point 1)

| Chemical name (IUPAC) | oxetan-3-yl 2-[(4,6-dimethylpyrimidin-2-yl)carbamoylsulfamoyl]benzoate |
|-----------------------|-----------------------------------------------------------------------|
| Chemical name (CA)    | 3-oxetan-2-[[[(4,6-dimethyl-2-pyrimidinyl)-amino]carbonyl]amino]sulfonyl]benzoate |
| CIPAC No              | 626                                                                   |
| CAS No                | 144651-06-9                                                           |
| EC No (EINECS or ELINCS) | 604-430-5                                                           |
| FAO Specification (including year of publication) | Not available |
| Minimum purity of the active substance as manufactured | 985 g/kg |
| Identity of relevant impurities (of toxicological, ecotoxicological and/or environmental concern) in the active substance as manufactured | None |
| Molecular formula     | C_{17} H_{18} N_{4} O_{6} S                                           |
| Molar mass            | 406.4 g/mol                                                           |
| Structural formula    | ![Structural formula image]                                            |
Physical and chemical properties (Regulation (EU) N° 283/2013, Annex Part A, point 2)

| Property                                      | Value                                                                 |
|-----------------------------------------------|----------------------------------------------------------------------|
| Melting point (state purity)                  | 158°C with thermal decomposition (99.5%)                             |
| Boiling point (state purity)                  | Not measurable because of decomposition                              |
| Temperature of decomposition (state purity)   | ≥ 158°C (Purity: ≤99.5%)                                             |
| Appearance (state purity)                     | White fine powder, odourless (Purity: 99.5%)                         |
| Vapour pressure (state temperature, state purity) | < 2·10⁻⁶ Pa at 25°C (Purity: 99.5%)                                 |
| Henry’s law constant (state temperature)      | 2.5·10⁻³ Pa m³ mol⁻¹ (calculated, 25°C)                              |
| Solubility in water (state temperature, state purity and pH) | Solubility in water (25°C, Purity: 99.5%):  
  pH 5.1: 52 mg/l (pure water)  
  pH 5.0: 63 mg/l (buffer solution)  
  pH 6.8: 1700 mg/l (buffer solution)  
  pH 7.8: 19 g/l (buffer solution)  
  Solubility in water (20°C, Purity: 98.2%):  
  pH 5: 65.5 mg/l (double distilled water)  
  pH 4: 69.9 mg/l (buffer solution)  
  pH 7: 1.78 g/l (buffer solution)  
  pH 9: 7.91 g/l (buffer solution) |
| Solubility in organic solvents (state temperature, state purity) | Solubility in organic solvents (25°C, Purity: 99.5%):  
  hexane: 0.002 g/L  
  toluene: 0.32 g/L  
  dichloromethane: 69 g/L  
  methanol: 1.5 g/L  
  octanol: 0.099 g/L  
  acetone: 9.3 g/L  
  ethylacetate: 2.3 g/L |
| Surface tension (state concentration and temperature, state purity) | Data gap                                                             |
| Partition coefficient (state temperature, pH and purity) | log $P_{OW}$ at 25°C (Purity: 99.5%), uncorrected:  
  0.75 ± (0.008) at pH 5.0  
  -0.81 ± (0.006) at pH 7.0  
  -2.2 ± (0.016) at pH 8.9 |
| Dissociation constant (state purity)          | Dissociation constant (Purity: 99.5%):  
  $pK_{a,1} = 5.10$ (acidic)  
  $pK_{a,2} = < 1$ (basic) |

The acidic dissociation constant describes the dissociation of the acidic proton of oxasulfuron in water according to the following equation.
UV/VIS absorption (max.) incl. $\varepsilon$ (state purity, pH)

| State | $\lambda_{\text{max}}$ (nm) | $\varepsilon$ (L mol$^{-1}$ cm$^{-1}$) |
|-------|-----------------|------------------|
| Methanol (99.5%) | 232.7 | 237 | 919 |
| | 271.2 | 595 | 1 |
| pH < 2 (0.1 mol/L aqueous HCl) | 232 | 246 | 61 |
| | 271 | 595 | 0 |
| pH > 10 (0.1 mol/L aqueous NaOH) | 242 | 275 | 63 |

No absorption between 300 nm and 900 nm was observed.

UV/VIS of purified oxasulfuron (99.5%) in methanol:

| $\lambda_{\text{max}}$ (nm) | $\varepsilon$ (L mol$^{-1}$ cm$^{-1}$) |
|-----------------|------------------|
| 231 | 250 | 24 |
| 271 | 613 | |
| pH < 2 (0.1 mol/L aqueous HCl) | 232 | 246 | 61 |
| | 271 | 595 | 0 |
| pH > 10 (0.1 mol/L aqueous NaOH) | 242 | 275 | 63 |

Flammability (state purity)

- Not highly flammable (Purity: 96.1%)
- Auto-flammability: data gap

Explosive properties (state purity)

- Not explosive (Purity: 96.1%)

Oxidising properties (state purity)

- Not oxidizing (Purity: 96.1%)
Summary of representative uses evaluated, for which all risk assessments needed to be completed (oxasulfuron) (Regulation (EU) No 284/2013, Annex Part A, points 3, 4)

| Crop and/or situation (a) | Membe r State or Country | Produ c t name | F G or I (b) | Pests or Group of pests controll ed (c) | Preparatio n | Application | Application rate per treatment | PHI (days ) (m) | Remark s |
|--------------------------|--------------------------|----------------|------------|--------------------------------|-------------|-------------|-------------------------------|----------------|----------|
| Soya bean | S EU | Laguna 75 WG | F | Grass & Broad leaved weeds | WG | 750 g/kg | spraying | between BBCH 10 and BBCH14 (from visible cotyledo n to fourth trifoliate leaf unfolded) | 1 (in full dose) | 18.7 kg a.s./hL min-max | 100 - 400 | 0.075 | - | 0.1 kg/ha (product dose rate) |

(a) For crops, the EU and Codex classifications (both) should be taken into account; where relevant, the use situation should be described (e.g. fumigation of a structure)  
(b) Outdoor or field use (F), greenhouse application (G) or indoor application (I)  
(c) e.g. biting and sucking insects, soil born insects, foliar fungi, weeds  
(d) e.g. wettable powder (WP), emulsifiable concentrate (EC), granule (GR)  
(e) CropLife International Technical Monograph no 2, 6th Edition. Revised May 2008. Catalogue of pesticide  
(f) All abbreviations used must be explained  
(g) Method, e.g. high volume spraying, low volume spraying, spreading, dusting, drench  
(h) Kind, e.g. overall, broadcast, aerial spraying, row, individual plant, between the plant: type of equipment used must be indicated  
(i) g/kg or g/L. Normally the rate should be given for the active substance (according to ISO) and not for the variant in order to compare the rate for same active substances used in different variants (e.g. fluoroxypr). In certain cases, where only one variant is synthesised, it is more appropriate to give the rate for the variant (e.g. bentiavalcarb-isopropyl).  
(j) Growth stage range from first to last treatment (BBCH Monograph, Growth Stages of Plants, 1997, Blackwell, ISBN 3-8263-3152-4), including where relevant, information on season at time of application  
(k) Indicate the minimum and maximum number of applications possible under practical conditions of use  
(l) The values should be given in g or kg whatever gives the more manageable number (e.g. 200 kg/ha instead of 200 000 g/ha or 12.5 g/ha instead of 0.0125 kg/ha)  
(m) PHI - minimum pre-harvest interval
Summary of additional intended uses for which MRL applications have been made, that in addition to the uses above, have also been considered in the consumer risk assessment (name of active substance or the respective variant)
Regulation (EC) No 1107/2009 Article 8.1(g)

Important note: efficacy, environmental risk and risk to humans by exposure other than via their diet have not been assessed for these uses

| Crop and/or situation (a) | Membe r State or Country | Product name | F or I (b) | Pests or Group of pests controlled (c) | Preparation | Application | Application rate per treatment | PHI (day(s)) (m) | Remarks |
|--------------------------|--------------------------|--------------|-----------|----------------------------------------|-------------|------------|---------------------------------|-----------------|---------|
|                          |                          |              |           |                                        | Type (d-f)  | Conc. a.s. (i) | method kind (f-h) | range of growth stages & season (j) | number min-max (k) | Interval between application (min) | kg a.s./hL min-max (l) | Water L/ha min-max | kg a.s./ha min-max (l) | |
|                          |                          |              |           |                                        |             |             |                                  |                          |                      |                          | |

(a) For crops, the EU and Codex classifications (both) should be taken into account; where relevant, the use situation should be described (e.g. fumigation of a structure)
(b) Outdoor or field use (F), greenhouse application (G) or indoor application (I)
(c) e.g. biting and sucking insects, soil born insects, foliar fungi, weeds
(d) e.g. wettable powder (WP), emulsifiable concentrate (EC), granule (GR)
(e) CropLife International Technical Monograph no 2, 6th Edition. Revised May 2008. Catalogue of pesticide
(f) All abbreviations used must be explained
(g) Method, e.g. high volume spraying, low volume spraying, spreading, dusting, drench
(h) Kind, e.g. overall, broadcast, aerial spraying, row, individual plant, between the plant- type of equipment used must be indicated
(i) g/kg or g/L. Normally the rate should be given for the active substance (according to ISO) and not for the variant in order to compare the rate for same active substances used in different variants (e.g. fluoroxypr). In certain cases, where only one variant is synthesised, it is more appropriate to give the rate for the variant (e.g. benthialvalcarb-isopropyl).
(j) Growth stage range from first to last treatment (BBCH Monograph, Growth Stages of Plants, 1997, Blackwell, ISBN 3-8263-3152-4), including where relevant, information on season at time of application
(k) Indicate the minimum and maximum number of applications possible under practical conditions of use
(l) The values should be given in g or kg whatever gives the more manageable number (e.g. 200 kg/ha instead of 200 000 g/ha or 12.5 g/ha instead of 0.0125 kg/ha
(m) PHI - minimum pre-harvest interval
Further information, Efficacy

Effectiveness (Regulation (EU) N° 284/2013, Annex Part A, point 6.2)

Oxasulfuron is a herbicide and target weeds are *Abutilon theophrasti*, *Amaranthus retroflexus*, *Chenopodium album*, *Echinochloa crus-galli*, *Sorghum halepense* and *Polygonum spp.* between the cotyledons and the 4 leaves stage (BBCH 10-14) in soybean.

After application of oxasulfuron, growth of susceptible plant species ceases, followed by yellow or red discoloration. Death of those species affected occurs within one to three weeks. The visible symptoms of affected plants are like those of other sulfonylurea herbicides.

Adverse effects on field crops (Regulation (EU) N° 284/2013, Annex Part A, point 6.4)

The repeated use of this product or with herbicides with the same mode of action may lead to selection of resistant weeds.

In order to prevent or slow down developing of resistant weed biotypes it is recommended to rotate with products having a different mode of action. The main emphasis should be on cultural options – rotation, cultivation and preventing weed spread.

Observations on other undesirable or unintended side-effects (Regulation (EU) N° 284/2013, Annex Part A, point 6.5)

Oxasulfuron and other sulfonylurea herbicides are given a classification B under Herbicide Resistance Action Committee (HRAC).

On 10th August 2015, 156 weed species were reported to have developed resistance to ‘Group B’ herbicides, among them 63 are reported for Europe.

The decision, if a resistance risk is acceptable, is following the EPPO (2003) guidelines, depends on whether the benefit of a compound is greater than a possible resistance risk.

Sulfonylurea herbicides are known to pose a higher resistance risk than other modes of action.

Groundwater metabolites: Screening for biological activity (SANCO/221/2000-rev.10-final Step 3 a Stage 1)

| Activity against target organism | M3 | M5(CGA 171895) | MT6 | oxetan-3-ol(CGA 297691) | Saccharin (CGA 27913) |
|---------------------------------|----|----------------|-----|------------------------|----------------------|
| No information                  | No information | No information | Data gap | No                     |                      |
Methods of Analysis

Analytical methods for the active substance (Regulation (EU) N° 283/2013, Annex Part A, point 4.1 and Regulation (EU) N° 284/2013, Annex Part A, point 5.2)

| Method | Description |
|--------|-------------|
| Technical a.s. (analytical technique) | HPLC-UV (220 nm) |
| Impurities in technical a.s. (analytical technique) | Karl Fischer titration |
| Plant protection product (analytical technique) | HPLC-UV (235 nm) |

Analytical methods for residues (Regulation (EU) N° 283/2013, Annex Part A, point 4.2 & point 7.4.2)

Residue definitions for monitoring purposes

| Environment | Residue definition |
|-------------|-------------------|
| Food of plant origin | Oxasulfuron |
| Food of animal origin | None proposed |
| Soil | Oxasulfuron |
| Sediment | Oxasulfuron |
| Water surface | Oxasulfuron M3, MT6 |
| Drinking/ground | Oxasulfuron |
| Air | Oxasulfuron |
| Body fluids and tissues | Oxasulfuron |

Monitoring/Enforcement methods

| Environment | Method and LOQ for methods for monitoring purposes |
|-------------|--------------------------------------------------|
| Food/feed of plant origin (analytical technique and LOQ for methods for monitoring purposes) | Substrates: soya beans  
Analysis: LC-MS/MS  
Determined analyte: oxasulfuron  
LOQ=0,01 mg/kg  
Method fully validated  
data gap: ILV |
| Food/feed of animal origin (analytical technique and LOQ for methods for monitoring purposes) | No method required. |
| Soil (analytical technique and LOQ) | Data gap |
| Water (analytical technique and LOQ) | Data gap |
| Air (analytical technique and LOQ) | Data gap |
| Body fluids and tissues (analytical technique and LOQ) | Data gap |

Classification and labelling with regard to physical and chemical data (Regulation (EU) No. 283/2013, Annex Part A, point 10)

| Substance | Description |
|-----------|-------------|
| oxasulfuron (ISO) | oxetan-3-yl 2-[(4,6-dimethylpyrimidin-2-yl)-carbamoylsulfamoyl]benzoate |
### Harmonised classification according to Regulation (EC) No 1272/2008 and its Adaptations to Technical Process [Table 3.1 of Annex VI of Regulation (EC) No 1272/2008 as amended]¹:

|  |  |
|---|---|
| No current harmonised classification with regard to physical and chemical data. |  |

Peer review proposal ² for harmonised classification according to Regulation (EC) No 1272/2008:

|  |  |
|---|---|
| None |  |

### Impact on Human and Animal Health

**Absorption, distribution, metabolism and excretion (toxicokinetics) (Regulation (EU) N° 283/2013, Annex Part A, point 5.1)**

| Rate and extent of oral absorption/systemic bioavailability | Rapidly and highly absorbed: >80% within 48 hours, based on urine excretion |
|---|---|
| Toxicokinetics | $C_{max}$: 20 ppm at a dose of 5 mg/kg bw and 200 ppm at 100 mg/kg bw |
|  | $T_{max}$: 1h (rat) |
|  | $T_{1/2}$: 6-8h (female), 11-14 h (male) in rat (blood) |
| Distribution | Widely distributed; highest levels in plasma, liver, kidneys and red blood cells |
| Potential for bioaccumulation | No evidence for accumulation |
| Rate and extent of excretion | Rapid (app. 84.4 to 97.2 % within 48 h), mainly via urine and faeces |
| Metabolism in animals | Up to 86% excreted as parent compound (CGA 277476). Metabolism included cleavage of the sulfonyl urea bridge, hydroxylation of the pyrimidinyl-methyl group, hydrolysis of the oxetanyl ester, and opening of the oxetane ring |
| *In vitro* metabolism | Data gap |
| Toxicologically relevant compounds (animals and plants) | Oxasulfuron (CGA 277476) |
| Toxicologically relevant compounds (environment) | oxetan-3-ol |

### Acute toxicity (Regulation (EU) N° 283/2013, Annex Part A, point 5.2)

|  |  |
|---|---|
| Rat LD$_{50}$ oral | > 5000 mg/kg bw |
| Rat LD$_{50}$ dermal | > 2000 mg/kg bw |
| Rat LC$_{50}$ inhalation | > 5082 mg/m³ (4h, nose-only exposure) |
| Skin irritation | Non-irritant |
| Eye irritation | Non-irritant |
| Skin sensitisation | Not- Sensitising (Buehler test, and Maximization) |

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¹ Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006. OJ L 353, 31.12.2008, 1-1355.

² It should be noted that harmonised classification and labelling is formally proposed and decided in accordance with Regulation (EC) No 1272/2008. Proposals for classification made in the context of the evaluation procedure under Regulation (EC) No 1107/2009 are not formal proposals.
Phototoxicity

| Test | not phototoxic, unlikely to be photoreactive |

**Short-term toxicity (Regulation (EU) Nº 283/2013, Annex Part A, point 5.3)**

| Target organ / critical effect | Rat: liver (hepatocyte hypertrophy), spleen (hyperplasia of lymphatic follicles ), urinary system (inflammation of urinary bladder, pelvis dilatation in the kidney)and testis (inflammation of epididymis) |
| Dog: peripheral nerves (degeneration), muscles (weakness), brain (vacuolation), testes (decreased spermatogenic activity, accumulation of atypical cells in the lumen of the seminiferous tubules and oligospermia in the epididymides) |
| Mouse: effect on the liver (increased serum 5’ nucleotidase) and red blood cells |

| Relevant oral NOAEL | Rat: 15.3 mg/kg bw per day (90-day) |
| Dog: 1.3 mg/kg bw per day (90-day and 1-yr) |
| Mouse: 672 mg/kg bw per day |

| Relevant dermal NOAEL | Rat: >1000 mg/kg bw per day (28-day) |

| Relevant inhalation NOAEL | No data - not required |

**Genotoxicity (Regulation (EU) Nº 283/2013, Annex Part A, point 5.4)**

**In vitro studies**

| Bacterial gene mutation assay: | non mutagenic with and without metabolic activation in S. typhimurium and E. Coli |
| Mammalian gene mutation assay: | non mutagenic |
| Mammalian cytogenetic assay: | equivocal |
| Unscheduled DNA repair assay: | no induction of unscheduled DNA repair |

**In vivo studies**

| Micronucleus test: | not clastogenic or aneugenic |

**Photomutagenicity**

| No data - not required |

**Potential for genotoxicity**

| Oxasulfuron is unlikely to be genotoxic |

**Long-term toxicity and carcinogenicity (Regulation (EU) Nº 283/2013, Annex Part A, point 5.5)**
### Long-term effects (target organ/critical effect)

**Mice:** peripheral nerves (axonal degeneration), liver (hypertrophy).

**Rats:** peripheral nerves (axonal degeneration), kidney (nephritis), liver (bile duct hyperplasia/ fibrosis), spleen (lymphatic depletion, pigmentation), testes (degeneration), muscles (neurogenic atrophy).

#### Relevant long-term NOAEL

- **Mouse:** 1.5 mg/kg bw per day (18-month)
- **Rat:** 8.3 mg/kg bw per day (2-year)

#### Carcinogenicity (target organ, tumour type)

**Mice:** no carcinogenic potential

**Rats:** Schwannomas at MTD in males were considered related to specific toxicity to the nervous system and not carcinogenic effect relevant to humans.

#### Reproductive toxicity (Regulation (EU) N° 283/2013, Annex Part A, point 5.6)

**Reproduction toxicity**

| Reproduction target / critical effect                              | Parental: decreased body weight gain, effects in testis | Repro. cat 2 H361f |
|-------------------------------------------------------------------|--------------------------------------------------------|--------------------|
|                                                                    | Offspring: decreased body weight gain                   |                    |
|                                                                    | Reproductive: reduced number of pregnancies, increased number of post-implantation losses |                    |

| Relevant parental NOAEL                                           | 14.75 mg/kg bw per day                                  |
|-------------------------------------------------------------------|--------------------------------------------------------|
| Relevant reproductive NOAEL                                        | 340.5 mg/kg bw per day                                  |
| Relevant offspring NOAEL                                           | 340.5 mg/kg bw per day                                  |

**Developmental toxicity**

| Developmental target / critical effect                            | Maternal: decreased body weight gain and food consumption (rats) |
|-------------------------------------------------------------------|---------------------------------------------------------------|
|                                                                    | Developmental: increased skeletal variations (rats)           |

| Relevant maternal NOAEL                                           | Rat: 300 mg/kg bw per day                                    |
|-------------------------------------------------------------------|--------------------------------------------------------------|
|                                                                   | Rabbit: 1000 mg/kg bw per day                                |

| Relevant developmental NOAEL                                      | Rat: 300 mg/kg bw per day                                    |
|-------------------------------------------------------------------|--------------------------------------------------------------|
|                                                                   | Rabbit: 1000 mg/kg bw per day                                |

**Neurotoxicity (Regulation (EU) N° 283/2013, Annex Part A, point 5.7)**

| Acute neurotoxicity                                              | NOAEL 10 mg/kg bw, based on decreased rectal body temperature in females |
|-------------------------------------------------------------------|------------------------------------------------------------------------|

| Repeated neurotoxicity                                           | Peripheral neurotoxicity was observed in rats, mice and dogs in standard short- and long-term studies. It was | STOT RE 2; H373 |
|-------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------|-----------------|
characterised by axonal degeneration of peripheral (motor) nerves leading to neurogenic atrophy of skeletal muscle observed in several species at different dose level and by brain vacuolization observed at 10.7 mg/kg in dog.

Additional studies (e.g. delayed neurotoxicity, developmental neurotoxicity)  
Not required

Other toxicological studies (Regulation (EU) N° 283/2013, Annex Part A, point 5.8)

Supplementary studies on the active substance  
Not required

Endocrine disrupting properties  
Not conclusive (data gap)

Studies performed on metabolites or impurities oxetan-3-ol

| Acute oral | LD₅₀ > 2000 mg/kg bw (rat) |
|-------------|-----------------------------|
| Acute dermal | LD₅₀ > 4000 mg/kg bw (rat) |
| Acute inhalation | LC₅₀ > 4.6 mg/L (nose only) |
| Skin irritation | Not irritating |
| Eye irritation | Not irritating |
| Skin sensitisation | Not a sensitiser (M&K) |

28-day dog oral  
NOAEL = 20 mg/kg bw per day based on minimal hepatocyte hypertrophy

90-day dog oral  
NOAEL = 50 mg/kg bw per day based on changes in erythropoietic system, liver and testes

Genotoxicity  
Negative in bacterial reverse gene mutation assay and cytogenic test in Chinese hamster ovaries

by-product  
Genotoxicity  
Positive in gene mutation assay with E. coli without metabolic activation. No mutagenic activity observed with S. typhimurium.

Medical data (Regulation (EU) N° 283/2013, Annex Part A, point 5.9)

No adverse health effects were found in routine medical surveillance of manufacturing plant personnel. No cases of poisoning have been reported.

Summary³ (Regulation (EU) N° 1107/2009, Annex II, point 3.1 and 3.6)

| oxasulfuron | Value | Study | Uncertainty factor |
|-------------|-------|-------|--------------------|
| Acceptable Daily Intake (ADI) | 0.013 | 1-year dog 90-day dog | 100 |
| Acute Reference Dose (ARfD) | | Not allocated | |
| Acceptable Operator Exposure Level (AOEL) | 0.013 | dog, 90-day | 100 |
Acute Acceptable Operator Exposure Level (AAOEL)

| oxetan-3-ol | Not allocated |
|-------------|---------------|

Acceptable Daily Intake (ADI)

| saccharin (and OH saccharin) | 0.05 | 16-week dog study | 1000 |
|-----------------------------|------|-------------------|------|

Acceptable Daily Intake (ADI)

| saccharin (and OH saccharin) | 3.8  | SCF (EC, 1997)    |
|-----------------------------|------|-------------------|

Dermal absorption (Regulation (EU) N° 284/2013, Annex Part A, point 7.3)

Representative formulation (Laguna 75 WG)

| Human/rat in vitro studies and rat in vivo (triple pack) with the formulation Dynam 75 WG: not representative
| Default values: 25% for the concentrate and 75% for the dilution |

Exposure scenarios (Regulation (EU) N° 284/2013, Annex Part A, point 7.2)

Operators

| Use: Soybean, tractor mounted equipment, application rate 75 g as/ha
| Exposure estimates (model): % of AOEL
| UK POEM
| Without PPE 3000%
| Gloves M/L and appl: 462%
| German model
| Without PPE: 336%
| Gloves M/L/Appl and coverall appl 20%
| EFSA guidance
| Without PPE 254%
| Gloves and work-wear M/L/Appl 2.36%

Workers

| EFSA guidance:
| 61% of the AOEL without PPE |

Bystanders and residents

| EFSA guidance:
| Bystander: 2%-20% (adult), 3%-25% (child)
| Resident: 2%-25% (adult), 4%-41% (child) (considering distances of 10m and 1m) |
Classification with regard to toxicological data (Regulation (EU) No 283/2013, Annex Part A, Section 10)

Substance: oxsulfuron (ISO)
oxetan-3-yl 2-[(4,6-dimethylpyrimidin-2-yl)-
carbamoysulfamoyl]benzoate

Harmonised classification according to Regulation (EC) No 1272/2008 and its Adaptations to Technical Process [Table 3.1 of Annex VI of Regulation (EC) No 1272/2008 as amended]:

- STOT RE 2 - H373
  May cause damage to organs through prolonged or repeated exposure

Peer review proposal for harmonised classification according to Regulation (EC) No 1272/2008:

- Repr. Cat 2 - H361f
 Suspected of damaging fertility

Residues in or on treated products food and feed

Metabolism in plants (Regulation (EU) No 283/2013, Annex Part A, points 6.2.1, 6.5.1, 6.6.1 and 6.7.1)

| Primary crops (Plant groups covered) OECD Guideline 501 | Crop groups | Crop(s) | Application(s) | DAT (days) |
|---------------------------------------------------------|-------------|---------|----------------|------------|
| Fruit crops                                             |             |         |                |            |
| Root crops                                              |             |         |                |            |
| Leafy crops                                             |             |         |                |            |
| Cereals/grass crops                                     |             |         |                |            |
| Pulses/Oilseeds                                         | Soyabea n   | Field application: pre-emergence, 1x 87 -111 g a.s./ha; post-emergence, 1x 89-90 g a.s./ha | Field application pre-emergence, 35, 42, 72 (1st, 2nd, 3rd thinning) and 134 (maturity) post-emergence, 0, 7, 37 (1st, 2nd thinning), 99 (maturity) |
|              |             | Greenhouse application: pre-emergence, 1x 381-326 g a.s./ha post-emergence, 1x 88-92 g a.s./ha | Greenhouse application: pre-emergence, 19-23, 27-31 (1st, 2nd thinning), 100-132 (maturity) post-emergence, 7 (2nd thinning) and 76-112 (maturity) |

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4 Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006. OJ L 353, 31.12.2008, 1-1355.

5 It should be noted that harmonised classification and labelling is formally proposed and decided in accordance with Regulation (EC) No 1272/2008. Proposals for classification made in the context of the evaluation procedure under Regulation (EC) No 1107/2009 are not formal proposals.
In the greenhouse metabolism studies only glucose and glutamine conjugates of the HO-pyrimidine amine (CGA-340355) were found at levels >10% TRR in soya beans equivalent to max. 0.012 mg/kg. In the field metabolism studies the predominant metabolites in soya bean foliage were glycerol ester of Oxsulfuron (CGA-310785), saccharin (CGA-27913) and sulfamoylbenzoic acid (CGA-177288). The highest residue was equivalent to 0.021 mg/kg. Only saccharin (CGA-27913) occurred at a level >10% TRR in mature beans but the actual concentration was very low (0.002 mg/kg).

### Rotational crops (metabolic pattern)

| Crop groups          | Crop(s)       | PBI (days) | Comments                                                                 |
|----------------------|---------------|------------|---------------------------------------------------------------------------|
| Root/tuber crops     | Turnip        | 35,120,383 | Metabolism studies conducted with a bare soil application at 188 g/ha with $^{14}$C-phenyl and 168 g/ha with $^{14}$C-pyrimidinyl oxasulfuron. |
| Leafy crops          | Mustard       | 35, 120, 383|                                                                            |
| Cereal (small grain) | Wheat         | 35, 120, 383|                                                                            |
| Pulses and oilseed   | -             | -          |                                                                           |

**Rotational crop and primary crop metabolism similar?**

Open

Data gap: Since CGA 27913 and C 1801 were shown to be low to high persistent in soil ($DT_{90}$ of 28.8-788 and 10.8-1560 days, respectively), the potential for residues of these compounds to be present in the rotational crops needs to be investigated. Furthermore and pending upon the outcome of the requested $DT_{50}/DT_{90}$ values on the metabolites CGA 171895 (M5), M3, CGA 179710, CGA 297691 and MT6 (data gaps in section 4), further rotational crops studies addressing the nature and magnitude of residues in regards to these compounds might be needed.

### Processed commodities (standard hydrolysis study)

| Conditions       | Hydrolysis studies not triggered as oxasulfuron residues in soya beans <0.01 mg/kg (LOQ). |
|------------------|------------------------------------------------------------------------------------------|
| 20 min, 90°C, pH 4 |                                                                                         |
| 60 min, 100°C, pH 5 |                                                                                         |
| 20 min, 120°C, pH 6 |                                                                                         |

**Plant residue definition for monitoring (RD-Mo)**

OECD Guidance, series on pesticides No 31

Oxsulfuron

**Plant residue definition for risk assessment (RD-RA)**

Oxsulfuron

**Conversion factor (monitoring to risk assessment)**

None

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**Metabolism in livestock (Regulation (EU) No 283/2013, Annex Part A, points 6.2.2, 6.2.3, 6.2.4, 6.2.5 6.7.1)**

| OECD Guideline 503 and SANCO/11187/2013 rev. 3 (fish) | Animal | Dose (mg/kg bw/d) | Duration (days) | N rate/comment |
|-------------------------------------------------------|--------|-------------------|-----------------|----------------|
| Animals covered                                      | Laying hen | 6.25              | 8               | 6250           |

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Goat & 3.27-3.54 & 4 & 3270-3910 & 

Pig & - & - & Not triggered & 

The major pathways are the oxidation of one of the pyrimidinyl methyl groups to form HO-oxasulfuron (OH-CGA-277476), the hydrolysis of the oxetane ring to form the glycerol ester of HO-oxasulfuron (HO-CGA-310785), prior to sulfonyleurea bridge cleavage and further transformation to saccharin (CGA 27913) and pyrimidine amine (C 1801). The metabolism pathways of oxasulfuron in rat and in ruminants are similar.

| Time needed to reach a plateau concentration in milk and eggs (days) | Not provided |
|---------------------------------------------------------------|--------------|
| Animal residue definition for monitoring (RD-Mo) | Not required |
| **OECD Guidance, series on pesticides No 31** |              |
| Animal residue definition for risk assessment (RD-RA) | Not required |
| Conversion factor (monitoring to risk assessment) | None |
| Metabolism in rat and ruminant similar (Yes/No) | Yes |
| Fat soluble residues (Yes/No) *(FAO, 2009)* | No |

**Residues in succeeding crops (Regulation (EU) N° 283/2013, Annex Part A, point 6.6.2)**

**Confined rotational crop study** *(Quantitative aspect)*

**OECD Guideline 502**

Data gap: Since CGA 27913 and C 1801 were shown to be low to high persistent in soil (DT$_{90}$ of 28.8-788 and 10.8-1560 days, respectively), the potential for residues of these compounds to be present in the rotational crops needs to be investigated. Furthermore and pending upon the outcome of the requested DT$_{50}$/DT$_{90}$ values on the metabolites CGA 171895 (M5), M3, CGA 179710, CGA 297691 and MT6 (data gaps in section 4), further rotational crops studies addressing the nature and magnitude of residues in regards to these compounds might be needed.

**Field rotational crop study**

**OECD Guideline 504**

Open

**Stability of residues (Regulation (EU) N° 283/2013, Annex Part A, point 6.1)**

**OECD Guideline 506**

| Plant products (Category) | Commodity | T (°C) | Stability (Months) |
|--------------------------|-----------|--------|-------------------|
| High water content       |           |        |                   |
| High oil content         | Soya bean | -20    | 24                |
| High protein content     |           |        |                   |
| High starch content      |           |        |                   |
High acid content

Other

Storage stability of oxasulfuron (CGA-277476) was demonstrated for a period of 24 months at -20 °C in soybean seeds and processed fractions (meal, hulls, oil).

| Animal | Animal commodity | T (°C) | Stability (Months) |
|--------|------------------|--------|-------------------|
| Beef   | Muscle           | -20    | 11                |
|        | Liver            | -20    | 7                 |
| Kidney |                  |        |                   |
| Milk   |                  | -20    | 10                |
| Egg    |                  | -20    | 12                |
Summary of residues data from the supervised residue trials (Regulation (EU) N° 283/2013, Annex Part A, point 6.3) OECD Guideline 509, OECD Guidance, series on pesticides No 66 and OECD MRL calculator

| Crop       | Region/Indoor (a) | Residue levels (mg/kg) observed in the supervised residue trials relevant to the supported GAPs (b) | Recommendations/comments (OECD calculations) | MRL proposals (mg/kg) | HR (mg/kg) (c) | STMR (mg/kg) (d) |
|------------|-------------------|-------------------------------------------------------------------------------------------------|------------------------------------------------|----------------------|----------------|-----------------|
| Soyabean   | SEU               | 7x <0.01                                                                                       | MRL_{OECD}: 0.01 mg/kg                          | 0.01(*)             | 0.01           | 0.01            |

MRL application
Not relevant

Summary of the data on formulation equivalence OECD Guideline 509
No information provided - Not relevant

Summary of data on residues in pollen and bee products (Regulation (EU) No 283/2013, Annex Part A, point 6.10.1)
No information provided

Data gap: The determination of the residues in pollen and bee products for human consumption resulting from residues taken up by honeybees from crops at blossom with regards to oxasulfuron and relevant metabolites and considering also the outstanding data on rotational crops is requested.

(a): NEU or SEU for northern or southern outdoor trials in EU member states (N+SEU if both zones), Indoor for glasshouse/protected crops, Country if non-EU location.
(b): Residue levels in trials conducted according to GAP reported in ascending order (e.g. 3x <0.01, 0.01, 6x 0.02, 0.04, 0.08, 3x 0.10, 2x 0.15, 0.17). When residue definition for monitoring and risk assessment differs, use Mo/RA to differentiate data expressed according to the residue definition for Monitoring and Risk Assessment.
(c): HR: Highest residue. When residue definition for monitoring and risk assessment differs, HR according to residue definition for monitoring reported in brackets (HR_{Mo}).
(d): STMR: Supervised Trials Median Residue. When residue definition for monitoring and risk assessment differs, STMR according to definition for monitoring reported in brackets (STMR_{Mo}).
### Inputs for animal burden calculations

| Feed commodity | Median dietary burden (mg/kg) | Comment | Maximum dietary burden (mg/kg) | Comment |
|----------------|-------------------------------|---------|-------------------------------|---------|
| **Representative uses** | | | | |
| Soybean seed | 0.01 | STMR | 0.01 | STMR |
| Soybean meal | 0.01 | STMR | 0.01 | STMR |
| Soybean hulls | 0.01 | STMR | 0.01 | STMR |
| **MRL application** | | | | |
| Not relevant | | | | |
### Residues from livestock feeding studies (Regulation (EU) N° 283/2013, Annex Part A, points 6.4.1, 6.4.2, 6.4.3 and 6.4.4) OECD Guideline 505 and OECD Guidance, series on pesticides No 73

| MRL calculations                      | Ruminant | Pig/Swine | Poultry | Fish |
|--------------------------------------|----------|-----------|---------|------|
| **Highest expected intake**          |          |           |         |      |
| (mg/kg bw/d)                          |          |           |         |      |
| (mg/kg DM for fish)                   |          |           |         |      |
| Beef cattle                          | 0.0001   |           | 0.0001  |      |
| Ram/Ewe                             | 0.0001   |           |         |      |
| Breeding                             | 0.0001   |           |         |      |
| Broiler                             | 0.0005   |           |         |      |
| Carp                                 | -        |           |         |      |
| Dairy cattle                         | 0.0001   |           |         |      |
| Lamb                                 | 0.0002   |           |         |      |
| Finishing                            | 0.0002   |           |         |      |
| Layer                                | 0.0003   |           |         |      |
| Trout                                | -        |           |         |      |
| Turkey                               | 0.0005   |           |         |      |
| Fish intake >0.1 mg/kg DM            |          |           |         |      |
| Intake >0.004 mg/kg bw               | No       | No        | No      | No   |
| Feeding study submitted              | Not required | Not required | Not required | Not required |
| Representative feeding level (mg/kg bw/d, mg/kg DM for fish) and N rates | Level | Level | Level | Level | Level | Level | Level | N rate |
| Beef: N                               | Estimated HR\(^{(a)}\) at 1N | MRL proposals | Estimated HR\(^{(a)}\) at 1N | MRL proposals | Estimated HR\(^{(a)}\) at 1N | MRL proposals | Estimated HR\(^{(a)}\) at 1N | MRL proposals |
| Dairy: N                              | Level    | MRL proposals | Level    | MRL proposals | Level    | MRL proposals | Level    | MRL proposals |
| Lamb: N                               | Estimated HR\(^{(a)}\) at 1N | MRL proposals | Estimated HR\(^{(a)}\) at 1N | MRL proposals | Estimated HR\(^{(a)}\) at 1N | MRL proposals | Estimated HR\(^{(a)}\) at 1N | MRL proposals |
| Ewe: N                               | Level    | MRL proposals | Level    | MRL proposals | Level    | MRL proposals | Level    | MRL proposals |
| N rate Breed/Finish                   | Level    | MRL proposals | Level    | MRL proposals | Level    | MRL proposals | Level    | MRL proposals |
| 8 or T: N Layer: N                    | Level    | MRL proposals | Level    | MRL proposals | Level    | MRL proposals | Level    | MRL proposals |
| Carp/Trout                            | Level    | MRL proposals | Level    | MRL proposals | Level    | MRL proposals | Level    | MRL proposals |

### Method of calculation\(^{(c)}\)
- Estimated HR calculated at 1N level (estimated mean level for milk).
- HR in meat calculated for mammalian on the basis of 20% fat + 80% muscle and 10% fat + 90% muscle for poultry.
- The OECD guidance document on residues in livestock (series on pesticides 73) recommends three different approaches to derive MRLs for animal products; by applying a transfer factor (Tf), by intrapolation (It) or by linear regression (Ln). Fill in method(s) considered to derive the MRL proposals.

### Notes:
- \(^{(a)}\) Estimated HR calculated at 1N level (estimated mean level for milk).
- \(^{(b)}\) HR in meat calculated for mammalian on the basis of 20% fat + 80% muscle and 10% fat + 90% muscle for poultry.
- \(^{(c)}\) The OECD guidance document on residues in livestock (series on pesticides 73) recommends three different approaches to derive MRLs for animal products; by applying a transfer factor (Tf), by intrapolation (It) or by linear regression (Ln). Fill in method(s) considered to derive the MRL proposals.
### Conversion Factors (CF) for monitoring to risk assessment

**Animal products**

Not relevant (RD-Mo = RD-RA)

**Plant products**

Not relevant (RD-Mo = RD-RA)

### Processing factors (Regulation (EU) No 283/2013, Annex Part A, points 6.5.2 and 6.5.3)

**OECD Guideline 508 and OECD Guidance, series on testing and assessment No 96**

| Crop (RAC)/Edible part | Crop (RAC)/Processed product | Number of studies<sup>(a)</sup> | Processing Factor (PF) | Conversion Factor (CF<sub>P</sub>) for RA<sup>(b)</sup> |
|------------------------|-------------------------------|-------------------------------|------------------------|--------------------------------------------------|
|                        |                               |                               | Individual values | Median PF |                               |

#### Representative Uses

Processing residue trials are not triggered.

<sup>(a)</sup>: Studies with residues in the RAC at or close to the LOQ should be disregarded (unless concentration)

<sup>(b)</sup>: When the residue definition for risk assessment differs from the residue definition for monitoring

### Consumer risk assessment (Regulation (EU) No 283/2013, Annex Part A, point 6.9)

**Including all uses** (representative uses and uses related to an MRL application).

| ADI                                                                 |                                                                 |
|---------------------------------------------------------------------|-----------------------------------------------------------------|
| TMDI according to EFSA PRIMO                                         | 0.013 mg/kg bw per day                                          |
| NTMDI, according to (to be specified)                               | Not relevant                                                    |
| IEDI (% ADI), according to EFSA PRIMO                               | Not provided, not required                                      |
| NEDI (% ADI), according to (to be specified)                        | Not provided, not required                                      |
| Factors included in the calculations                                | None                                                            |
| ARfD                                                                |                                                                 |
| IESTI (% ARfD), according to EFSA PRIMO                             | Not allocated                                                   |
| NESTI (% ARfD), according to (to be specified)                      | -                                                               |
| Factors included in IESTI and NESTI                                 | -                                                               |

**Consumer risk assessment limited to the representative uses<sup>(1)</sup>**

| TMDI (% ADI), according to EFSA PRIMO                               | Highest TMDI: <1% of the ADI (WHO cluster diet F)               |
| NTMDI (% ADI), according to (to be specified)                       | Not provided, not required                                      |
| IEDI (% ADI), according to EFSA PRIMO                               | Not provided, not required                                      |
| NEDI (% ADI), according to (to be specified)                        | Not provided, not required                                      |
| Factors included in the calculations                                | None                                                            |
| IESTI (% ARfD, according to EFSA PRIMO)                             | Not provided, not required                                      |
| NESTI (% ARfD, according to (to be specified)                       | Not provided, not required                                      |
| Factors included in IESTI and NESTI                                 | None                                                            |
Additional contribution to the consumer intakes through drinking water resulting from groundwater metabolite expected to be present above 0.75 µg/L (1)

| Metabolite         | ADI (mg/kg bw per day) | Intake of groundwater metabolites (% ADI) |
|--------------------|------------------------|------------------------------------------|
| CGA 297691         | 0.05                   | Adult (60 kg bw, 2 L): 0.2 % ADI         |
|                    |                        | Child (10 kg bw, 1 L): 0.6 % ADI         |
|                    |                        | Infant (5 kg bw, 0.75 L): 0.9 % ADI      |

(1): The overall consumer exposure assessment cannot be finalised in view of the identified data gap for the potential for residues of CGA 27913 and C 1801 to be present in the rotational crops, the outstanding data regarding the metabolism and magnitude of the relevant compounds in rotational crops (see section 4) and the consumer exposure assessment through drinking water with regards to MT6, CGA 171895 (M5) and M3.

Proposed MRLs (Regulation (EU) No 283/2013, Annex Part A, points 6.7.2 and 6.7.3)

| Code(a) | Commodity/Group | MRL/Import tolerance(b) (mg/kg) and Comments |
|---------|-----------------|--------------------------------------------|
| 0401070 | Soyabeans       | 0.01(*) Current MRL Reg EU 289/2014        |

(a): Commodity code number, as listed in Annex I of Regulation (EC) No 396/2005
(b): MRLs proposed at the LOQ, should be annotated by an asterisk (*) after the figure

Environmental fate and behaviour

Route of degradation (aerobic) in soil (Regulation (EU) N° 283/2013, Annex Part A, point 7.1.1.1)

| Mineralisation after 100 days | 0.1-57.4 % after 90-105 d, [14C-phenyl]-label (n=4)  
|                              | 1.3-21.3 % after 90-83 d, [14C-pyrimidinyl]-label (n=3)  
|                              | 80.4 % after 120 d, [14C-oxetan]-label (n=1)  |
| Non-extractable residues after 100 days | 1.7-27 % after 90-105 d, [14C-phenyl]-label (n=4)  
|                                | 25.5-53.9 % after 90-83 d, [14C-pyrimidinyl]-label (n=3)  
|                                | 5.3 % after 120 d, [14C-oxetan]-label (n=1)  |
| Metabolites requiring further consideration | saccharin CGA (27913) – 9-98.5 % at 9-90 d (n=9) [14C-phenyl]-label  
| - name and/or code, % of applied (range and maximum) | M3 – 4.8-25 % at 0-65 d (n=6) [14C-phenyl] & [14C-pyrimidinyl] and [14C-oxetan]-label  
|                                    | M5 – 5.4-10.2 % at 9-2 d (n=2) [14C-phenyl]-label  
|                                    | C1801 – 29.2-54.7 % at 5-14 d (n=4) [14C-pyrimidinyl]-label  
|                                    | CGA 179710 – 1.3-27.5 % at 7-14 d (n=2) [14C-pyrimidinyl]-label  
|                                    | CGA 297691 – about 21 % at 4 d (n=1) [14C-oxetan]-label, field study only |
**Route of degradation (anaerobic) in soil (Regulation (EU) N° 283/2013, Annex Part A, point 7.1.1.2)**

| Mineralisation after 100 days | 0.2-0.3 % at 90-120 d, $^{14}$C-phenyl-label (n=2)  
|                            | 1.1-15.6 % at 90-127 d, $^{14}$C-pyrimidinyl-label (n=2)  
|                            | 6.6 % at 90 d, $^{14}$C-oxetan-label (n=1)  
| Non-extractable residues after 100 days | 3-3.6 % at 90-120 d, $^{14}$C-phenyl-label (n=2)  
|                              | 19.3-50.1 % at 90-127 d, $^{14}$C-pyrimidinyl-label (n=2)  
|                              | 20.2 % at 90 d, $^{14}$C-oxetan-label (n=1)  
| Metabolites that may require further consideration for risk assessment - name and/or code, % of applied (range and maximum) | saccharin (CGA 27913) – 86.5-96.8 % at 120-59 d (n=2)  
|                                 | $^{14}$C-phenyl-label  
|                                 | M3 – 30.2 % at 40 d (n=1)  
|                                 | $^{14}$C-pyrimidinyl-label  
|                                 | C1801 – 22.7-69 % at 8-59 d (n=2)  
|                                 | $^{14}$C-pyrimidinyl-label  
|                                 | CGA 297691 – 87.8 % at 62 d (n=1)  
|                                 | $^{14}$C-oxetan-label  

**Route of degradation (photolysis) on soil (Regulation (EU) N° 283/2013, Annex Part A, point 7.1.1.3)**

| Metabolites that may require further consideration for risk assessment - name and/or code, % of applied (range and maximum) | saccharin (CGA 27913) – 90.5 % at 30 d (n=1)  
|                                                  | $^{14}$C-phenyl-label  
|                                                  | CGA 297691 – 58.8 % at 30 d (n=1)  
|                                                  | $^{14}$C-oxetan-label  
|                                                  | C1801 – 51.5 % at 30 d (n=1)  
|                                                  | $^{14}$C-pyrimidinyl-label  
| Mineralisation at study end | 0.2 % at 30 d, $^{14}$C-phenyl-label (n=1)  
|                               | 0.4 % at 30 d, $^{14}$C-pyrimidinyl-label (n=1)  
|                               | 16.3 % at 30 d, $^{14}$C-oxetan-label (n=1)  
| Non-extractable residues at study end | 0.4 % at 30 d, $^{14}$C-phenyl-label (n=1)  
|                                      | 5.5 % at 30 d, $^{14}$C-pyrimidinyl-label (n=1)  
|                                      | 7.5 % at 30 d, $^{14}$C-oxetan-label (n=1)  

**Mineralisation at study end** | 0.2 % at 30 d, $^{14}$C-phenyl-label (n=1)  
|                                    | 0.4 % at 30 d, $^{14}$C-pyrimidinyl-label (n=1)  
|                                    | 16.3 % at 30 d, $^{14}$C-oxetan-label (n=1)  

**Non-extractable residues at study end** | 0.4 % at 30 d, $^{14}$C-phenyl-label (n=1)  
|                                         | 5.5 % at 30 d, $^{14}$C-pyrimidinyl-label (n=1)  
|                                         | 7.5 % at 30 d, $^{14}$C-oxetan-label (n=1)
### Rate of degradation in soil (aerobic) laboratory studies active substance
(Regulation (EU) N° 283/2013, Annex Part A, point 7.1.2.1.1 and Regulation (EU)
N° 284/2013, Annex Part A, point 9.1.1.1)

| Oxasulfuron         | Dark aerobic conditions                                                                 |
|---------------------|----------------------------------------------------------------------------------------|
|                     | Soil type | O.C. (%) | pH a) | t. °C / % MWHC | DT50/DT90 (d) | St. (χ²) | DT50 (d) 20 °C pF2/10kPa b) | St. (χ²) | Method of calculation § |
| Gartenacker, Silt loam | 2.3  | 7.2     | 20°C/40% | 8.4/27.9 | 3  | 8.4  | 3  | SFO |
| Speyer 2.2, Loamy sand | 2.2   | 5.7     | 20°C/40% | 29.3/97.3 | 6.9 | 29.3 | 6.9 | SFO |
| Weide, Sandy loam   | 1.3   | 7.6     | 20°C/40% | 11.6/51   | 3.1 | 15.4 | 3.1 | FOMC (DT90/3.32) |
| Gartenacker, Silt loam | 2.1   | 7.2     | 19.8°C/75% of field capacity | 5.7/18.9 | 3.5 | 4.6  | 3.5 | SFO |
| Collombey, Loamy sand | 1.6   | 7.4     | 19.8°C/75% of field capacity | 6.7/35.5 | 2.5 | 8.6  | 2.5 | FOMC (DT90/3.32) |
| USA, Sandy loam a   | 1.1   | 6.8     | 25°C/75% of field capacity at 0.33 bar | 4.2/14   | 6.1 | 5.5  | 6.1 | SFO |
| USA, Sandy loam b   | 1.1   | 6.8     | 25°C/75% of field capacity at 0.33 bar | 3.2/10.6 | 9.9 | 4.2  | 9.9 | SFO |
| USA, Sandy loam c   | 1.5   | 7       | 25.5°C/75% of field capacity at 0.33 bar | 3.7/20.1 | 6.7 | 8.3  | 6.7 | FOMC (DT90/3.32) |
| USA, Sandy loam d   | 1     | 7.5     | 25°C/75% of field capacity at 0.33 bar | 7.2/24   | 1.4 | 9.5  | 1.4 | SFO |
| USA, Sandy loam e   | 1     | 7.5     | 25°C/75% of field capacity at 0.33 bar | 8.3/27.5 | 3.7 | 10.9 | 3.7 | SFO |
| USA, Sand           | 0.5   | 8.3     | 25°C/75% of field capacity at 0.33 bar | 10/33.3  | 3.3 | 13.1 | 3.3 | SFO |
| USA, Loam           | 1.4   | 6.7     | 25°C/75% of field capacity at 0.33 bar | 9/29.9   | 3  | 11.8 | 3  | SFO |
| USA, Clay           | 1.2   | 7.3     | 25°C/75% of field capacity at 0.33 bar | 7.4/24.7 | 2.9 | 9.7  | 2.9 | SFO |

Geometric mean (if not pH dependent) | 9.4

pH dependence, No

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1) Measured in water
2) Normalised using a Q10 of 2.58 and Walker equation coefficient of 0.7
# Non-normalised for trigger evaluation
§ For modelling purposes
### Rate of degradation in soil (aerobic) laboratory studies transformation products (Regulation (EU) No 283/2013, Annex Part A, point 7.1.2.1.2 and Regulation (EU) No 284/2013, Annex Part A, point 9.1.1.1)

| Saccharin (CGA 27913) | Dark aerobic conditions | Oxasulfuron dosed from which the f.f. was derived was 0.6 |
|------------------------|------------------------|--------------------------------------------------------|
| **Soil type** | O.C. (%) | pH<sup>b)</sup> | t. °C / % MWHC | DT<sub>50</sub>/ DT<sub>90</sub> (d) # | f. f. k<sub>r</sub> / k<sub>d</sub> | St. (χ<sup>2</sup>) | DT<sub>50</sub> (d) 20 °C pF2/10kPa<sup>a)</sup> | St. (χ<sup>2</sup>) | Method of calculation § |
| Gartenacker, Silt loam | 2.3 | 7.2 | 20°C/40% | 12.5/111 DFOP (decline phase) | 1* | 12.9 | 48 | 23.7 | FOMC (DT<sub>50</sub>/3.32) |
| Speyer 2.2, Loamy sand | 2.2 | 5.7 | 20°C/40% | 8.7/28.8 SFO+SFO | 0.59 | 23.8 | 8.7 | 23.8 | SFO+SFO |
| Weide, Sandy loam | 1.3 | 7.6 | 20°C/40% | 4.6/26.1 FOMC (decline phase) | 1* | 2.6 | 7.9 | 2.6 | FOMC (DT<sub>50</sub>/3.32) |
| Sandy loam<sup>$</sup> | - | 5.7 | 20°C/50% | 80.7/269 | - | - | 80.7 | 2 | SFO |
| Silt loam-1<sup>$</sup> | - | 7.7 | 20°C/50% | 34.8/116 | - | - | 34.8 | 10 | SFO |
| Silt loam-2<sup>$</sup> | - | 6.4 | 20°C/50% | 119/661 | - | - | 119 | 5 | SFO |
| Mattapex, silt loam<sup>$</sup> | - | 6.9 | 20°C | 237.4/788.6 | - | - | 237.4 | 4 | SFO |
| Speyer 2.2, loamy sand-1<sup>$</sup> | - | 5.7 | 20°C | 9.69/32.2 | - | - | 9.69 | 4.7 | Modified HS |
| Speyer 3A, sandy loam-1<sup>$</sup> | - | 7.3 | 20°C | 10.2/34 | - | - | 9.53 | 5.3 | Modified HS |
| Speyer 65, clay-1<sup>$</sup> | - | 7.1 | 20°C | 29.9/99.2 | - | - | 20.6 | 5.7 | Modified HS |
| Speyer 2.2, loamy sand-2<sup>$</sup> | - | 5.7 | 20°C | 14.8/49.2 | - | - | 14.8 | - | SFO |
| Speyer 3A, sandy loam-2<sup>$</sup> | - | 6.88 | 20°C | 9.1/30.1 | - | - | 8.45 | - | SFO |
| Speyer 65, clay-2<sup>$</sup> | - | 7.23 | 20°C | 27.5/91.2 | - | - | 20.47 | - | SFO |

**Geometric mean (if not pH dependent)**

| Arithmetic mean | 24.7 |
| pH dependence, No | 0.86 |

<sup>a)</sup> Measured in water
<sup>b)</sup> Normalised using a Q10 of 2.58 and Walker equation coefficient of 0.7
<sup>#</sup> Non-normalised for trigger evaluation
<sup>§</sup> For modelling purposes
<sup>*</sup> A worst-case value of 1 has been selected because no acceptable fit could be derived by modelling parent and metabolite together, therefore a suitable estimation of the formation fraction could not be achieved.
<sup>$</sup> These values were contained in the endpoints lists from the published finalised EFSA conclusions for the a.s. metsulfuron-methyl [https://www.efsa.europa.eu/it/efsajournal/pub/3936](https://www.efsa.europa.eu/it/efsajournal/pub/3936) and ethametsulfuron-methyl [https://www.efsa.europa.eu/it/efsajournal/pub/3508](https://www.efsa.europa.eu/it/efsajournal/pub/3508)
### M3

| Soil type                  | O.C. (%) | pH<sup>(a)</sup> | t. °C / % MWHC | DT<sub>50</sub> / DT<sub>90</sub> (d) | f. f. k<sub>f</sub> / k<sub>dp</sub> | St. (χ²) | DT<sub>50</sub> (d) 20 °C pF2/10kPa<sup>(b)</sup> | St. (χ²) | Method of calculation § |
|---------------------------|----------|------------------|----------------|--------------------------------|-----------------|----------|---------------------------------|----------|-------------------------|
| Gartenacker, Silt loam    | 2.3      | 7.2              | 20°C/40%       | 122/406                      | 0.25            | 20.7     | 122                              | 53.2     | SFO+SFO                  |
| Geometric mean             |          |                  |                |                               |                 |          | 122                              |          |                         |
| Arithmetic mean            |          |                  |                |                               |                 | 0.25     |                                  |          |                         |

*Measured in water<br/><sup>a</sup> Normalised using a Q10 of 2.58 and Walker equation coefficient of 0.7<br/># Non-normalised for trigger evaluation<br/>§ For modelling purposes

### M5 (CGA 171895)

| Soil type                  | O.C. (%) | pH<sup>(a)</sup> | t. °C / % MWHC | DT<sub>50</sub> / DT<sub>90</sub> (d) | f. f. k<sub>f</sub> / k<sub>dp</sub> | St. (χ²) | DT<sub>50</sub> (d) 20 °C pF2/10kPa<sup>(b)</sup> | St. (χ²) | Method of calculation § |
|---------------------------|----------|------------------|----------------|--------------------------------|-----------------|----------|---------------------------------|----------|-------------------------|
| Speyer 2.2, Loamy sand    | 2.2      | 5.7              | 20°C/40%       | 12.7/321                     | 1*              | 18.3     | 154                              | 18.3     | HS-K2 after lag phase     |
| Weide, Sandy loam         | 1.3      | 7.6              | 20°C/40%       | 7.4/59.1                     | 1*              | 19.1     | 17.8                              | 19.1     | FOMC (DT<sub>90</sub>/3.32) |
| Geometric mean             |          |                  |                |                               |                 |          | 52.4                             |          |                         |
| Arithmetic mean            |          |                  |                |                               |                 | 1        |                                  |          |                         |

*Measured in water<br/><sup>a</sup> Normalised using a Q10 of 2.58 and Walker equation coefficient of 0.7<br/># Non-normalised for trigger evaluation<br/>§ For modelling purposes<br/>* A worst-case value of 1 has been selected because no acceptable fit could be derived by modelling parent and metabolite together, therefore a suitable estimation of the formation fraction could not be achieved.

### C1801

| Soil type                  | O.C. (%) | pH<sup>(a)</sup> | t. °C / % MWHC | DT<sub>50</sub> / DT<sub>90</sub> (d) | f. f. k<sub>f</sub> / k<sub>dp</sub> | St. (χ²) | DT<sub>50</sub> (d) 20 °C pF2/10kPa<sup>(b)</sup> | St. (χ²) | Method of calculation § |
|---------------------------|----------|------------------|----------------|--------------------------------|-----------------|----------|---------------------------------|----------|-------------------------|
| Gartenacker, Silt loam    | 2.1      | 7.2              | 19.8°C/75%    | 3.2/10.8                     | 0.3             | 10.8     | 2.6                              | 10.8     | SFO+SFO                 |
| Collombey,                | 1.6      | 7.4              | 19.8°C/75%    | 14.8/49.2                    | 0.8             | 10.8     | 11.8                             | 10.4     | FOMC+SFO                |

*Measured in water<br/><sup>a</sup> Normalised using a Q10 of 2.58 and Walker equation coefficient of 0.7<br/># Non-normalised for trigger evaluation<br/>§ For modelling purposes
Peer review of the pesticide risk assessment of the active substance oxasulfuron

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Rate of degradation field soil dissipation studies (Regulation (EU) N° 283/2013, Annex Part A, point 7.1.2.2.1 and Regulation (EU) N° 284/2013, Annex Part A, point 9.1.1.2.1)

| Oyasulfuron | Aerobic conditions |
|-------------|-------------------|
| Soil type (indicate if bare or cropped soil was used). | Location (country or USA state). |
| Loamy sand | Illinois |
| USA, Sandy loam b | North Carolina |

| CGA 179710 | Dark aerobic conditions | Oxasulfuron dosed from which the f.f. was derived was 0.3 |
|------------|------------------------|--------------------------------------------------------|
| Soil type  | O.C. (%) pH | t. °C / % MWHC | DT₅₀ / DT₉₀ (d) | f. f. kₕ / kₕₚ | St. (χ²) | DT₅₀ (d) 20 °C pF₂/10kPa | St. (χ²) | Method of calculation |
| USA, Sandy loam b | 1.1 6.8 | 25°C/75% of field capacity at 0.33 bar | 298/989 SFO+SFO | 0.3 | 10.8 | 389.2 | 10.8 | SFO+SFO |

Geometric mean (if not pH dependent)
Arithmetic mean
pH dependence, No

| MT6 | Data gap |

* Measured in water
b) Normalised using a Q10 of 2.58 and Walker equation coefficient of 0.7
# Non-normalised for trigger evaluation
§ For modelling purposes

Rate of degradation field soil dissipation studies (Regulation (EU) N° 283/2013, Annex Part A, point 7.1.2.2.1 and Regulation (EU) N° 284/2013, Annex Part A, point 9.1.1.2.1)

| Oyasulfuron | Aerobic conditions |
|-------------|-------------------|
| Soil type (indicate if bare or cropped soil was used). | Location (country or USA state). |
| Loamy sand | Illinois |
| Loamy sand/sandy loam, cropped soil | North Carolina |

| Geometric mean (if not pH dependent) | pH dependence, No |
|------------------------------------|-------------------|
| 4.3 | 4.3 |

* Measured in unknown medium
b) Normalised using a Q10 of 2.58 and Walker equation coefficient of 0.7, values are DegT50matrix
* Correlation coefficient n.c. Not calculated

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Combined laboratory and field kinetic endpoints for modelling (when not from different populations)*

| Endpoint | Calculation | Relevance |
|----------|-------------|-----------|
| Rate of degradation in soil active substance, normalised geometric mean (if not pH dependent) | | Not relevant, since field data are not suitable for modelling purposes |
| Rate of degradation in soil transformation products, normalised geometric mean (if not pH dependent) | | Not relevant |
| Kinetic formation fraction (f. f. k_r / k_dp) of transformation products, arithmetic mean | | Not relevant |

* Only relevant after implementation of the published EFSA guidance describing how to amalgamate laboratory and field endpoints.

Soil accumulation (Regulation (EU) N° 283/2013, Annex Part A, point 7.1.2.2 and Regulation (EU) N° 284/2013, Annex Part A, point 9.1.1.2.2)

| Soil accumulation and plateau concentration | Relevance |
|--------------------------------------------|-----------|
| | Not relevant (Plateau concentration of 0.000 mg/kg reached after 0 years, based on calculation) |

Rate of degradation in soil (anaerobic) laboratory studies active substance (Regulation (EU) N° 283/2013, Annex Part A, point 7.1.2.1.3 and Regulation (EU) N° 284/2013, Annex Part A, point 9.1.1.1)

| Oxasulfuron | Dark anaerobic conditions. Results not reported since anaerobic DT50 should not be used for the risk assessment |
|------------|--------------------------------------------------------------------------------------------------|
| Soil type  | DT50 / DT90 (d) | DT50 (d) 20 °C(b) | St. (r^2) | Method of calculation |
|-------------|-----------------|------------------|----------|----------------------|
| Gartenacker, Silt loam | 20°C/40% | - | - | - |
| Gartenacker, Silt loam | 19.8°C/75% of field capacity | - | - | - |
| USA, Sandy loam a | 25°C/17.7% of field capacity at 0.33 bar | - | - | - |
| USA, Sandy loam b | 25°C/17.7% of field capacity at 0.33 bar | - | - | - |
| USA, Sandy loam c | 25°C/17.2% of field capacity at 0.33 bar | - | - | - |

Geometric mean (if not pH dependent)

| Method of calculation |
|-----------------------|
| Measured in water |
| Normalised using a Q10 of 2.58 |

Rate of degradation in soil (anaerobic) laboratory studies transformation products (Regulation (EU) N° 283/2013, Annex Part A, point 7.1.2.1.4 and Regulation (EU) N° 284/2013, Annex Part A, point 9.1.1.1)

| C1801 | Dark anaerobic conditions. Results not reported since anaerobic DT50 should not be used for the risk assessment |
**Rate of degradation on soil (photolysis) laboratory active substance (Regulation (EU) N° 283/2013, Annex Part A, point 7.1.1.3)**

| Parent | Soil photolysis | Method of calculation |
|--------|-----------------|-----------------------|
| Soil type | O.M. (%) | pH<sup>b</sup> | t. °C / % MWHC | DT<sub>50</sub> / DT<sub>90</sub> (d) | DT<sub>50</sub> (d) | C.C.* |
| Gartenacker, Silt loam | 2.1 | 7.2 | 19.8°C/75 % of field capacity | - | - | - | - |

**Soil adsorption active substance (Regulation (EU) N° 283/2013, Annex Part A, point 7.1.3.1.1 and Regulation (EU) N° 284/2013, Annex Part A, point 9.1.2.1)**

**Oxasulfuron**

| Soil Type | OC % | Soil pH<sup>a</sup> | K<sub>d</sub> (mL/g) | K<sub>doc</sub> (mL/g) | K<sub>f</sub> (mL/g) | K<sub>Foc</sub> (mL/g) | 1/n |
|-----------|------|---------------------|-------------------|------------------|-----------------|-----------------|-----|
| Nassau, Silt loam | 1.3 | 6.9 | n.c. | n.c. | 0.33 | 26 | 1.03 |
| Niagara, Clay loam | 1.9 | 6.8 | n.c. | n.c. | 0.33 | 17 | 0.86 |
| Sequatchie, Sandy loam | 0.9 | 7.7 | n.c. | n.c. | 0.16 | 17 | 1.36 |
| Cajon, Loamy sand | 0.4 | 6.4 | n.c. | n.c. | 0.12 | 30 | 0.91 |

**Soil adsorption transformation products (Regulation (EU) N° 283/2013, Annex Part A, point 7.1.3.1.2 and Regulation (EU) N° 284/2013, Annex Part A, point 9.1.2.1)**

**Saccharin (CGA 27913)**

| Soil Type | OC % | Soil pH<sup>a</sup> | K<sub>d</sub> (mL/g) | K<sub>doc</sub> (mL/g) | K<sub>f</sub> (mL/g) | K<sub>Foc</sub> (mL/g) | 1/n |
|-----------|------|---------------------|-------------------|------------------|-----------------|-----------------|-----|
| Maryland, Clay | 2.8 | 5.9 | n.c. | n.c. | 0.09 | 3 | 0.94 |
| Maryland, Sand | 0.5 | 6.5 | n.c. | n.c. | 0 | 0 | - | - |
| Maryland, Sandy loam | 1.1 | 7.5 | n.c. | n.c. | 0.03 | 3 | 1.05 |
| Soil Type               | OC % | Soil pH<sup>a</sup> | K<sub>d</sub> (mL/g) | K<sub>doc</sub> (mL/g) | K<sub>F</sub> (mL/g) | K<sub>Foc</sub> (mL/g) | 1/n  |
|------------------------|------|---------------------|---------------------|-----------------------|---------------------|-----------------------|------|
| California, Loam       | 0.5  | 6.7                 | n.c.                | n.c.                  | 0.03                | 6                     | 0.53 |
| Gross-Umstadt, Silt loam | 1.2  | 7.7                 | -                   | -                     | -                   | 20                    | 0.94 |
| Arrow, Sandy loam      | 2.3  | 5.7                 | -                   | -                     | -                   | 14                    | 0.88 |
| Mattapex, Silt loam    | 2.6  | 6.4                 | -                   | -                     | -                   | 12                    | 0.94 |
| Speyer 2.1, Sand       | 0.56 | 6                   | -                   | -                     | -                   | 1.8                   | 0.92 |
| soil 115, Clay loam    | 1.7  | 7.4                 | -                   | -                     | -                   | 2.2                   | 0.71 |
| soil 164, Silt loam    | 3    | 6.5                 | -                   | -                     | -                   | 4.2                   | 0.93 |
| soil 243, Sandy loam   | 1.1  | 4.3                 | -                   | -                     | -                   | 4                     | 1.01 |
| BBA 2.2, Loamy sand    | 2.5  | 6.1                 | -                   | -                     | -                   | 5.2                   | 0.95 |
| Hofchen, Silt loam     | 2.7  | 7.8                 | -                   | -                     | -                   | 4.6                   | 0.94 |
| Laacherhof, Silt loam  | 0.86 | 8.1                 | -                   | -                     | -                   | 5.2                   | 0.97 |
| Ephrata, Loamy sand    | 0.37 | 6.8                 | -                   | -                     | -                   | 6.7                   | 0.95 |
| Stilwell, Silty clay loam | 1.6  | 6.7                 | -                   | -                     | -                   | 15.5                  | 0.92 |

Geometric mean (if not pH dependent)*
Arithmetic mean (if not pH dependent)

pH dependence, No

- Measured in unknown medium
- Taken into account as 1 for the arithmetic mean
* Only relevant after implementation of the published EFSA guidance.

### C1801

| Soil Type               | OC % | Soil pH<sup>a</sup> | K<sub>d</sub> (mL/g) | K<sub>doc</sub> (mL/g) | K<sub>F</sub> (mL/g) | K<sub>Foc</sub> (mL/g) | 1/n  |
|------------------------|------|---------------------|---------------------|-----------------------|---------------------|-----------------------|------|
| 824-3, Sandy loam      | 1.2  | 7.4                 | n.c.                | n.c.                  | 0.6                 | 54                    | 0.90 |
| 824-4, Loamy sand      | 0.3  | 6.2                 | n.c.                | n.c.                  | 6.2                 | 2124                  | 0.75 |
| 824-1, Silt loam       | 1.2  | 6.7                 | n.c.                | n.c.                  | 2.3                 | 213                   | 0.79 |
| 824-2, Clay            | 1.7  | 6.5                 | n.c.                | n.c.                  | 2.7                 | 170                   | 0.75 |

Geometric mean (if not pH dependent)*
Arithmetic mean (if not pH dependent)

pH dependence, No

- Measured in unknown medium
* Only relevant after implementation of the published EFSA guidance.

### CGA 179710

| Soil Type               | OC % | Soil pH<sup>a</sup> | K<sub>d</sub> (mL/g) | K<sub>doc</sub> (mL/g) | K<sub>F</sub> (mL/g) | K<sub>Foc</sub> (mL/g) | 1/n  |
|------------------------|------|---------------------|---------------------|-----------------------|---------------------|-----------------------|------|
| 824-3, Sandy loam      | 1.2  | 7.4                 | n.c.                | n.c.                  | 1.5                 | 143                   | 0.77 |
| 824-4, Loamy sand      | 0.3  | 6.2                 | n.c.                | n.c.                  | 1.7                 | 601                   | 0.78 |
| 824-1, Silt loam       | 1.2  | 6.7                 | n.c.                | n.c.                  | 2.0                 | 185                   | 0.82 |
| 824-2, Clay            | 1.7  | 6.5                 | n.c.                | n.c.                  | 2.3                 | 147                   | 0.76 |

Geometric mean (if not pH dependent)*
Arithmetic mean (if not pH dependent)

pH dependence, No

- Measured in unknown medium
* Only relevant after implementation of the published EFSA guidance.

### M3

Data gap

### CGA 171895 (M5)

Data gap

### CGA 297691

Data gap

### MT6

Data gap
Mobility in soil column leaching active substance (Regulation (EU) N° 283/2013, Annex Part A, point 7.1.4.1.1 and Regulation (EU) N° 284/2013, Annex Part A, point 9.1.2.1)

| Parameter                                      | Value                              |
|------------------------------------------------|------------------------------------|
| Elution (mm)                                   | 300 mm                             |
| Time period (d)                                 | < 1 d (lowest value of 28 tests)   |
| Leachate: 94.5 % total residues/radioactivity in leachate (highest value of 28 tests) |                                     |
| 91.5 % active substance, 2.6 % C1801            |                                     |
| 0 % total residues/radioactivity retained in top 30 cm (lowest value of 28 tests) |                                     |

Lysimeter / field leaching studies (Regulation (EU) N° 283/2013, Annex Part A, points 7.1.4.2 / 7.1.4.3 and Regulation (EU) N° 284/2013, Annex Part A, points 9.1.2.2 / 9.1.2.3)

| Parameter                                      | Value                              |
|------------------------------------------------|------------------------------------|
| Location                                       | North Carolina                     |
| Study type (e.g. lysimeter, field)              | lysimeter                          |
| Soil properties                                | texture loamy sand to sandy clay loam, pH 5.6-6.6, OC 0.1-0.8%, Field capacity = 10.37-17.81% |
| Dates of application                           | June 23, 1993                      |
| Number of applications                         | 1 year, 1 applications per year    |
| Duration                                       | 367 days                           |
| Application rate                               | 117 g/ha/year                      |
| Average annual rainfall (mm)                   | 4 mm                               |
| Average annual leachate volume (mm)            | 12.9 liters                        |
| % radioactivity in leachate (maximum/year)     | 1.2% AR                            |
| Individual annual maximum: 0.7 µg/L active substance |                                        |
| Analyses for individual constituents in the leachates could not be performed. |                                        |
| Amount of radioactivity in the soils at the end of the study = 8.4% AR; 0.62 % AR as parent, 7.78 % AR as C1801 |                                        |
| Location                                       | North Carolina                     |
| Study type (e.g. lysimeter, field)              | field                              |
| Soil properties                                | texture, pH=5-6, OC<0.6%, MWHC unknown |
| Dates of application                           | June 23, 1993                      |
| Crop: soybean /Interception estimated: 0%       | (incorporation into soil)          |
Number of applications: 1 year, 1 application per year
Duration: 365 d
Application rate: 224 g/ha/year
Average annual rainfall (mm): 741 mm
\% radioactivity in leachate (maximum/year): 0 %

Individual annual maximum concentrations of all the substances were below the limit of detection (0.1 ppb), except for a single sample that was considered as contaminated. That sample was therefore not considered as valid.

Amount of radioactivity in the soils at the end of the study was below the limit of detection

Location: Wisconsin
Study type (e.g. lysimeter, field): field
Soil properties: texture, pH=5.7-6.8, OC<0.7%, MWHC unknown
Dates of application: June 22, 1994
Crop: soybean /Interception estimated: 0% (incorporation into soil)
Number of applications: 1 year, 1 application per year
Duration: 763 d
Application rate: 224 g/ha/year
Average annual rainfall (mm): 1002 mm

Oxasulfuron: no detections in any soil-pore water or groundwater samples through 736 DAA.
CGA 177288: no detections in any soil-pore water samples through 736 DAA. A single detection in groundwater (0.17 µg/l).
C 1801: one single pore water detection (0.12 µg/l). No groundwater detections.
saccharin (CGA 27913): sporadic low level detections (up to 0.4 µg/l) in soil-pore water at all depths through 490 DAA, as well as prior to the application (0.1 - 0.3 µg/l). Occasionally present in groundwater samples (up to 3 µg/l). 8 out of 12 samples taken before treatment contained residues of up to 1.5 µg/l.

Amount of radioactivity in the soils at the end of the study was below the limit of detection
Hydrolytic degradation (Regulation (EU) N° 283/2013, Annex Part A, point 7.2.1.1)

Hydrolytic degradation of the active substance and metabolites > 10 %

| pH 5: 6.3-17.2 d at 25-20 °C (pseudo-1st order, r²=0.998, χ²=2.6) | CGA 27913: 95.3 % AR (30 d) |
|---------------------------------------------------------------|-----------------------------|
| C1801: 95.3 % AR (30 d)                                      | CGA 297691: 93 % AR (30d)   |
| pH 7: 8.3-22.7 d at 25-20 °C (pseudo-1st order, r²=0.999, χ²=2.7) | CGA 27913: 89.4 % AR (30 d) |
| C1801: 90.8 % AR (30d)                                      | CGA 297691: 88 % AR (30d)   |
| pH 9: 8.2-22.0 d at 25-20 °C (pseudo-1st order, r²=0.997, χ²=2.4) | CGA 27913: 87.2 % AR (30 d) |
| C1801: 88.2 % AR (30d)                                      | CGA 297691: 88.6 % AR (30d) |

Aqueous photochemical degradation (Regulation (EU) N° 283/2013, Annex Part A, points 7.2.1.2 / 7.2.1.3)

Photolytic degradation of active substance and metabolites above 10 %

| DT₅₀: 3-4 d | C1801: 51 % AR (7 d) |
|------------|---------------------|
| saccharin (CGA 27913): 37 % AR (30 d) | CGA 297691: 91 % AR (30 d) |

Estimated DT₅₀ at 40°N 4.7 days in mid summertime
Estimated DT₅₀ at 40°N 8.8 days in mid springtime
Estimated DT₅₀ at 50°N 11.4 days in mid summertime
Estimated DT₅₀ at 50°N 16.5 days in mid springtime

Quantum yield of direct phototransformation in water at Σ > 290 nm

7.57 · 10⁻³ mol · Einstein⁻¹ at pH 4
5.33 · 10⁻² mol · Einstein⁻¹ at pH 9

‘Ready biodegradability’ (Regulation (EU) N° 283/2013, Annex Part A, point 7.2.2.1)

Readily biodegradable
(Yes/no)

No

Aerobic mineralisation in surface water (Regulation (EU) N° 283/2013, Annex Part A, point 7.2.2.2 and Regulation (EU) N° 284/2013, Annex Part A, point 9.2.1.1)

Oxasulfuron

| System identifier (indicate fresh, estuarine or marine) | pH water phase | t°C | DT₅₀ / DT₉₀ Water (pelagic test) | St. (χ²) | Method of calculation |
|--------------------------------------------------------|----------------|-----|---------------------------------|----------|----------------------|
|                                                        |                |     |                                 |          |                      |
| System identifier (indicate fresh, estuarine or marine) | pH water phase | Mineralisation x % after 30 d (end of the study) | Non-extractable residues. max x % after n d (suspended sediment test) | Non-extractable residues. max x % after n d (end of the study) (suspended sediment test) |
|------------------------------------------------------|----------------|-------------------------------------------------|-------------------------------------------------------------------|-------------------------------------------------------------------|
| Fresh, first label 9.4 μg/L appl                      | 7.9            | 3.2                                            | Not reported                                                      | Not reported                                                      |
| Fresh, first label 93.1 μg/L appl                     | 7.9            | 0.4                                            | Not reported                                                      | Not reported                                                      |
| Fresh, second label 10.3 μg/L appl                    | 7.9            | 0.8                                            | Not reported                                                      | Not reported                                                      |
| Fresh, second label 105.9 μg/L appl                   | 7.9            | 0.1                                            | Not reported                                                      | Not reported                                                      |

**Water / sediment study (Regulation (EU) Nº 283/2013, Annex Part A, point 7.2.2.3 and Regulation (EU) Nº 284/2013, Annex Part A, point 9.2.2)**

**Oxasulfuron**

| Water / sediment system   | Distribution (total radiocarbon max in water 101.0% after 0 d. Max. sed 56.4 % after 57 d) | Method of calculation |
|---------------------------|--------------------------------------------------------------------------------------------|----------------------|
|                           | Water / sediment system | pH water phase a) | pH sed b) | t °C a) | DT₅₀/DT₉₀ whole sys. | St. (χ²) | DT₅₀/DT₉₀ wate r | St. (χ²) | DT₅₀/DT₉₀ sed | St. (χ²) | Method of calculation |
| Rhine river-a             | 8.3                      | 7             | 19.4      | 20.4/83.1 | 3               | n.c.     | n.c.     | n.c.     | n.c.     | FOMC     |                     |
| Rheinfelden pond          | 8.6                      | 7.3           | 19.3      | 19.5/64.8 | 5.6             | n.c.     | n.c.     | n.c.     | n.c.     | SFO      |                     |
| Rhine river-b             | 8.6                      | 7.4           | 19.6      | 21.5/71.3 | 5.7             | n.c.     | n.c.     | n.c.     | n.c.     | SFO      |                     |

**Geometric mean at 20°C**

| Geometric mean at 20°C | 21.9 |

a) Temperature of incubation
b) Normalised using a Q10 of 2.58 to the temperature of the environmental media at the point of sampling. (note temp of x should be stated).
Metabolite C1801

Distribution unknown. Max in total system 66.7 % after 120 days, kinetic formation fraction \((k_t / k_{dp})\): 0.85 in pond experiment, 0.88 in river experiment from oxasulfuron. Whole system calculation.

| Water / sediment system | pH water phase | pH sed | t. °C | DT\(_{50}\) / DT\(_{90}\) whole sys. | St. \((\chi^2)\) | DT\(_{50}\) / DT\(_{90}\) wate r | St. \((\chi^2)\) | DT\(_{50}\) / DT\(_{90}\) sed | St. \((\chi^2)\) | Method of calculation |
|-------------------------|----------------|--------|------|-------------------------------|------------------|-----------------|-----------------|------------------|------------------|-------------------|
| Rheinfelden pond        | 8.6            | 7.3    | 19.3 | 108/359                       | 7.1              | n.c.            | n.c.            | n.c.             | SFO+SFO          |
| Rhine river-b           | 8.6            | 7.45   | 19.6 | 232/772                       | 3.7              | n.c.            | n.c.            | n.c.             | DFOP+SFO\(b\)   |

Geometric mean at 20°C\(c\) 158.3

\(a\) Measured in [medium to be stated, usually calcium chloride solution or water]

\(b\) Normalised using a Q10 of 2.58

\(c\) Excluding latest time-step

Mineralisation and non extractable residues (from parent dosed experiments)

| Water / sediment system | pH water phase | pH sed | Mineralisation x % after n d. (end of the study) | Non-extractable residues in sed. max x % after n d | Non-extractable residues in sed. max x % after n d (end of the study) |
|-------------------------|----------------|--------|-----------------------------------------------|-------------------------------------------------|------------------------------------------------------------------|
| Rhine river-a           | 8.3            | 7      | 72.8% after 182 d                             | 24.6% after 56 d                                | 20.9% after 182 d                                               |
| Rheinfelden pond        | 8.6            | 7.3    | 33.25% after 180 d                            | 24.6% after 180 d                               | 24.6% after 180 d                                               |
| Rhine river-b           | 8.6            | 7.45   | 53.86% after 180 d                            | 19.65% after 180 d                              | 19.65% after 180 d                                              |

\(a\) During equilibration and incubation

\(b\) Measured in KCl

Fate and behaviour in air (Regulation (EU) N° 283/2013, Annex Part A, point 7.3.1)

| Direct photolysis in air | Not studied - no data requested |
| -------------------------|---------------------------------|
| Photochemical oxidative degradation in air | \(DT_{50}\) of 3-15 hours derived by the Atkinson model (version unknown), OH (12 h) concentration assumed = 1.5 \times 106 OH-radicals . cm\(^{-3}\) |
| Volatilisation | from plant surfaces (BBA guideline): considered as not relevant, in agreement with the Henry's law constant of <3.2 \times 10^{-5} Pa . m3 . mole-1 (20°C, calculated from vapour pressure and water solubility) |
| | from soil surfaces (BBA guideline): considered as not relevant, in agreement with the Henry's law constant of <3.2 \times 10^{-5} Pa . m3 . mole-1 (20°C, calculated from vapour pressure and water solubility) |
| Metabolites | No metabolites expected |
Residues requiring further assessment (Regulation (EU) No 283/2013, Annex Part A, point 7.4.1)

Environmental occurring residues requiring further assessment by other disciplines (toxicology and ecotoxicology) and or requiring consideration for groundwater exposure

| Soil: Oxasulfuron, saccharin (CGA 27913), C1801, M3, M5 (CGA 171895), CGA 179710, CGA 297691, MT6 |
| Surface water: Oxasulfuron, saccharin (CGA 27913), C1801, M3, M5 (CGA 171895), CGA 179710, CGA 297691, guanidine, 3-guanidine-1-butene, MT6 |
| Sediment: Oxasulfuron, saccharin (CGA 27913), C1801, M3, M5 (CGA 171895), CGA 179710, CGA 297691, MT6 |
| Ground water: Oxasulfuron, saccharin (CGA 27913), C1801, M3, M5 (CGA 171895), CGA 179710, CGA 297691, MT6 |
| Air: Oxasulfuron |

Definition of the residue for monitoring (Regulation (EU) No 283/2013, Annex Part A, point 7.4.2)

| Soil: Oxasulfuron (CGA-277476) |
| Water: Oxasulfuron (CGA-277476) |
| Groundwater: Oxasulfuron (CGA-277476), M3 |

Monitoring data, if available (Regulation (EU) No 283/2013, Annex Part A, point 7.5)

| Soil (indicate location and type of study) | None available from formal monitoring requests at EU or national level |
| Surface water (indicate location and type of study) | None available from formal monitoring requests at EU or national level |
| Ground water (indicate location and type of study) | None available from formal monitoring requests at EU or national level |
| Air (indicate location and type of study) | None available from formal monitoring requests at EU or national level |

PEC soil (Regulation (EU) No 284/2013, Annex Part A, points 9.1.3 / 9.3.1)

| Oxasulfuron |
| Method of calculation |
| DT\text{soil} (d): 29.3 days |
| Kinetics: SFO |
| Field or Lab: representative worst case from lab studies |
Application data

| PEC(s) (mg/kg) | Single application Actual | Single application Time weighted average | Multiple application Actual | Multiple application Time weighted average |
|----------------|---------------------------|----------------------------------------|-----------------------------|----------------------------------------|
| Initial        | 0.065                     | -                                      | -                           | -                                      |
| Short term 24h | 0.063                     | 0.064                                  | -                           | -                                      |
| 2d             | 0.062                     | 0.063                                  | -                           | -                                      |
| 4d             | 0.059                     | 0.062                                  | -                           | -                                      |
| Long term 7d   | 0.055                     | 0.060                                  | -                           | -                                      |
| 28d            | 0.034                     | 0.048                                  | -                           | -                                      |
| 50d            | 0.020                     | 0.038                                  | -                           | -                                      |
| 100d           | 0.006                     | 0.025                                  | -                           | -                                      |

Plateau concentration 0.000 mg/kg

saccharin (CGA 27913)
Method of calculation
Molecular weight relative to the parent: 183.0/406.4 g/mol
DT_{50} (d): 237.4 days
Kinetics: SFO
Field or Lab: representative worst case from lab studies.

Application data
Application rate assumed: 33.27 g/ha (assumed CGA 27913 is formed at a maximum of 98.5 % of the applied dose)

| PEC(s) (mg/kg) | Single application Actual | Single application Time weighted average | Multiple application Actual | Multiple application Time weighted average |
|----------------|---------------------------|----------------------------------------|-----------------------------|----------------------------------------|
| Initial        | 0.029                     | -                                      | -                           | -                                      |
| Short term 24h | 0.029                     | 0.029                                  | -                           | -                                      |
| 2d             | 0.029                     | 0.029                                  | -                           | -                                      |
| 4d             | 0.028                     | 0.029                                  | -                           | -                                      |
| Long term 7d   | 0.028                     | 0.029                                  | -                           | -                                      |
| 28d            | 0.027                     | 0.028                                  | -                           | -                                      |
| 50d            | 0.025                     | 0.027                                  | -                           | -                                      |
| 100d           | 0.022                     | 0.025                                  | -                           | -                                      |

Plateau concentration 0.004 mg/kg
### C1801

**Method of calculation**

- Molecular weight relative to the parent: 123.0/406.4 g/mol
- DT$_{50}$ (d): 468 days
- Kinetics: SFO+SFO
- Field or Lab: lab

**Application data**

- Application rate assumed: 12.48 g/ha (assumed C1801 is formed at a maximum of 55 % of the applied dose)

| PEC$_{(s)}$ (mg/kg) | Single application Actual | Single application Time weighted average | Multiple application Actual | Multiple application Time weighted average |
|--------------------|--------------------------|----------------------------------------|-----------------------------|----------------------------------------|
| Initial            | 0.011                    | -                                      | -                           | -                                      |
| Short term 24h     | 0.011                    | 0.011                                  | -                           | -                                      |
| 2d                 | 0.011                    | 0.011                                  | -                           | -                                      |
| 4d                 | 0.011                    | 0.011                                  | -                           | -                                      |
| Long term 7d       | 0.011                    | 0.011                                  | -                           | -                                      |
| 28d                | 0.010                    | 0.011                                  | -                           | -                                      |
| 50d                | 0.010                    | 0.010                                  | -                           | -                                      |
| 100d               | 0.010                    | 0.010                                  | -                           | -                                      |
| Plateau concentration |                       | 0.004 mg/kg after 4 yr                |                             |                                         |

### M3

**Method of calculation**

- Molecular weight relative to the parent: 436/406.4 g/mol
- DT$_{50}$ (d): 1000 days
- Kinetics: -
- Field or Lab: worst case assumption

**Application data**

- Application rate assumed: 20.12 g/ha (assumed M3 is formed at a maximum of 25 % of the applied dose)

| PEC$_{(s)}$ (mg/kg) | Single application Actual | Single application Time weighted average | Multiple application Actual | Multiple application Time weighted average |
|--------------------|--------------------------|----------------------------------------|-----------------------------|----------------------------------------|
| Initial            | 0.017                    | -                                      | -                           | -                                      |
| Short term 24h     | 0.017                    | 0.017                                  | -                           | -                                      |
| 2d                 | 0.017                    | 0.017                                  | -                           | -                                      |
| 4d                 | 0.017                    | 0.017                                  | -                           | -                                      |
| Long term 7d       | 0.017                    | 0.017                                  | -                           | -                                      |
| 28d                | 0.017                    | 0.017                                  | -                           | -                                      |
| 50d                | 0.017                    | 0.017                                  | -                           | -                                      |
| 100d               | 0.016                    | 0.017                                  | -                           | -                                      |
| Plateau concentration |                       | 0.015 mg/kg after 6 yr                |                             |                                         |
| Concentration | Molecular weight relative to the parent: 124/406.4 g/mol | DT$_{50}$ (d): 1000 days | Kinetics: - | Field or Lab: worst case assumption |
|---|---|---|---|---|
| CGA 171895 (M5) Method of calculation | Application rate assumed: 2.33 g/ha (assumed M5 is formed at a maximum of 10.2 % of the applied dose) | | | |

| **PEC$_{(s)}$ (mg/kg)** | **Single application Actual** | **Single application Time weighted average** | **Multiple application Actual** | **Multiple application Time weighted average** |
|---|---|---|---|---|
| Initial | 0.002 | - | - | - |
| Short term 24h | 0.002 | 0.002 | - | - |
| 2d | 0.002 | 0.002 | - | - |
| 4d | 0.002 | 0.002 | - | - |
| Long term 7d | 0.002 | 0.002 | - | - |
| 28d | 0.002 | 0.002 | - | - |
| 50d | 0.002 | 0.002 | - | - |
| 100d | 0.002 | 0.002 | - | - |
| Plateau concentration | 0.002 mg/kg | | | |

| Concentration | Molecular weight relative to the parent: 166/406.4 g/mol | DT$_{50}$ (d): 1000 days | Kinetics: - | Field or Lab: worst case assumption |
|---|---|---|---|---|
| CGA 179710 Method of calculation | Application rate assumed: 8.42 g/ha (assumed CGA 179710 is formed at a maximum of 27.5 % of the applied dose) | | | |

| **PEC$_{(s)}$ (mg/kg)** | **Single application Actual** | **Single application Time weighted average** | **Multiple application Actual** | **Multiple application Time weighted average** |
|---|---|---|---|---|
| Initial | 0.007 | - | - | - |
| Short term 24h | 0.007 | 0.007 | - | - |
| 2d | 0.007 | 0.007 | - | - |
| 4d | 0.007 | 0.007 | - | - |
| Long term 7d | 0.007 | 0.007 | - | - |
| 28d | 0.007 | 0.007 | - | - |
| 50d | 0.007 | 0.007 | - | - |
| 100d | 0.007 | 0.007 | - | - |
| Plateau concentration | 0.006 mg/kg | | | |
CGA 297691
Method of calculation
Molecular weight relative to the parent: 74.1/406.4 g/mol
DT$_{50}$ (d): 1000 days
Kinetics:
Field or Lab: worst case assumption

Application data
Application rate assumed: 2.87 g/ha (assumed CGA 297691 is formed at a maximum of 21 % of the applied dose)

| PEC$_{(s)}$ (mg/kg) | Single application Actual | Single application Time weighted average | Multiple application Actual | Multiple application Time weighted average |
|---------------------|---------------------------|----------------------------------------|-----------------------------|------------------------------------------|
| Initial             | 0.002                     | -                                      | -                           | -                                        |
| Short term 24h      | 0.002                     | 0.002                                  | -                           | -                                        |
| 2d                  | 0.002                     | 0.002                                  | -                           | -                                        |
| 4d                  | 0.002                     | 0.002                                  | -                           | -                                        |
| Long term 7d        | 0.002                     | 0.002                                  | -                           | -                                        |
| 28d                 | 0.002                     | 0.002                                  | -                           | -                                        |
| 50d                 | 0.002                     | 0.002                                  | -                           | -                                        |
| 100d                | 0.002                     | 0.002                                  | -                           | -                                        |
| Plateau concentration | 0.002 mg/kg               | -                                      | -                           | -                                        |

Data gap

PEC ground water (Regulation (EU) N° 284/2013, Annex Part A, point 9.2.4.1)
Method of calculation and type of study (e.g. modelling, field leaching, lysimeter)
For FOCUS gw modelling,
Modelling using FOCUS model(s), with appropriate FOCUSgw scenarios, according to FOCUS guidance.
Model(s) used: FOCUS PEARL v. 4.4.4, FOCUS PELMO v. 5.5.3
Crop: soybeans
Crop uptake factor: 0
Oxasulfuron
Water solubility (mg/L): 1700 at pH 7 and 25°C
Vapour pressure: 0 Pa at 25°C
DT$_{50}$ lab: 9.4 d (geometric mean, normalisation to pF2, 20 °C with Q10 of 2.58 and Walker equation coefficient 0.7).
K$_{OC}$: 17 mL/g (worst case), $1/n= 1.36$ (arithmetic mean).
Metabolites:
saccharin (CGA 27913)
DT$_{50}$ lab: 24.7d (geometric mean, normalisation to pF2, 20 °C with Q10 of 2.58 and Walker equation coefficient 0.7).
coefficients 0.7).
\( K_{OC} \): 6.7mL/g (arithmetic mean), \( \frac{1}{n} = 0.91 \) (arithmetic mean).
Formation fraction: 0.86 from oxasulfuron

C1801
\( DT_{50} \): 26.6 d (geometric mean).
\( K_{OC} \): 640 mL/g (arithmetic mean), \( \frac{1}{n} = 0.8 \) (arithmetic mean).
Formation fraction: 1\(^{st} \) from oxasulfuron

CGA 179710
\( DT_{50} \): 1000 d (worst-case default value).
\( K_{OC} \): 269 mL/g (arithmetic mean), \( \frac{1}{n} = 0.78 \) (arithmetic mean).
Formation fraction: 1 from oxasulfuron

CGA 297691
\( DT_{50} \): 1000 d (worst-case default value).
\( K_{OC} \): 0 mL/g (worst case default value), \( \frac{1}{n} = 1 \).
Formation fraction: 1 from oxasulfuron

CGA 171895 (M5)
Data gap

M3
Data gap

MT6
Data gap

For field and lysimeter studies
Location: North Carolina
Study type (e.g. lysimeter, field): lysimeter
Soil properties: pH 5.6-6.6, OC 0.1-0.8%, Field capacity = 10.37-17.81%
Dates of application: June 23, 1993
Number of applications: 1 year, 1 application per year
Duration: 367 days.
Average annual rainfall (mm): 4 mm
Average annual leachate volume (mm): 12.9 liters

Location: North Carolina
Study type (e.g. lysimeter, field): field
Soil properties: pH=5-6, OC<0.6%, MWHC unknown
Dates of application: June 23, 1993
Crop: soybean /Interception estimated: 0% (incorporation into soil)
Number of applications: 1 year, 1 application per...
Application rate

- Gross application rate: 75 g/ha.
- Crop growth stage: BBCH 10-14
- Canopy interception %: 35\(^{(b)}\)
- Application rate net of interception: 48.75 g/ha.
- No. of applications: 1
- Time of application (absolute or relative application dates): 1, 10 and 20 days after emergence (relative applications)

\(^{(a)}\) a value of 0.57 should be used for future calculations
\(^{(b)}\) canopy interception was specified in calculations performed by the applicant, while was calculated by the model in PEC\(_{gw}\) calculations for M3 (one application every third year) and CGA 297691 performed by the RMS

### PEC(gw) - FOCUS modelling results (80\(^{th}\) percentile annual average concentration at 1m)

| PELMO 5.5.3 / Soybeans | Scenario (annual appl) | Oxasulfuron (µg/L) | Metabolites (µg/L) |
|-------------------------|------------------------|--------------------|--------------------|
|                         |                        | CGA 27913 | C1801  |
| Piacenza, 1 day after emergence | 0.007                  | 0.449   | 0.000   |
| Piacenza, 10 days after emergence | 0.005                  | 0.472   | 0.000   |
| Piacenza, 20 days after emergence | 0.006                  | 0.471   | 0.000   |
### PELMO 5.5.3 / Soybeans

| Scenario (appl every third year) | Oxasulfuron (µg/L) | C1801 | CGA 27913 |
|---------------------------------|--------------------|-------|-----------|
| Piacenza, 1 day after emergence | n.c.               | 0.182 | n.c.      |
| Piacenza, 10 days after emergence | n.c.               | 0.177 | n.c.      |
| Piacenza, 20 days after emergence | n.c.               | 0.184 | n.c.      |

### PEARL 4.4.4 / Soybeans

#### Scenario (annual appl)

| Oxasulfuron (µg/L) | C1801 | CGA 27913 |
|--------------------|-------|-----------|
| Piacenza, 1 day after emergence | 0.005 | 0.291     |
| Piacenza, 10 days after emergence | 0.004 | 0.362     |
| Piacenza, 20 days after emergence | 0.005 | 0.208     |

#### Scenario (appl every third year)

| Oxasulfuron (µg/L) | C1801 | CGA 27913 |
|--------------------|-------|-----------|
| Piacenza, 1 day after emergence | n.c. | 0.075     |
| Piacenza, 10 days after emergence | n.c. | 0.099     |
| Piacenza, 20 days after emergence | n.c. | 0.132     |

n.c. not calculated since an acceptable risk was found with annual applications

### PELMO 5.5.3 / Soybeans

| Scenario (annual appl) | Metabolites (µg/L) |
|------------------------|--------------------|
|                        | CGA 179710 | CGA 297691 |
| Piacenza, 1 day after emergence | 0.042 | 2.436     |
| Piacenza, 10 days after emergence | 0.038 | 2.437     |
| Piacenza, 20 days after emergence | 0.050 | 2.448     |

### PELMO 5.5.3 / Soybeans

| Scenario (appl every third year) | Metabolites (µg/L) |
|---------------------------------|--------------------|
|                                | CGA 179710 | CGA 297691 |
| Piacenza, 1 day after emergence | n.c.       | 1.270      |
| Piacenza, 10 days after emergence | n.c.   | 1.251      |
| Piacenza, 20 days after emergence | n.c.   | 1.251      |
### PEARL 4.4.4 / Soybeans

#### Scenario (annual appl)

|                | Metabolites (µg/L) |       |       |
|----------------|--------------------|-------|-------|
|                | CGA 179710         | CGA 297691 |
| Piacenza, 1 day after emergence | 0.039 | 2.982 |
| Piacenza, 10 days after emergence | 0.039 | 2.989 |
| Piacenza, 20 days after emergence | 0.048 | 3.004 |

#### Scenario (appl every third year)

|                | Metabolites (µg/L) |       |       |
|----------------|--------------------|-------|-------|
|                | CGA 179710         | CGA 297691 |
| Piacenza, 1 day after emergence | n.c. | 1.029 |
| Piacenza, 10 days after emergence | n.c. | 1.033 |
| Piacenza, 20 days after emergence | n.c. | 1.039 |

n.c. not calculated since an acceptable risk was found with annual applications

### PEC\(_{(gw)}\) From lysimeter / field studies

|          | 1\(^{st}\) year | 2\(^{nd}\) year | 3\(^{rd}\) year |
|----------|----------------|----------------|----------------|
| Oxasulfuron | Not detected | Not detected | Not detected |
| CGA 27913 | < 0.1         | n.p.           | n.p.           |

n.p.: not performed, since study duration was too short

### PEC surface water and PEC sediment (Regulation (EU) N° 284/2013, Annex Part A, points 9.2.5 / 9.3.1)

|          | 1\(^{st}\) year | 2\(^{nd}\) year | 3\(^{rd}\) year |
|----------|----------------|----------------|----------------|
| Oxasulfuron |                 |                 |                |
| Parameters used in FOCUSsw step 1 and 2 | Version control no. of FOCUS calculator: STEPS 1-2 in FOCUS v. 3.2 | Molecular weight (g/mol): 406.4 | K\(_{OC}\)/K\(_{OM}\) (mL/g): 17/9.86 (worst case to take into account the pH effects) |
|          |                 |                 |                |
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|          |                 |                 |                |
| Parameters used in FOCUSsw step 3 and 4 | Version control no.‘s of FOCUS software: SPIN v. 2.2, SWASH v. 5.3, Drift calculator v. 1.1, MACRO v. 5.5.4, PRZM v. 4.3.1, TOXSWA v. 4.4.3 | Water solubility (mg/L): 1700 |
Application rate

Crop and growth stage: soybeans BBCH 10-14
Number of applications: 1
Interval (d): -
Application rate(s): 75 g a.s./ha
Application window:
Step 1-2: Mar-May (worst-case).
Step 3:

| Scenario | Timing           |
|----------|------------------|
|          | Early            | Late             |
| R3       | 11 May-10 Jun    | 21 May-20 Jun    |
| R4       | 11 Mar-11 Apr    | 21 Mar-20 Apr    |

| FOCUS STEP 1 Scenario | Day after overall maximum | PEC_{SW} (µg/L) Actual | PEC_{SW} (µg/L) TWA | PEC_{SED} (µg/kg) Actual | PEC_{SED} (µg/kg) TWA |
|-----------------------|---------------------------|------------------------|---------------------|--------------------------|------------------------|
|                       |                           |                        |                     |                          |                        |
| 0 h                   |                           | 25.1356                | 4.1558              |                          |                        |
| 24 h                  |                           | 24.3377                | 24.7367             | 4.1374                   | 4.1466                 |
| 2 d                   |                           | 23.5795                | 24.3467             | 4.0085                   | 4.0196                 |
| 4 d                   |                           | 22.1331                | 23.5977             | 3.7626                   | 3.9969                 |
| 7 d                   |                           | 20.1283                | 22.5336             | 3.4218                   | 3.8223                 |
| 14 d                  |                           | 16.1282                | 20.2940             | 2.7418                   | 3.4458                 |
| 21 d                  |                           | 12.9231                | 18.3515             | 2.1969                   | 3.1170                 |
| 28 d                  |                           | 10.3549                | 16.6616             | 1.7603                   | 2.8304                 |
| 42 d                  |                           | 6.6483                 | 13.8961             | 1.1302                   | 2.3609                 |

Treatments during March to May

| FOCUS STEP 2 Scenario | Day after overall maximum | PEC_{SW} (µg/L) Actual | PEC_{SW} (µg/L) TWA | PEC_{SED} (µg/kg) Actual | PEC_{SED} (µg/kg) TWA |
|-----------------------|---------------------------|------------------------|---------------------|--------------------------|------------------------|
|                       |                           |                        |                     |                          |                        |
| Southern EU           |                           | 6.4240                 | 6.2199              | 6.3219                   | 1.0574                 |
| 24 h                  |                           | 6.0303                 | 6.2235              | 1.0251                   | 1.0576                 |
| 2 d                   |                           | 5.6683                 | 6.0357              | 0.9636                   | 1.0259                 |
| 4 d                   |                           | 5.1656                 | 5.7690              | 0.8782                   | 0.9806                 |
| 7 d                   |                           | 4.1593                 | 5.2068              | 0.7071                   | 0.8851                 |
| 14 d                  |                           | 3.3490                 | 4.7178              | 0.5693                   | 0.8020                 |
| 21 d                  |                           | 2.6966                 | 4.2912              | 0.4584                   | 0.7295                 |

Vapour pressure: $2 \times 10^{-6}$ Pa at 25°C

$K_{OC}/K_{OH}$ (mL/g): 17/9.86 (worst case to take into account the pH effects)

1/n: 1.36 (worst case to take into account the pH effects)

$Q_{10}=2.58$, Walker equation coefficient 0.7

Crop uptake factor: 0
### Early application

| FOCUS STEP 3 Scenario | Water body | Day after overall maximum | PEC\textsubscript{SW} (µg/L) | PEC\textsubscript{SED} (µg/kg) |
|-----------------------|------------|---------------------------|-----------------------------|------------------------------|
|                       |            |                           | Actual | TWA  | Actual | TWA  |
| R3 stream             | 0 h        | 2.621                     | --     | 0.1506 | --     | 0.064 |
|                       | 24 h       | 0.0027                    | 1.511  | 0.046  | 0.064  | 0.090 |
|                       | 2 d        | 0.0005                    | 0.758  | 0.2972 | 0.049  | 0.066 |
|                       | 4 d        | 0.347                     | 0.379  | 0.6103 | 0.028  | 0.054 |
|                       | 7 d        | 0.000                     | 0.239  | 0.117  | 0.017  | 0.038 |
|                       | 14 d       | 0.000                     | 0.128  | 0.064  | 0.011  | 0.030 |
|                       | 21 d       | 0.000                     | 0.085  | 0.011  | 0.008  | 0.025 |
|                       | 28 d       | 0.000                     | 0.064  | 0.008  | 0.005  | 0.019 |
|                       | 42 d       | 0.000                     | 0.043  | 0.008  | 0.005  | 0.019 |
| R4 stream             | 0 h        | 0.272                     | --     | 0.008  | --     | 0.002 |
|                       | 24 h       | 0.000                     | 0.049  | 0.0209 | 0.011  | 0.004 |
|                       | 2 d        | 0.000                     | 0.024  | 0.011  | 0.001  | 0.003 |
|                       | 4 d        | 0.000                     | 0.012  | 0.001  | 0.001  | 0.002 |
|                       | 7 d        | 0.000                     | 0.007  | 0.001  | 0.001  | 0.002 |
|                       | 14 d       | < 1e-6                    | 0.003  | 0.000  | 0.000  | 0.001 |
|                       | 21 d       | < 1e-6                    | 0.002  | 0.000  | 0.000  | 0.001 |
|                       | 28 d       | < 1e-6                    | 0.002  | 0.000  | 0.000  | 0.001 |
|                       | 42 d       | < 1e-6                    | 0.001  | 0.000  | 0.000  | 0.000 |

### Late application

| FOCUS STEP 3 Scenario | Water body | Day after overall maximum | PEC\textsubscript{SW} (µg/L) | PEC\textsubscript{SED} (µg/kg) |
|-----------------------|------------|---------------------------|-----------------------------|------------------------------|
|                       |            |                           | Actual | TWA  | Actual | TWA  |
| R3 stream             | 0 h        | 0.5222                    | --     | 0.0387 | --     | 0.0209 |
|                       | 24 h       | 0.0024                    | 0.4397 | 0.0151 | 0.0108 | 0.0332 |
|                       | 2 d        | 0.0002                    | 0.2338 | 0.0108 | 0.0081 | 0.0271 |
|                       | 4 d        | 0.0001                    | 0.1170 | 0.0060 | 0.0040 | 0.0205 |
|                       | 7 d        | < 1e-6                    | 0.0669 | 0.0055 | 0.0020 | 0.0160 |
|                       | 14 d       | < 1e-6                    | 0.0372 | 0.0030 | 0.0010 | 0.0120 |
|                       | 21 d       | < 1e-6                    | 0.0292 | 0.0030 | 0.0010 | 0.0097 |
|                       | 28 d       | < 1e-6                    | 0.0237 | 0.0020 | 0.0010 | 0.0082 |
|                       | 42 d       | < 1e-6                    | 0.0159 | 0.0019 | 0.0010 | 0.0065 |
| R4 stream             | 0 h        | 0.2715                    | --     | 0.0078 | --     | 0.0021 |
|                       | 24 h       | < 1e-6                    | 0.0489 | 0.0021 | 0.0010 | 0.0040 |
|                       | 2 d        | < 1e-6                    | 0.0245 | 0.0015 | 0.0010 | 0.0029 |
|                       | 4 d        | < 1e-6                    | 0.0122 | 0.0010 | 0.0010 | 0.0021 |
|                       | 7 d        | < 1e-6                    | 0.0070 | 0.0007 | 0.0010 | 0.0016 |
|                       | 14 d       | < 1e-6                    | 0.0035 | 0.0007 | 0.0010 | 0.0011 |
|                       | 21 d       | < 1e-6                    | 0.0023 | 0.0007 | 0.0010 | 0.0008 |
|                       | 28 d       | < 1e-6                    | 0.0017 | 0.0007 | 0.0010 | 0.0007 |
|                       | 42 d       | < 1e-6                    | 0.0012 | 0.0007 | 0.0010 | 0.0005 |
### Early application

| FOCUS STEP 4 Scenario (20m vegetated filter strips) | Water body | Day after overall maximum | $\text{PEC}_{\text{SW}}$ (µg/L) Actual | $\text{PEC}_{\text{SW}}$ (µg/L) TWA | $\text{PEC}_{\text{SED}}$ (µg/kg) Actual | $\text{PEC}_{\text{SED}}$ (µg/kg) TWA |
|--------------------------------------------------|------------|--------------------------|--------------------------------------|-----------------------------------|--------------------------------------|-----------------------------------|
| R3 stream                                        | 0 h        | 0.6203                   | --                                   | 0.0346                            | --                                   | --                                |
|                                                  | 24 h       | 0.0006                   | 0.356                                | 0.0146                            | 0.0267                               |                                   |
|                                                  | 2 d        | 0.0001                   | 0.1788                               | 0.0105                            | 0.0021                               |                                   |
|                                                  | 4 d        | 0.0770                   | 0.08942                              | 0.0110                            | 0.0151                               |                                   |
|                                                  | 7 d        | 0.0000                   | 0.05589                              | 0.0063                            | 0.0122                               |                                   |
|                                                  | 14 d       | 0.0000                   | 0.02892                              | 0.0038                            | 0.0086                               |                                   |
|                                                  | 21d        | 0.0000                   | 0.01928                              | 0.0026                            | 0.0068                               |                                   |
|                                                  | 28 d       | 0.0000                   | 0.01446                              | 0.0019                            | 0.0057                               |                                   |
|                                                  | 42 d       | 0.0000                   | 0.009667                             | 0.0012                            | 0.0043                               |                                   |
| R4 stream                                        | 0 h        | 0.0316                   | --                                   | 0.0009                            | --                                   | --                                |
|                                                  | 24 h       | 0.0000                   | 0.0057                               | 0.0002                            | 0.0005                               |                                   |
|                                                  | 2 d        | < 1e-6                   | 0.0028                               | 0.0002                            | 0.0003                               |                                   |
|                                                  | 4 d        | < 1e-6                   | 0.0014                               | 0.0001                            | 0.0002                               |                                   |
|                                                  | 7 d        | < 1e-6                   | 0.0008                               | 0.0001                            | 0.0002                               |                                   |
|                                                  | 14 d       | < 1e-6                   | 0.0004                               | 0.0000                            | 0.0001                               |                                   |
|                                                  | 21 d       | < 1e-6                   | 0.0003                               | 0.0000                            | 0.0001                               |                                   |
|                                                  | 28 d       | < 1e-6                   | 0.0002                               | 0.0000                            | 0.0001                               |                                   |
|                                                  | 42 d       | < 1e-6                   | 0.0001                               | 0.0000                            | 0.0001                               |                                   |

### Late application

| FOCUS STEP 4 Scenario (20m vegetated filter strips) | Water body | Day after overall maximum | $\text{PEC}_{\text{SW}}$ (µg/L) Actual | $\text{PEC}_{\text{SW}}$ (µg/L) TWA | $\text{PEC}_{\text{SED}}$ (µg/kg) Actual | $\text{PEC}_{\text{SED}}$ (µg/kg) TWA |
|--------------------------------------------------|------------|--------------------------|--------------------------------------|-----------------------------------|--------------------------------------|-----------------------------------|
| R3 stream                                        | 0 h        | 0.1249                   | --                                   | 0.0088                            | --                                   | --                                |
|                                                  | 24 h       | 0.0278                   | 0.1061                               | 0.0048                            | 0.0076                               |                                   |
|                                                  | 2 d        | 0.0001                   | 0.0564                               | 0.0034                            | 0.0062                               |                                   |
|                                                  | 4 d        | 0.0000                   | 0.0282                               | 0.0024                            | 0.0047                               |                                   |
|                                                  | 7 d        | 0.0000                   | 0.0161                               | 0.0018                            | 0.0036                               |                                   |
|                                                  | 14 d       | 0.0000                   | 0.0090                               | 0.0013                            | 0.0027                               |                                   |
|                                                  | 21d        | 0.0000                   | 0.0062                               | 0.0009                            | 0.0022                               |                                   |
|                                                  | 28 d       | 0.0000                   | 0.0051                               | 0.0006                            | 0.0018                               |                                   |
|                                                  | 42 d       | < 1e-6                   | 0.0034                               | 0.0004                            | 0.0014                               |                                   |
| R4 stream                                        | 0 h        | 0.0316                   | --                                   | 0.0009                            | --                                   | --                                |
|                                                  | 24 h       | 0.0000                   | 0.0057                               | 0.0002                            | 0.0005                               |                                   |
|                                                  | 2 d        | < 1e-6                   | 0.0028                               | 0.0002                            | 0.0003                               |                                   |
|                                                  | 4 d        | < 1e-6                   | 0.0014                               | 0.0001                            | 0.0002                               |                                   |
|                                                  | 7 d        | < 1e-6                   | 0.0008                               | 0.0001                            | 0.0002                               |                                   |
Metabolite saccharin (CGA 27913)

Parameters used in FOCUSsw step 1 and 2

| Parameters | Value |
|------------|-------|
| Molecular weight | 183.0 |
| Soil or water metabolite | soil and water |
| Koc/Kom (mL/g) | 6.7/3.9 |
| Water solubility (mg/L) | 1700 |
| DT_{50} soil (d) | 24.7 (geometric mean from lab) |
| DT_{50} water/sediment system (d) | 1000 (worst case) |
| DT_{50} water (d) | 1000 (worst case) |
| DT_{50} sediment (d) | 1000 (worst case) |
| Crop interception (%) | 35% (minimal crop cover) |
| Maximum occurrence observed (% molar basis with respect to the parent) | |
| Total Water and Sediment | 54% |
| Soil | 98.5% |

Application rate

Crop and growth stage: soybeans BBCH 10-14
Number of applications: 1
Interval (d): -
Application rate(s): 75 g a.s./ha
Application window: Mar-May and Jun-Sep.

FOCUS STEP 1 Scenario

| Day after overall maximum | PEC_{SW} (µg/L) | PEC_{SED} (µg/kg) |
|--------------------------|----------------|-------------------|
|                          | Actual         | TWA               | Actual         | TWA               |
| 0 h                      | 17.2176        | 1.1423            |
| 24 h                     | 17.2042        | 17.2109           | 1.1527         | 1.1475            |
| 2 d                      | 17.1923        | 17.2046           | 1.1519         | 1.1499            |
| 4 d                      | 17.1685        | 17.1925           | 1.1503         | 1.1505            |
| 7 d                      | 17.1328        | 17.1745           | 1.1479         | 1.1499            |
| 14 d                     | 17.0499        | 17.1329           | 1.1423         | 1.1475            |
| 21 d                     | 16.9673        | 17.0915           | 1.1368         | 1.1449            |
| 28 d                     | 16.8852        | 17.0502           | 1.1313         | 1.1422            |
| 42 d                     | 16.7222        | 16.9680           | 1.1204         | 1.1367            |

Treatments during March to May

FOCUS STEP 2 Scenario

| Day after overall maximum | PEC_{SW} (µg/L) | PEC_{SED} (µg/kg) |
|--------------------------|----------------|-------------------|
|                          | Actual         | TWA               | Actual         | TWA               |
| Southern EU              |                |                   |                |                   |
| 0 h                      | 4.7542         | ---               | 0.3183         | ---               |
| 24 h                     | 4.7504         | 4.7523            | 0.3181         | 0.3182            |
| 2 d                      | 4.7471         | 4.7505            | 0.3178         | 0.3181            |
| 4 d                      | 4.7406         | 4.7472            | 0.3174         | 0.3178            |
Peer review of the pesticide risk assessment of the active substance oxasulfuron

Molecular weight: 123.0
Soil or water metabolite: soil and water
Koc/Kom (mL/g): 640/371.2
Water solubility (mg/L): 1700
DT$_{50}$ soil (d): 26.6 days (geometric mean from lab studies)
DT$_{50}$ water/sediment system (d): 158.3 (geometric mean from sediment water studies)$^{40}$
DT$_{50}$ water (d): 158.3 (whole system)
DT$_{50}$ sediment (d): 1000 (worst case)
Crop interception (%): 35 (minimal crop cover)
Maximum occurrence observed (% molar basis with respect to the parent):
Total Water and Sediment: 67%
Soil: 55%

Parameters used in FOCUSsw step 3

Vapour pressure: 0 Pa at 20°C
Koc/Kom (mL/g): 640/371.2
1/n: 0.8
Q10=2.58, Walker equation coefficient 0.7
Crop uptake factor: 0
Metabolite kinetically generated in simulation (yes/no): yes
Formation fraction in soil ($k_f/k_{dp}$): 1
Formation fraction in sediment water ($k_f/k_{dp}$): 1

Application rate

Crop and growth stage: soybeans BBCH 10-14
Number of applications: 1
Interval (d): -
Application rate(s): 75 g a.s./ha
Application window:
Step 1-2: Mar-May.
Step 3:

| Scenario | Timing        |
|----------|---------------|
|          | Early | Late       |
| R3       | 11 May-10 Jun | 21 May-20 Jun |
| R4       | 11 Mar-11 Apr | 21 Mar-20 Apr |

Main routes of entry

Runoff

$^{40}$ Simulation with DT50water=1000d and DT50sed=158.3d is not reported since it gave higher PECsed, but no risk assessment for the sediment compartment is needed for
## FOCUS STEP 1 Scenario

| Day after overall maximum | PEC<sub>SW</sub> (µg/L) | PEC<sub>SED</sub> (µg/kg) |
|---------------------------|--------------------------|--------------------------|
|                           | Actual       | TWA        | Actual       | TWA           |
| 0 h                       | 5.0955       | 31.7202    | 32.0604      | 31.8903       |
| 24 h                      | 5.0094       | 5.0525     | 31.9203      | 31.9403       |
| 2 d                       | 4.9875       | 5.0255     | 31.7403      | 31.6406       |
| 4 d                       | 4.9441       | 31.6420    | 31.6406      | 31.6783       |
| 7 d                       | 4.8795       | 4.9597     | 31.2291      | 31.2291       |
| 14 d                      | 4.7322       | 4.8826     | 30.2864      | 31.2168       |
| 21 d                      | 4.5894       | 4.8085     | 29.3722      | 30.7535       |
| 28 d                      | 4.4509       | 4.7364     | 28.4555      | 30.2968       |
| 42 d                      | 4.1862       | 4.5966     | 26.7918      | 29.4079       |

### Treatments during March to May

| FOCUS STEP 2 Scenario | Day after overall maximum | PEC<sub>SW</sub> (µg/L) | PEC<sub>SED</sub> (µg/kg) |
|-----------------------|---------------------------|--------------------------|--------------------------|
|                       |                           | Actual       | TWA        | Actual       | TWA           |
| Northern EU           | 0 h                       | 1.3802       | 8.7421     | ---          | ---           |
|                       | 24 h                      | 1.3609       | 8.7187     | 8.7304       |
|                       | 2 d                       | 1.3573       | 8.6953     | 8.7187       |
|                       | 4 d                       | 1.3500       | 8.6489     | 8.6954       |
|                       | 7 d                       | 1.3392       | 8.5796     | 8.6606       |
|                       | 14 d                      | 1.3143       | 8.4201     | 8.5801       |
|                       | 21 d                      | 1.2899       | 8.2636     | 8.5006       |
|                       | 28 d                      | 1.2659       | 8.1101     | 8.4221       |
|                       | 42 d                      | 1.2193       | 7.8114     | 8.2680       |

### Early application

| FOCUS STEP 3 Scenario | Water body | Day after overall maximum | PEC<sub>SW</sub> (µg/L) | PEC<sub>SED</sub> (µg/kg) |
|-----------------------|------------|---------------------------|--------------------------|--------------------------|
|                       |            |                           | Actual       | TWA        | Actual       | TWA           |
| R3                    | stream     | 0 h                       | 0.1351       | 0.0609     | ---          | ---           |
|                       |            | 24 h                      | 0.0003       | 0.0559     | 0.0559       |
|                       |            | 2 d                       | 0.0002       | 0.0393     | 0.0513       |
|                       |            | 4 d                       | 0.0261       | 0.0197     | 0.0527       |
|                       |            | 7 d                       | 0.0001       | 0.0130     | 0.0434       |
|                       |            | 14 d                      | 0.0000       | 0.0066     | 0.0323       |
|                       |            | 21d                       | 0.0000       | 0.0044     | 0.0270       |
|                       |            | 28 d                      | 0.0000       | 0.0035     | 0.0345       |
|                       |            | 42 d                      | 0.0000       | 0.0025     | 0.0347       |
| R4                    | stream     | 0 h                       | 0.0030       | 0.0086     | ---          | ---           |
|                       |            | 24 h                      | < 1e-6       | 0.0025     | 0.0084       | 0.0085       |
| FOCUS STEP 3 Scenario | Water body | Day after overall maximum | PEC_{sw} (µg/L) | PEC_{sed} (µg/kg) |
|-----------------------|------------|---------------------------|-----------------|------------------|
|                       |            | Actual | TWA | Actual | TWA |
| R3  stream            | 0 h        | 0.0563 | --  | 0.1006 | --  |
|                       | 24 h       | 0.0004 | 0.0475 | 0.0991 | 0.1002 |
|                       | 2 d        | 0.0001 | 0.0253 | 0.0976 | 0.0996 |
|                       | 4 d        | 0.0001 | 0.0127 | 0.0950 | 0.0983 |
|                       | 7 d        | 0.0001 | 0.0073 | 0.0920 | 0.0965 |
|                       | 14 d       | 0.0001 | 0.0055 | 0.0902 | 0.0943 |
|                       | 21 d       | 0.0127 | 0.0037 | 0.0913 | 0.0935 |
|                       | 28 d       | 0.0000 | 0.0032 | 0.0902 | 0.0930 |
|                       | 42 d       | 0.0000 | 0.0024 | 0.0853 | 0.0924 |
| R4  stream            | 0 h        | 0.0071 | --  | 0.0179 | --  |
|                       | 24 h       | 0.0000 | 0.0057 | 0.0173 | 0.0177 |
|                       | 2 d        | 0.0000 | 0.0049 | 0.0167 | 0.0174 |
|                       | 4 d        | 0.0058 | 0.0025 | 0.0158 | 0.0171 |
|                       | 7 d        | 0.0000 | 0.0020 | 0.0170 | 0.0169 |
|                       | 14 d       | 0.0000 | 0.0013 | 0.0146 | 0.0164 |
|                       | 21 d       | 0.0000 | 0.0008 | 0.0132 | 0.0156 |
|                       | 28 d       | 0.0000 | 0.0006 | 0.0123 | 0.0149 |
|                       | 42 d       | 0.0000 | 0.0004 | 0.0112 | 0.0138 |

Metabolite M3

Parameters used in FOCUSsw step 1 and 2

- Molecular weight: 436
- Soil or water metabolite: soil
- Koc/Kom (mL/g): 0/0
- Water solubility (mg/L): 1700
- DT_{50} soil (d): 1000 (worst case)
- DT_{50} water/sediment system (d): 1000 (worst case)
- DT_{50} water (d): 1000 (worst case)
- DT_{50} sediment (d): 1000 (worst case)
- Crop interception (%): 35 (minimal crop cover)
- Maximum occurrence observed (% molar basis with respect to the parent):
  - Total Water and Sediment: 0.001% (default as M3 was not listed in water/sediment studies but FOCUS Steps 1-2 will not accept 0 as input)
Parameters used in FOCUSsw step 3 and 4

- Soil: 25%
- Vapour pressure: 0 Pa at 20°C
- Kom/Koc (mL/g): 0/0
- 1/n: 1
- Q10=2.58, Walker equation coefficient 0.7
- Crop uptake factor: 0
- Metabolite kinetically generated in simulation (yes/no): yes
- Formation fraction in soil (k_f/k_dp): 1
- Formation fraction in sediment water (k_f/k_dp): 0

Application rate

- Crop and growth stage: soybeans BBCH 10-14
- Number of applications: 1
- Interval (d): -
- Application rate(s): 75 g a.s./ha
- Application window:
  - Step 1-2: Mar-May and Jun-Sep.
  - Step 3-4:

Main routes of entry

- Runoff

| FOCUS STEP 1 Scenario | Day after overall maximum | PEC_{sw} (µg/L) | PEC_{sed} (µg/kg) |
|------------------------|--------------------------|----------------|------------------|
|                        | Actual                   | TWA            | Actual           | TWA              |
| 0 h                    | 6.7055                   | --             | 0.0000           | --               |
| 24 h                   | 6.7008                   | 6.7032         | 0.0000           | 0.0000           |
| 2 d                    | 6.6962                   | 6.7008         | 0.0000           | 0.0000           |
| 4 d                    | 6.6869                   | 6.6962         | 0.0000           | 0.0000           |
| 7 d                    | 6.6730                   | 6.6893         | 0.0000           | 0.0000           |
| 14 d                   | 6.6407                   | 6.6731         | 0.0000           | 0.0000           |
| 21 d                   | 6.6086                   | 6.6569         | 0.0000           | 0.0000           |
| 28 d                   | 6.5766                   | 6.6408         | 0.0000           | 0.0000           |
| 42 d                   | 6.5131                   | 6.6088         | 0.0000           | 0.0000           |

| Treatment during March to May |
|------------------------------|
| FOCUS STEP 2 Scenario | Day after overall maximum | PEC_{sw} (µg/L) | PEC_{sed} (µg/kg) |
|------------------------|--------------------------|----------------|------------------|
|                        | Actual                   | TWA            | Actual           | TWA              |
| Southern EU            | 0 h                      | 2.1398         | --               | 0.0000           | --               |
|                        | 24 h                     | 2.1383         | 2.1391           | 0.0000           | 0.0000           |
|                        | 2 d                      | 2.1368         | 2.1383           | 0.0000           | 0.0000           |
|                        | 4 d                      | 2.1339         | 2.1368           | 0.0000           | 0.0000           |
### Early application

| FOCUS STEP | Water body | Day after overall maximum | PEC<sub>SW</sub> (µg/L) | PEC<sub>SED</sub> (µg/kg) |
|------------|------------|---------------------------|--------------------------|---------------------------|
| 3 Scenario | R3 stream  | 0 h                       | 0.5241                   | 0.02806                   |
|            |            | 24 h                      | 0.0005                   | 0.0119                    |
|            |            | 2 d                       | 0.0001                   | 0.0086                    |
|            |            | 4 d                       | 0.1199                   | 0.0116                    |
|            |            | 7 d                       | 0.0000                   | 0.0057                    |
|            |            | 14 d                      | 0.0000                   | 0.0034                    |
|            |            | 21 d                      | 0.0000                   | 0.0023                    |
|            |            | 28 d                      | 0.0000                   | 0.0017                    |
|            |            | 42 d                      | 0.0000                   | 0.0010                    |
|            | R4 stream  | 0 h                       | 0.000198                 | 0.0000                   |
|            |            | 24 h                      | < 1e-6                   | 0.0000                   |
|            |            | 2 d                       | < 1e-6                   | 0.0000                   |
|            |            | 4 d                       | < 1e-6                   | 0.0000                   |
|            |            | 7 d                       | < 1e-6                   | 0.0000                   |
|            |            | 14 d                      | < 1e-6                   | 0.0000                   |
|            |            | 21 d                      | < 1e-6                   | < 1e-6                   |
|            |            | 28 d                      | < 1e-6                   | < 1e-6                   |
|            |            | 42 d                      | < 1e-6                   | < 1e-6                   |

### Late application

| FOCUS STEP | Water body | Day after overall maximum | PEC<sub>SW</sub> (µg/L) | PEC<sub>SED</sub> (µg/kg) |
|------------|------------|---------------------------|--------------------------|---------------------------|
| 3 Scenario | R3 stream  | 0 h                       | 0.5408                   | 0.0368                    |
|            |            | 24 h                      | 0.002508                 | 0.0196                    |
|            |            | 2 d                       | 0.000185                 | 0.0138                    |
|            |            | 4 d                       | 0.000062                 | 0.0098                    |
|            |            | 7 d                       | 0.000026                 | 0.0072                    |
|            |            | 14 d                      | 0.000016                 | 0.0057                    |
|            |            | 21 d                      | 0.002374                 | 0.0039                    |
|            |            | 28 d                      | 0.000004                 | 0.0027                    |
|            |            | 42 d                      | 0.000002                 | 0.0016                    |
|            | R4 stream  | 0 h                       | 0.0081                   | 0.0005                    |
|            |            | 24 h                      | 0.0000                   | 0.0002                    |

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Early application

| FOCUS STEP 4 Scenario (20m vegetated filter strips) | Water body | Day after overall maximum | PEC<sub>SW</sub> (µg/L) Actual | TWA | PEC<sub>SED</sub> (µg/kg) Actual | TWA |
|-------------------------------------------------|------------|---------------------------|--------------------------|-----|-------------------------------|-----|
| R3 stream                                       | 0 h        | 0.1241                    | --                       | 0.0066 | --                             |     |
|                                                | 24 h       | 0.000128                  | 0.0713                  | 0.0028 | 0.0051                        |     |
|                                                | 2 d        | 0.000021                  | 0.0358                  | 0.0020 | 0.0039                        |     |
|                                                | 4 d        | 0.02665                   | 0.0179                  | 0.0026 | 0.0029                        |     |
|                                                | 7 d        | 0.000005                  | 0.0119                  | 0.0013 | 0.0024                        |     |
|                                                | 14 d       | 0.000002                  | 0.0059                  | 0.0008 | 0.0017                        |     |
|                                                | 21 d       | < 1e-6                    | 0.0040                  | 0.0005 | 0.0014                        |     |
|                                                | 28 d       | < 1e-6                    | 0.0030                  | 0.0004 | 0.0012                        |     |
|                                                | 42 d       | < 1e-6                    | 0.0020                  | 0.0002 | 0.0009                        |     |
| R4 stream                                       | 0 h        | 0.00005                   | --                      | 0.000003 | --                             |     |
|                                                | 24 h       | < 1e-6                    | 0.00003                 | 0.000001 | 0.000002                        |     |
|                                                | 2 d        | < 1e-6                    | 0.00001                 | < 1e-6  | 0.000001                        |     |
|                                                | 4 d        | < 1e-6                    | 0.00001                 | < 1e-6  | 0.000001                        |     |
|                                                | 7 d        | < 1e-6                    | 0.00000                 | < 1e-6  | < 1e-6                         |     |
|                                                | 14 d       | < 1e-6                    | 0.00000                 | < 1e-6  | < 1e-6                         |     |
|                                                | 21 d       | < 1e-6                    | 0.00000                 | < 1e-6  | < 1e-6                         |     |
|                                                | 28 d       | < 1e-6                    | 0.00000                 | < 1e-6  | < 1e-6                         |     |
|                                                | 42 d       | < 1e-6                    | < 1e-6                  | < 1e-6  | < 1e-6                         |     |

Late application

| FOCUS STEP 4 Scenario (20m vegetated filter strips) | Water body | Day after overall maximum | PEC<sub>SW</sub> (µg/L) Actual | TWA | PEC<sub>SED</sub> (µg/kg) Actual | TWA |
|-------------------------------------------------|------------|---------------------------|--------------------------|-----|-------------------------------|-----|
| R3 stream                                       | 0 h        | 0.1294                    | --                       | 0.0088 | --                             |     |
|                                                | 24 h       | 0.0291                    | 0.1100                  | 0.0047 | 0.0076                        |     |
|                                                | 2 d        | 0.0001                    | 0.0586                  | 0.0033 | 0.0062                        |     |
|                                                | 4 d        | 0.0000                    | 0.0293                  | 0.0024 | 0.0046                        |     |
|                                                | 7 d        | 0.0000                    | 0.0167                  | 0.0017 | 0.0036                        |     |
Metabolite CGA 297691
Parameters used in FOCUSsw step 1 and 2

| Parameter                      | Value          |
|--------------------------------|----------------|
| Molecular weight               | 74.08          |
| Soil or water metabolite:      | water          |
| Koc/Kom (mL/g)                 | 0/0            |
| Water solubility (mg/L)        | 1700           |
| DT$_{50}$ soil (d)             | 1000 (worst case) |
| DT$_{50}$ water/sediment system (d) | 1000 (worst case) |
| DT$_{50}$ water (d)            | 1000 (worst case) |
| DT$_{50}$ sediment (d)         | 1000 (worst case) |
| Crop interception (%)          | 35 (minimal crop cover) |
| Maximum occurrence observed (% molar basis with respect to the parent): |               |
| Total Water and Sediment       | 93%            |
| Soil                           | 21%            |

Application rate

Crop and growth stage: soybeans BBCH 10-14
Number of applications: 1
Interval (d): -
Application rate(s): 75 g a.s./ha
Application window: Mar-May and Jun-Sep.

| FOCUS STEP 1 Scenario | Day after overall maximum | PEC$_{sw}$ (µg/L) Actual | PEC$_{sw}$ (µg/L) TWA | PEC$_{sed}$ (µg/kg) Actual | PEC$_{sed}$ (µg/kg) TWA |
|-----------------------|---------------------------|---------------------------|-----------------------|---------------------------|------------------------|
|                       | 0 h                       | 5.3134                    |                       | 0.0000                    |                       |
|                       | 24 h                      | 5.3098                    | 5.3116                | 0.0000                    | 0.0000                 |
|                       | 2 d                       | 5.3061                    | 5.3098                | 0.0000                    | 0.0000                 |
|                       | 4 d                       | 5.2987                    | 5.3061                | 0.0000                    | 0.0000                 |
|                       | 7 d                       | 5.2877                    | 5.3006                | 0.0000                    | 0.0000                 |
|                       | 14 d                      | 5.2621                    | 5.2877                | 0.0000                    | 0.0000                 |
|                       | 21 d                      | 5.2367                    | 5.2750                | 0.0000                    | 0.0000                 |
|                       | 28 d                      | 5.2113                    | 5.2622                | 0.0000                    | 0.0000                 |
|                       | 42 d                      | 5.1610                    | 5.2368                | 0.0000                    | 0.0000                 |
### Treatments during March to May

| FOCUS STEP 2 Scenario | Day after overall maximum | PEC\textsubscript{SW} (µg/L) | PEC\textsubscript{SED} (µg/kg) |
|-----------------------|---------------------------|-----------------------------|-----------------------------|
|                       |                           | Actual | TWA | Actual | TWA |
| Southern EU           | 0 h                       | 1.4321 | --- | 0.0000 | --- |
|                       | 24 h                      | 1.4312 | 1.4317 | 0.0000 | 0.0000 |
|                       | 2 d                       | 1.4302 | 1.4312 | 0.0000 | 0.0000 |
|                       | 4 d                       | 1.4282 | 1.4302 | 0.0000 | 0.0000 |
|                       | 7 d                       | 1.4252 | 1.4287 | 0.0000 | 0.0000 |
|                       | 14 d                      | 1.4183 | 1.4252 | 0.0000 | 0.0000 |
|                       | 21 d                      | 1.4115 | 1.4218 | 0.0000 | 0.0000 |
|                       | 28 d                      | 1.4046 | 1.4183 | 0.0000 | 0.0000 |
|                       | 42 d                      | 1.3911 | 1.4115 | 0.0000 | 0.0000 |

**Metabolite CGA 171895 (M5)**

Data gap

**Metabolite CGA 179710**

Parameters used in FOCUS\textsubscript{sw} step 1 and 2

- Molecular weight: 166.2
- Soil or water metabolite: soil
- Koc/Kom (mL/g): 269/156
- Water solubility (mg/L): 1700
- DT\textsubscript{50} soil (d): 1000 (worst case)
- DT\textsubscript{50} water/sediment system (d): 1000 (worst case)
- DT\textsubscript{50} water (d): 1000 (worst case)
- DT\textsubscript{50} sediment (d): 1000 (worst case)
- Crop interception (%): 3 (minimal crop cover)
- Maximum occurrence observed (% molar basis with respect to the parent):
  - Total Water and Sediment: 2.4%
  - Soil: 27.5%

**Application rate**

- Crop and growth stage: soybeans BBCH 10-14
- Number of applications: 1
- Interval (d): -
- Application rate(s): 75 g a.s./ha
- Application window: Mar-May.

### FOCUS STEP 1 Scenario

| FOCUS STEP 1 Scenario | Day after overall maximum | PEC\textsubscript{SW} (µg/L) | PEC\textsubscript{SED} (µg/kg) |
|-----------------------|---------------------------|-----------------------------|-----------------------------|
|                       |                           | Actual | TWA | Actual | TWA |
| 0 h                   | 2.2567                    | 6.0524 |
| 24 h                  | 2.2534                    | 6.0616 | 6.0570 |
| 2 d                   | 2.2518                    | 6.0574 | 6.0583 |
| 4 d                   | 2.2487                    | 6.0490 | 6.0557 |
| 7 d                   | 2.2440                    | 6.0364 | 6.0502 |
| 14 d                  | 2.2332                    | 6.0072 | 6.0360 |
| 21 d                  | 2.2224                    | 5.9782 | 6.0216 |
### Treatments during March to May

| FOCUS STEP 2 Scenario | Day after overall maximum | PEC<sub>SW</sub> (µg/L) Actual | TWA | PEC<sub>SED</sub> (µg/kg) Actual | TWA |
|------------------------|---------------------------|----------------|----|----------------|----|
| **Southern EU**        | 0 h                       | 0.7088         | ---| 1.9042         | ---|
|                        | 24 h                      | 0.7079         | 0.7084 | 1.9029         | 1.9035 |
|                        | 2 d                       | 0.7074         | 0.7080 | 1.9015         | 1.9029 |
|                        | 4 d                       | 0.7064         | 0.7074 | 1.8989         | 1.9015 |
|                        | 7 d                       | 0.7049         | 0.7067 | 1.8950         | 1.8996 |
|                        | 14 d                      | 0.7015         | 0.7050 | 1.8858         | 1.8950 |
|                        | 21 d                      | 0.6981         | 0.7032 | 1.8767         | 1.8904 |
|                        | 28 d                      | 0.6947         | 0.7015 | 1.8676         | 1.8858 |
|                        | 42 d                      | 0.6880         | 0.6982 | 1.8495         | 1.8767 |

### Early application

| FOCUS STEP 3 Scenario | Water body | Day after overall maximum | PEC<sub>SW</sub> (µg/L) Actual | TWA | PEC<sub>SED</sub> (µg/kg) Actual | TWA |
|------------------------|------------|---------------------------|----------------|----|----------------|----|
| **R3** stream          | 0 h        | 0.0541                     | --            | 0.0518 | --            | 0.0518 |
|                        | 24 h       | 0.0001                     | 0.0391        | 0.0480 | 0.0508        |
|                        | 2 d        | 0.0001                     | 0.0208        | 0.0480 | 0.0497        |
|                        | 4 d        | 0.0378                     | 0.0105        | 0.0424 | 0.0480        |
|                        | 7 d        | 0.0001                     | 0.0069        | 0.0375 | 0.0449        |
|                        | 14 d       | 0.0000                     | 0.0058        | 0.0456 | 0.0438        |
|                        | 21 d       | 0.0000                     | 0.0039        | 0.0373 | 0.0432        |
|                        | 28 d       | 0.0001                     | 0.0038        | 0.0391 | 0.0430        |
|                        | 42 d       | 0.0000                     | 0.0033        | 0.0411 | 0.0427        |
| **R4** stream          | 0 h        | 0.0149                     | --            | 0.0172 | --            | 0.0172 |
|                        | 24 h       | 0.0000                     | 0.0094        | 0.0153 | 0.0166        |
|                        | 2 d        | 0.0000                     | 0.0087        | 0.0139 | 0.0159        |
|                        | 4 d        | 0.0097                     | 0.0044        | 0.0118 | 0.0146        |
|                        | 7 d        | 0.0000                     | 0.0037        | 0.0129 | 0.0140        |
|                        | 14 d       | 0.0000                     | 0.0023        | 0.0095 | 0.0127        |
|                        | 21 d       | 0.0000                     | 0.0015        | 0.0080 | 0.0115        |
|                        | 28 d       | 0.0000                     | 0.0011        | 0.0072 | 0.0106        |
|                        | 42 d       | 0.0000                     | 0.0008        | 0.0061 | 0.0093        |
Late application

| FOCUS STEP 3 | Water body | Day after overall maximum | PEC$_{SW}$ (µg/L) Actual | PEC$_{SW}$ (µg/L) TWA | PEC$_{SED}$ (µg/kg) Actual | PEC$_{SED}$ (µg/kg) TWA |
|--------------|------------|---------------------------|--------------------------|-----------------------|---------------------------|--------------------------|
| R3 stream    | 0 h        | 0.1507                    | ..                       | 0.1555                | --                        | --                       |
|              | 24 h       | 0.0014                    | 0.1267                   | 0.1411                | 0.1518                    | --                       |
|              | 2 d        | 0.0006                    | 0.0675                   | 0.1402                | 0.1474                    | --                       |
|              | 4 d        | 0.0003                    | 0.0340                   | 0.1224                | 0.1412                    | --                       |
|              | 7 d        | 0.0001                    | 0.0195                   | 0.1083                | 0.1312                    | --                       |
|              | 14 d       | 0.0003                    | 0.0190                   | 0.1342                | 0.1279                    | --                       |
|              | 21 d       | 0.0882                    | 0.0127                   | 0.1105                | 0.1266                    | --                       |
|              | 28 d       | 0.0001                    | 0.0124                   | 0.1152                | 0.1265                    | --                       |
|              | 42 d       | 0.0002                    | 0.0106                   | 0.1195                | 0.149                     | --                       |
| R4 stream    | 0 h        | 0.03477                   | --                       | 0.0366                | --                        | --                       |
|              | 24 h       | 0.0000                    | 0.0203                   | 0.0321                | 0.0351                    | --                       |
|              | 2 d        | 0.0000                    | 0.0192                   | 0.0286                | 0.0335                    | --                       |
|              | 4 d        | 0.0208                    | 0.0098                   | 0.0241                | 0.0307                    | --                       |
|              | 7 d        | 0.0000                    | 0.0085                   | 0.0261                | 0.0291                    | --                       |
|              | 14 d       | 0.0000                    | 0.0051                   | 0.0191                | 0.0261                    | --                       |
|              | 21 d       | 0.0000                    | 0.0034                   | 0.0163                | 0.0235                    | --                       |
|              | 28 d       | 0.0000                    | 0.0025                   | 0.0146                | 0.0216                    | --                       |
|              | 42 d       | 0.0000                    | 0.0017                   | 0.0126                | 0.0190                    | --                       |
Metabolite MT6

Data gap

Metabolites guanidine and 3-guanidine-1-butene

PECsw and PECSED calculation assumptions

PECsw were calculated for water phase metabolites guanidine and 3-guanidine-1-butene based on their maximum observed formation in water, the maximum Step 2 PECsw and PECSED for oxasulfuron (6.4 µg/L and 1.1 µg/kg) and assuming the same molecular weight as oxasulfuron in the absence of specific data for 3-guanidine-1-butene.

Results

|                | Max occ % | Molecular weight | PECsw µg/L | PECsed µg/kg |
|----------------|-----------|------------------|------------|--------------|
| Oxasulfuron    | -         | 406.4            | 6.4        | 1.1          |
| guanidine      | 33        | 59.07            | 0.31       | 0.05         |
| 3-guanidine-1-butene | 24      | 406.4            | 1.54       | 0.26         |

Estimation of concentrations from other routes of exposure (Regulation (EU) N° 284/2013, Annex Part A, point 9.4)

Method of calculation

PEC calculation from other routes of exposure is not necessary

PEC

Maximum concentration

PEC calculation from other routes of exposure is not necessary
### Ecotoxicology

**Effects on birds and other terrestrial vertebrates (Regulation (EU) N° 283/2013, Annex Part A, point 8.1 and Regulation (EU) N° 284/2013, Annex Part A, point 10.1)**

| Species | Test substance | Time scale | End point | Toxicity (mg/kg bw per day) |
|---------|----------------|------------|-----------|----------------------------|
| **Birds** | | | | |
| Bobwhite quail | a.s. | Acute | LD$_{50}$ | >2250 |
| Mallard duck | a.s. | Acute | LD$_{50}$ | >2250 |
| Bobwhite quail | a.s. | Short-term | LD$_{50}$ | >1613 |
| Mallard duck | a.s. | Short-term | LD$_{50}$ | >1831 |
| Bobwhite quail | a.s. | Long-term | NOEL | 6.91 |
| Mallard duck | a.s. | Long-term | NOEL | 12.67 |
| **Mammals** | | | | |
| Rat | a.s. | Acute | LD$_{50}$ | >5000 |
| Rat | a.s. | Long-term | NOAEL | 8.3 |

- **Endocrine disrupting properties (Annex Part A, points 8.1.5)**
  - No indication for potential endocrine disrupting properties from the data available in the section of ecotoxicology
- **Additional higher tier studies (Annex Part A, points 10.1.1.2):**
  - No higher tier studies submitted
- **Terrestrial vertebrate wildlife (birds, mammals, reptile and amphibians) (Annex Part A, points 8.1.4, 10.1.3):**
  - No available data

### Toxicity/exposure ratios for terrestrial vertebrates (Regulation (EU) N° 284/2013, Part A, Annex point 10.1)

**Soybean (BBCH 10-14): 0.1 kg formulated product/ha corresponding to 75 g oxasulfuron/ha**

| Growth stage | Indicator or focal species | Time scale | DDD (mg/kg bw per day) | TER | Trigger |
|--------------|----------------------------|------------|------------------------|-----|---------|
| **Screening Step (Birds)** | | | | | |
| BBCH 10-14 | Small omnivorous bird | Acute | 11.91 | >189 | 10 |
| BBCH 10-14 | Small omnivorous bird | Long-term | 2.58 | **2.68** | 5 |
| **Tier 1 (Birds)** | | | | | |
| BBCH 10-14 | Small granivorous bird (finch) | Long-term | 0.453 | 15.25 | 5 |
| BBCH 10-14 | Small omnivorous bird (lark) | Long-term | 0.433 | 15.96 | 5 |
| BBCH 10-14 | Medium herbivorous/granivorous bird (pigeon) | Long-term | 0.902 | 7.66 | 5 |
| BBCH 10-14 | Small insectivorous bird (wagtail) | Long-term | 0.449 | 15.40 | 5 |
| **Screening Step (Mammals)** | | | | | |
| BBCH 10-14 | Small herbivorous mammal | Acute | 10.23 | >489 | 10 |
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| BBCH 10-14 | Tier 1 (Mammals) |
| BBCH 10-14 | Large herbivorous mammal “lagomorph” |
| BBCH 10-14 | Small omnivore mammal “mouse” |
| BBCH 10-14 | Small insectivore mammal “shrew” |

**Risk from bioaccumulation and food chain behaviour** – not necessary (log K\text{ow} < 3 for active substance and metabolites)

**Risk from consumption of contaminated water**

**Puddle scenario, Screening step**

Application rate (g a.s./ha)/relevant endpoint ≤ 50 (koc<500 L/kg), TER calculation not needed

**Bold values** do not meet the trigger

**Toxicity data for all aquatic tested species (Regulation (EU) N° 283/2013, Annex Part A, points 8.2 and Regulation (EU) N° 284/2013 Annex Part A, point 10.2)**

* This section does not yet reflect the new EFSA Guidance Document on aquatic organisms which has been noted in the meeting of the Standing Committee on Plants, Animals, Food and Feed on 11 July 2014.

1 (nom) nominal concentration; (im) initial measured concentration; (mm) mean measured concentration; prep.: preparation; a.s.: active substance

| Group | Test substance | Time-scale (Test type) | End point | Toxicity |
|-------|----------------|------------------------|-----------|----------|
| **Laboratory tests** | | | | |
| Fish | Lepomis macrochirus a.s. | 96 hr (flow-through) | Mortality, LC\text{50} | > 111 (mm) |
| Oncorhynchus mykiss a.s. | 96 hr (flow-through) | Mortality, LC\text{50} | > 116 (mm) |
| Cyprinodon variegatus a.s. | 96 hr (flow-through) | Mortality, LC\text{50} | > 113 (mm) |
| Pimephales promelas a.s. | 35 d (flow-through) | Survival and Growth NOEC | 114 (mm) |
| Oncorhynchus mykiss CGA 297691 (CA2013A) | 96 hr (flow-through) | Mortality, LC\text{50} | > 100 (nom) |
| Oncorhynchus mykiss C1801 (CA2006A) | 96 hr (static) | Mortality, EC\text{50} | > 100 (nom) |
| **Aquatic invertebrates** | | | | |
| Daphnia magna a.s. | 48 h (flow-through) | Immobility, EC\text{50} | >89.4 (mm) |
| Crassostea virginica a.s. | 96 h (flow-through) | Shell deposition, EC\text{50} | >132 (mm) |
| Mysisopsis bahia a.s. | 48 h (flow-through) 96 h (flow-through) | Mortality, LC\text{50} Mortality, LC\text{50} | >109 (mm) 82.6 (mm) |
| Daphnia magna a.s.* | 48 h (flow-through) | Immobility, EC\text{50} | >136 (mm) |
| Daphnia magna a.s. | 21 d (flow-through) | Reproduction, NOEC Reproduction, EC\text{10} | 14 (mm) 14.3 (mm) 28.85 (mm) |
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### Group Test substance Time-scale (Test type) End point Toxicity

| Group | Test substance | Time-scale (Test type) | End point | Toxicity |
|-------|----------------|------------------------|-----------|----------|
| Daphnia magna | CGA 297691 (CA2013A) | 48 h (static) | Reproduction, EC<sub>50</sub> | >100 (nom) |
| Daphnia magna | C1801 (CA2006A) | 48 h (static) | Immobility, EC<sub>50</sub> | >100 (nom) |
| Algae\^\^ | Navicula pelliculosa | a.s. | 72 h (static) | 72h EC<sub>50</sub> | >100 (nom) |
| | | | | 72h EC<sub>50</sub> | >100 (nom) |
| | Pseudokirchneriella subcapitata | a.s. | 72 h (static) | 72h EC<sub>50</sub> | 0.256 (mm) |
| | | | | 2.25 (a.s., mm) | 1.30 (mm) |
| | Pseudokirchneriella subcapitata | Laguna 75 WG | 72 h (static) | EC<sub>50</sub> | >0.097 (mm) |
| | | | | 0.097 (mm) | >0.097 (mm) |
| | Pseudokirchneriella subcapitata | CGA 297691 (CA2013A)* | 120h (static) | 72h EC<sub>50</sub> | 0.0015 (mm) |
| | | | | 72h EC<sub>50</sub> | 0.00324 (mm) |
| | | | | 72h EC<sub>50</sub> | 0.00020 (mm) |
| | Selenastrum capricornutum | CGA 297691 (CA2013A) | 72 h (static) | EC<sub>50</sub> | >96.8 (mm) |
| | | | | 14d, frond count | >96.8 (mm) |
| Higher plant | Lemna gibba | a.s.* | 14 d (static) | 7d , frond count | 0.0015 (mm) |
| | | | | 6d , frond count | 0.00324 (mm) |
| | | | | 14d, frond count | 0.00020 (mm) |
| | Lemna gibba | Laguna 75 WG | 7 d (semi-static) | Biomass: EC<sub>50</sub> | 2.23 (mm) |
| | | | | Growth rate: EC<sub>50</sub> | 5.59 (mm) |
| | Lemna gibba | CGA 297691 (CA2013A)* | 14 d (static) | Frond count, dry weight, EC<sub>50</sub> | >0.08 (mm) |

**Further testing on aquatic organisms**

No further tests submitted

Potential endocrine disrupting properties (Annex Part A, point 8.2.3)

No indication for potential endocrine disrupting properties from the data available in the section of ecotoxicology

* (nom) nominal concentration; (mm) mean measured concentration; (im) initial measured concentration; prep.: preparation; a.s.: active substance

* radiolabelled active substance

Endpoint marked in bold used in the risk assessment

### Bioconcentration in fish (Annex Part A, point 8.2.2.3)

| Active substance | C1801 (CA2006A) | CGA 297691 (CA2013A) | CGA 171895 | CGA 179710 | CGA 297691 |
|------------------|----------------|----------------------|------------|------------|------------|
| logP<sub>O/W</sub> | -0.81 | 0.97* | 0.45* | 1.30* | 0.835* |
| Steady-state bioconcentration factor (BCF) (total wet weight/normalised to 5% lipid content) | Not required | Not required | Not required | Not required | Not required |
| Uptake/depuration kinetics BCF | Not performed | Not performed | Not performed | Not performed | Not performed |
| Annex VI Trigger for the bioconcentration factor |  |
|-------------------------------------------------|---|
| Clearance time (days) (CT<sub>50</sub>)         | Not performed |
| (CT<sub>90</sub>)                                | Not performed |
| Level and nature of residues (%) in organisms after the 14 day depuration phase | Not performed |
| Higher tier study                                | No higher tier studies submitted |

*Values estimated by the WSKOWWIN V1.67 program contained in the US EPA’s EPISUITE package of predictive models*
### Toxicty/exposure ratios for the most sensitive aquatic organisms (Regulation (EU) No 284/2013, Annex Part A, point 10.2)

Maximum PECsw values and TER values for oxasulfuron for FOCUS Step 1 Scenario – application to Soybean (BBCH 10-14): 0.1 \text{L kg formulated product/ha} corresponding to 75 \text{g oxasulfuron/ha}

| Scenario         | PEC Step 1 (µg/L) | Fish acute | Fish prolonged | Invertebrate acute | Invertebrate prolonged | Algae | Aquatic plants |
|------------------|-------------------|------------|----------------|--------------------|------------------------|-------|----------------|
|                   | L. macrochirus    | P. promelas| Mysis b. | D. magna | P. subcapitata | L. gibba |
| oxasulfuron       |                   |            |             | E<sub>50</sub> | E<sub>50</sub> | E<sub>50</sub> | E<sub>50</sub> |
|                   | LC<sub>50</sub>   | NOEC       | EC<sub>50</sub> | NOEC | E<sub>50</sub> | E<sub>50</sub> |
|                   | >111000 µg/L      | 114000 µg/L| 82600 µg/L  | 14000 µg/L         | 1300 µg/L             | 3.24 µg/L |
| O. mykiss         |                   |            |             | E<sub>50</sub> | E<sub>50</sub> | E<sub>50</sub> | E<sub>50</sub> |
|                   | LC<sub>50</sub>   | NOEC       | EC<sub>50</sub> | NOEC | E<sub>50</sub> | E<sub>50</sub> |
|                   | >1000000 µg/L     | >1000000 µg/L| >10000 µg/L | >97 µg/L            | >80 µg/L             | 3.24 µg/L |
| C1801 (CA2006A)   | 5.12              | >19607     | >19607       |                     | 254                   | 0.63 |
|                   | L. macrochirus    | P. promelas| Mysis b. | D. magna | P. subcapitata | L. gibba |
|                   |                   |            |             | E<sub>50</sub> | E<sub>50</sub> | E<sub>50</sub> | E<sub>50</sub> |
|                   | LC<sub>50</sub>   | NOEC       | EC<sub>50</sub> | NOEC | E<sub>50</sub> | E<sub>50</sub> |
|                   | >100000 µg/L      | >100000 µg/L| >97 µg/L    | >80 µg/L            | >80 µg/L             | 3.24 µg/L |
| CGA 297691        | 5.31              | >18832     | >18832       |                     | >18.27               | >15.1 |
|                   | P. promelas       | D. magna   | P. subcapitata | L. gibba |
|                   |                   |            | E<sub>50</sub> | E<sub>50</sub> |
|                   | LC<sub>50</sub>   | NOEC       | EC<sub>50</sub> | E<sub>50</sub> |
|                   | 17300 µg/L        | 86200 µg/L | 1300 µg/L    | 3.24 µg/L           | 3.24 µg/L |
| CGA 27913         | 17.22             | 1004       | 5000         |                     | 75                   | 0.19 |
|                   | L. macrochirus    | Mysis b.   | P. subcapitata | L. gibba |
|                   |                   |            | E<sub>50</sub> | E<sub>50</sub> |
|                   | LC<sub>50</sub>   | NOEC       | EC<sub>50</sub> | E<sub>50</sub> |
|                   | >111000 µg/L      | 82600 µg/L | 1300 µg/L    | 3.24 µg/L           | 3.24 µg/L |
| CGA 179710        | 2.26              | >49115     | 36415        |                     | 575                   | 1.43 |
|                   | L. macrochirus    | Mysis b.   | P. subcapitata | L. gibba |
|                   |                   |            | E<sub>50</sub> | E<sub>50</sub> |
|                   | LC<sub>50</sub>   | NOEC       | EC<sub>50</sub> | E<sub>50</sub> |
|                   | >111000 µg/L      | 82600 µg/L | 1300 µg/L    | 0.324 µg/L          | 0.324 µg/L |
| M3                | 6.71              | >1654      | 1230         |                     | 19.37               | 0.05 |

Annex VI Trigger

|         |   |   |   |   |   |   |
|---------|---|---|---|---|---|---|
|         | 100 | 10 | 100 | 100 | 10 | 10 |

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**Surrogate value, conservatively assuming acute toxicity to be ×10 higher than that of the parent active substance.**

**Surrogate value, conservatively assuming toxicity to be equal to that of the parent active substance.**

**Bold values do not meet the trigger.**

**Maximum PECsw values and TER values for oxasulfuron for FOCUS Step 2 Scenario – application to Soybean (BBCH 10-14): 0.1 kg formulated producta corresponding to 75 g oxasulfuron/ha**

| Scenario | PEC Step 2 (SEU) (µg/L) | Fish acute | Fish prolonged | Invertebrate acute | Invertebrate prolonged | Algae | Aquatic plants |
|----------|-------------------------|------------|----------------|-------------------|------------------------|-------|-----------------|
|          |                         | L. macrochirus | P. promelas | Mysis bahia | D. magna | P. subcapitata | L. gibba |
| oxasulfuron | 6.42 | >111000 µg/L | 82600 µg/L | 14000 µg/L | 1300µg/L | 3.24 µg/L |
| C1801 (CA2006A) | 1.38 | >72464 µg/L | >72464 µg/L | 942 µg/L | 2.35 µg/L |
| CGA 297691 (CA2013A) | 1.43 | >69930 µg/L | >69930 µg/L | >97 µg/L | >80 µg/L |
| CGA 27913 (saccharin) | 4.75 | 17300 µg/L | 86200 µg/L | >100000 µg/L | 3.24 µg/L |
| CGA 179710 | 0.71 | >11100 µg/L | 8260 µg/L | 130 µg/L | 0.324 µg/L |
**TER calculation for FOCUS Step 3-4 (20m VFS) Scenario for oxasulfuron—application to Soybean (BBCH 10-14): 0.1 L kg formulated product/ha corresponding to 75 g oxasulfuron/ha (worst case between early and late application)**

| Scenario | PEC (µg/L) | Fish acute | Fish prolonged | Invertebrate acute | Invertebrate prolonged | Algae | Aquatic plants |
|----------|------------|------------|----------------|--------------------|-----------------------|-------|----------------|
|          |            |          |                |                    |                       |       |                |
| Fish acute | L. macrochirus |
|           | LC₅₀  |
|           | NOEC  |
| >111000 µg/L | >114000 µg/L | 82600 µg/L | 14000 µg/L | 1300 µg/L | 3.24 µg/L |
| Fish prolonged | P. promelas |
|           | EC₅₀  |
|           | NOEC  |
| 114000 µg/L | 114000 µg/L | 82600 µg/L | 14000 µg/L | 1300 µg/L | 3.24 µg/L |
| Invertebrate acute | Mysidopsis bahia |
|           | EC₅₀  |
|           | NOEC  |
| 114000 µg/L | 114000 µg/L | 82600 µg/L | 14000 µg/L | 1300 µg/L | 3.24 µg/L |
| Invertebrate prolonged | D. magna |
|           | EC₅₀  |
|           | NOEC  |
| 114000 µg/L | 114000 µg/L | 82600 µg/L | 14000 µg/L | 1300 µg/L | 3.24 µg/L |
| Algae | P. subcapitata |
|           | EᵣC₅₀  |
|           | EᵣC₅₀  |
| 114000 µg/L | 114000 µg/L | 82600 µg/L | 14000 µg/L | 1300 µg/L | 3.24 µg/L |
| Aquatic plants | L. gibba |
|           | EᵣC₅₀  |
|           | EᵣC₅₀  |
| 114000 µg/L | 114000 µg/L | 82600 µg/L | 14000 µg/L | 1300 µg/L | 3.24 µg/L |

**Step 3**

- **R3**
  - 2.621
  - 42350
  - 43495
  - 31515
  - 5341
  - 496
  - **1.24**

- **R4**
  - 0.272
  - 408088
  - 419118
  - 303676
  - 51471
  - 4779
  - 11.91

**Step 4 (20m VFS)**

- **R3**
  - 0.620
  - 179032
  - 183871
  - 133226
  - 22581
  - 2097
  - **5.23**

- **R4**
  - 0.033
  - 3468750
  - 3562500
  - 2581250
  - 437500
  - 40625
  - 101

**Bold values** do not meet the trigger.

**TER calculation for FOCUS Step 3 Scenario for C1801 (CA2006A)—application to Soybean (BBCH 10-14): 0.1 L kg formulated product/ha corresponding to 75 g oxasulfuron/ha (worst case between early and late application)**

| Scenario | PEC (µg/L) | O. mykiss | D. magna | P. subcapitata | L. gibba |
|----------|------------|-----------|-----------|----------------|---------|
|          |            | LC₅₀      | EC₅₀      | EᵣC₅₀          | EᵣC₅₀  |
| Fish acute | n.a.       |
|           |           | >100000 µg/L | >100000 µg/L | 1300 µg/L | 3.24 µg/L |
| Fish prolonged | n.a.       |
|           |           | >100000 µg/L | >100000 µg/L | 1300 µg/L | 3.24 µg/L |
| Invertebrate acute | n.a.       |
|           |           | >100000 µg/L | >100000 µg/L | 1300 µg/L | 3.24 µg/L |
| Invertebrate prolonged | n.a.       |
|           |           | >100000 µg/L | >100000 µg/L | 1300 µg/L | 3.24 µg/L |
| Algae | P. subcapitata |
|           | EᵣC₅₀  |
|           | EᵣC₅₀  |
| >100000 µg/L | >100000 µg/L | 1300 µg/L | 3.24 µg/L |
| Aquatic plants | L. gibba |
|           | EᵣC₅₀  |
|           | EᵣC₅₀  |
| >100000 µg/L | >100000 µg/L | 1300 µg/L | 3.24 µg/L |

**Step 3**

- **R3**
  - 0.135
  - 740741
  - 740741
  - 9630
  - 24

- **R4**
  - 0.007
  - 14285714
  - 14285714
  - 185714
  - 463

**Surrogate value, conservatively assuming toxicity to be equal to that of the parent active substance.**
**TER calculation for FOCUS Step 3 Scenario for CGA 179710 – application to Soybean (BBCH 10-14): 0.1 L kg formulated product./ha corresponding to 75 g oxasulfuron/ha (worst case between early and late application)**

| Scenario | PEC (µg/L) | Fish acute | Fish prolonged | Invertebrate acute | Invertebrate prolonged | Algae | Aquatic plants |
|----------|------------|------------|----------------|--------------------|-----------------------|-------|----------------|
|          |            |            |                |                    |                       |       |                |
|          |            |            |                |                    |                       |       |                |
|          |            |            |                |                    |                       |       |                |
|          |            |            |                |                    |                       |       |                |
| L. macrochirus | n.a. | Mysis spp. bahia | n.a. | P. subcapitata | E₅₀ | L. gibba |
| LC₅₀   | >111000² µg/L | 82600² µg/L | 1300² µg/L | 3.24² µg/L |

**Step 3**

| R3 | 0.151 | 735099 | 547020 | 8609 | 21 |
| R4 | 0.035 | 3171429| 2360000| 37143 | 93 |

² Surrogate value, conservatively assuming toxicity to be equal to that of the parent active substance.

**TER calculation for FOCUS Step 3-4 (20m VFS) Scenario for M3— application to Soybean (BBCH 10-14): 0.1 kg formulated product/ha corresponding to 75 g oxasulfuron/ha (worst case between early and late application)**

| Scenario | PEC (µg/L) | Fish acute | Fish prolonged | Invertebrate acute | Invertebrate prolonged | Algae | Aquatic plants |
|----------|------------|------------|----------------|--------------------|-----------------------|-------|----------------|
|          |            |            |                |                    |                       |       |                |
|          |            |            |                |                    |                       |       |                |
|          |            |            |                |                    |                       |       |                |
|          |            |            |                |                    |                       |       |                |
| L. macrochirus | n.a. | Mysis spp. bahia | n.a. | P. subcapitata | E₅₀ | L. gibba |
| LC₅₀   | >111000² µg/L | 82600² µg/L | 1300² µg/L | 0.324² µg/L |

**Step 3**

| R3 | 0.54 | 20518 | 15268 | 240 | 0.60 |
| R4 | 0.008 | 1387500 | 1032500 | 16250 | 41 |

**Step 4 (20m VFS)**

| R3 | 0.129 | 86047 | 64031 | 1008 | 2.51 |
| R4 | 0.002 | 5550000 | 4130000 | 65000 | 162 |

² Surrogate value, conservatively assuming acute toxicity to be ×10 higher than that of the parent active substance.

**Bold values** do not meet the trigger.
Effects on bees (Regulation (EU) N° 283/2013, Annex Part A, point 8.3.1 and Regulation (EU) N° 284/2013 Annex Part A, point 10.3.1)*

* This section does reflect the new EFSA Guidance Document on bees which has not yet been noted by the Standing Committee on Plants, Animals, Food and Feed.

| Species       | Test substance | Time scale/type of endpoint | End point                     | toxicity                      |
|---------------|----------------|----------------------------|-------------------------------|-------------------------------|
| Apis mellifera| a.s.           | Acute                      | Oral toxicity (LD50)          | >100 µg/bee                   |
| Apis mellifera| a.s.           | Acute                      | Larval toxicity (single exposure)* (LD50) | >20 µg/bee                   |
| Apis mellifera| Laguna 75 WG   | Chronic                    | LC50                          | >6.847 g product/kg food (5.136 g a.s./kg food) |
|               |                |                            | NOEC                          | ≥6.847 g product/kg food (5.136 g a.s./kg food) |
|               |                |                            | LDD50                         | >191.4 µg product/bee/day (>143.5 µg a.s./bee/day) |
|               |                |                            | NOED                          | ≥191.4 µg product/bee/day (143.5 µ µg a.s./bee/day) |

Semi-field test (Cage and tunnel test)
No further tests submitted

Field tests
No further tests submitted

*Risk assessment was not used in the risk assessment, since it is not considered suitable

Risk assessment for bees from contact and oral dietary exposure - application to Soybean (BBCH 10-14): 0.1 kg formulated product./ha corresponding to 75 g oxasulfuron/ha

| Species       | Test substance | Scenario                  | Risk quotient | HQ/ETR | Trigger |
|---------------|----------------|---------------------------|---------------|--------|---------|
| Consumption of pollen and nectar - Screening level assessment
| Apis mellifera| a.s.           | Not relevant              | ETR_{acute adult oral}          | < 0.0057 < 0.004 | 0.2 < 0.03 |
| Apis mellifera| a.s.           | Not relevant              | ETR_{chronic adult oral}       | <0.006 < 0.002 | 0.2 < 0.03 |

Consumption of guttation water - Screening level assessment

| Apis mellifera| a.s.           | Not relevant              | ETR_{acute adult oral}          | < 0.006 < 0.002 | 0.2 < 0.03 |
| Apis mellifera| a.s.           | Not relevant              | ETR_{chronic adult oral}       | <0.006 < 0.002 | 0.2 < 0.03 |

Consumption of surface water* - Screening level assessment

| Apis mellifera| a.s.           | Not relevant              | ETR_{acute adult oral}          | < 0.000003 < 0.000002 | 0.2 < 0.03 |
| Apis mellifera| a.s.           | Not relevant              | ETR_{chronic adult oral}       | <0.000003 < 0.000002 | 0.2 < 0.03 |

*PEC_{SW} calculated at Step1
### Effects on other arthropod species (Regulation (EU) N° 283/2013, Annex Part A, point 8.3.2 and Regulation (EU) N° 284/2013 Annex Part A, point 10.3.2)

#### Laboratory tests with standard sensitive species

| Species                     | Test Substance | End point                      | Toxicity                                                                                       |
|-----------------------------|----------------|--------------------------------|------------------------------------------------------------------------------------------------|
| *Typhlodromus pyri*         | Laguna 75 WG   | Mortality, LR_{50}              | 3.23 g a.s./ha <50% at the highest tested rate with sufficient survivors for reproduction assessment (7.8% at 3.19 g a.s./ha) |
|                             |                | Reproduction, reduction %      |                                                                                                 |
| *Aphidius rhopalosiphi*     | Laguna 75 WG   | Mortality LR_{50}               | >75 g a.s./ha <50% (25.9% at 37.5 g a.s./ha)                                                    |
|                             |                | Reproduction, reduction %      |                                                                                                 |

**Additional species**

None submitted

### First tier risk assessment for – Soybean (BBCH 10-14): 0.1 kg formulated product/ha corresponding to 75 g oxasulfuron/ha

| Test substance | Species                  | Effect (LR_{50} g/ha) | HQ in-field | HQ off-field (1 m) | Trigger |
|----------------|--------------------------|-----------------------|-------------|--------------------|---------|
| Laguna 75 WG   | *Typhlodromus pyri*      | 3.23 g a.s./ha        | 23.2        | 0.6                | 2       |
| Laguna 75 WG   | *Aphidius rhopalosiphi*  | >75 g a.s./ha         | <1          | <0.03              | 2       |

### Extended laboratory tests, aged residue tests

| Species                     | Life stage | Test substance, substrate | Time scale | Dose (g product/ha) | End point        | % effect* |
|-----------------------------|------------|----------------------------|------------|---------------------|------------------|-----------|
| *Typhlodromus pyri*         | Protonymphs and adults | Laguna 75 WG, leaf bean discs | 14 d of exposure | 4.688 9.375 18.75 37.5 75 | reproduction | 8 8.2 0.5 3.8 1.3 |
| *Poecilus cupreus*          | Adults     | Laguna 75 WG, sandy soil   | 14 d of exposure | 4.688 9.375 18.75 37.5 75 | Food consumption | 25.9 12.9 2.9 15.1 12.2 |

**Semi-field tests**

No studies submitted

**Field studies**

No studies submitted

**Additional specific test**

No studies submitted

*(positive values = adverse effects)*
### Effects on non-target soil meso- and macro fauna; effects on soil nitrogen transformation (Regulation (EU) No 283/2013, Annex Part A, points 8.4, 8.5, and Regulation (EU) No 284/2013 Annex Part A, points 10.4, 10.5)

| Test organism | Test substance | Application method of test a.s./OM | Time scale | End point | Toxicity (mg/kg d.w. soil) |
|---------------|----------------|----------------------------------|------------|----------|----------------------------|
| **Earthworms**|                |                                  |            |          |                            |
| *Eisenia foetida* | a.s. | Incorporated into soil / 10% OM | Acute (14d) | Mortality | LC$_{50}$ >1000            |
| *Eisenia foetida* | Laguna 75 WG | Incorporated into soil / 10% OM | Chronic (56d) | Reproduction | NOEC= 2                  |
| *Eisenia foetida* | CGA 27913* | Incorporated into soil / 10% OM | Chronic (56d) | Reproduction | NOEC=0.04                |

**Other soil macroorganisms**

No studies submitted

*endpoint (metabolite IN-00581) from the EFSA conclusion on metsulfuron-methyl (EFSA, 2015)

### Higher tier testing (e.g. modelling or field studies)

No studies submitted

### Nitrogen transformation

| Nitrogen transformation | Test substance | Maximum tested rate of 0.5 kg product/ha (0.67 mg test item/kg soil dry weight), corresponding to 375 g a.s./ha (0.50 mg a.s./kg soil dry weight); Sandy loam soil. | 11.5% effect at day 70 at 0.50 mg a.s./kg soil dry weight (=375 g a.s./ha) |
|-------------------------|----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------|
| Laguna 75 WG*           |                | Maximum tested rate of 0.5 kg product/ha (0.67 mg test item/kg soil dry weight), corresponding to 375 g a.s./ha (0.50 mg a.s./kg soil dry weight); Sandy loam soil. | 11.5% effect at day 70 at 0.50 mg a.s./kg soil dry weight (=375 g a.s./ha) |

*Considering the length of the study, the DT50 in soil and the % of formation of the metabolites reached the maximum in the degradation studies in soil (both aerobic and anaerobic) in short times, metabolites are covered in the study.

### Toxicity/exposure ratios for soil organisms

**Soybean (BBCH 10-14): 0.1 kg formulated product/ha corresponding to 75 g oxasulfuron/ha**

| Test organism | Test substance | Time scale | Soil PEC (actual) | TER     | Trigger |
|---------------|----------------|------------|-------------------|---------|---------|
| **Earthworms**|                |            |                   |         |         |
| a.s.          | Acute          | 0.065      | 15384.62          | 10      |         |
| a.s.          | Chronic        | 0.065      | 30.77             | 5       |         |
Other soil macroorganisms

\[ \text{CGA 27913} \quad \text{Chronic} \quad 0.029 \quad \text{1.38}^b \quad 5 \\
\text{C 1801 (CA2006A)} \quad \text{Chronic} \quad 0.011 \quad 18.18^a \quad 5 \\
\text{CGA171895} \quad \text{Chronic} \quad 0.002 \quad 100^a \quad 5 \\
\text{CGA 179710} \quad \text{Chronic} \quad 0.007 \quad 28.6^a \quad 5 \\
\text{CGA 297691 (CA2013A)} \quad \text{Chronic} \quad 0.0025 \quad 80^a \quad 5 \\
\text{M3} \quad \text{Chronic} \quad 0.017 \quad 11.76^a \quad 5 \\
\]

\footnote{\textit{a} assuming toxicity to be \( \times 10 \) higher than that of the parent active substance

\footnote{\textit{b} based on worst case toxicity endpoint from EFSA conclusion for metsulfuron-methyl (EFSA Journal 2015;13(1):3936), acceptable risk demonstrated by higher tier risk assessment.}

**Effects on terrestrial non target higher plants (Regulation (EU) N° 283/2013, Annex Part A, point 8.6 and Regulation (EU) N° 284/2013 Annex Part A, point 10.6)**

Screening data

Not required for herbicides or plant growth regulators as \( \text{ER}_{50} \) tests should be provided

**Laboratory dose response tests**

| Test substance          | Species | \( \text{ER}_{50} \) (g a.s./ha) | \( \text{ER}_{50}^{**} \) (g a.s./ha) |
|-------------------------|---------|-------------------------------|-----------------------------------|
|                         |         | vegetative vigour              | emergence                         |
| Laguna 75 WG            | Oat     | -                             | 122                               |
|                         | Corn    | 152                           |                                   |
|                         | Ryegrass| 24                            |                                   |
|                         | Onion   | 149                           |                                   |
|                         | Radish  | 129                           |                                   |
|                         | Cabbage | 225                           |                                   |
|                         | Lettuce | >75                           |                                   |
|                         | Tomato  | >75                           |                                   |
|                         | Cucumber| >375                          |                                   |
|                         | Pea     | >215.6                        |                                   |

\footnote{\textit{*}Risk assessment for non-target terrestrial plants could not be finalised due to the lack of data on vegetative vigour.

\footnote{\textit{**ER50s} are based on shoot height. Please note, that for all the tested species, except the most sensitive one (ryegrass) the endpoint based of fresh weight is lower}

**Effects on biological methods for sewage treatment (Regulation (EU) N° 283/2013, Annex Part A, point 8.8)**

| Test type/organism          | end point                           |
|----------------------------|-------------------------------------|
| Activated sludge           | 3-hour EC\(_50\) > 1000 mg a.s./L  |
| Activated sludge           | 3-hour EC\(_50\) > 1000 mg CA 2006A/L |
| \textit{Pseudomonas sp}    | No data were available              |

**Monitoring data (Regulation (EU) N° 283/2013, Annex Part A, point 8.9 and Regulation (EU) N° 284/2013, Annex Part A, point 10.8)**

Available monitoring data concerning adverse effect of the a.s.

No data available

Available monitoring data concerning effect of the PPP.

No data available
Definition of the residue for monitoring (Regulation (EU) N° 283/2013, Annex Part A, point 7.4.2) Ecotoxicologically relevant compounds

| Compartment | Ecotoxicologically relevant compounds |
|-------------|---------------------------------------|
| soil        | Oxasulfuron (CGA-277476), CGA 27913 (saccharin) |
| water       | Oxasulfuron (CGA-277476), M3 (pending), MT6 (pending), CGA 171895 (Pending) |
| sediment    | -                                      |
| groundwater | -                                      |

1 metabolites are considered relevant when, based on the risk assessment, they pose a risk comparable or higher than the parent

Classification and labelling with regard to ecotoxicological data (Regulation (EU) N° 283/2013, Annex Part A, Section 10)

**Substance**

Harmonised classification according to Regulation (EC) No 1272/2008 and its Adaptations to Technical Process [Table 3.1 of Annex VI of Regulation (EC) No 1272/2008 as amended]

| oxasulfuron (ISO) oxetan-3-yl 2-[(4,6-dimethylpyrimidin-2-yl)-carbamoylsulfamoyl]benzoate |
|Aquatic Acute 1 – H400 |
|Aquatic Chronic 1 - H410 |

Peer review proposal7 for harmonised classification according to Regulation (EC) No 1272/2008:

| Aquatic Acute 1 – H400 (M=100) |
|Aquatic Chronic 1 - H410 (M=100) |

Proposal is based upon the endpoint for aquatic plants

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6 Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006. OJ L 353, 31.12.2008, 1-1355.

7 It should be noted that harmonised classification and labelling is formally proposed and decided in accordance with Regulation (EC) No 1272/2008. Proposals for classification made in the context of the evaluation procedure under Regulation (EC) No 1107/2009 are not formal proposals.
Abbreviations

1/n slope of Freundlich isotherm
λ wavelength
ε decadic molar extinction coefficient
a.s. active substance
AChE acetylcholinesterase
ADE actual dermal exposure
ADI acceptable daily intake
AF assessment factor
AAOEL acute acceptable operator exposure level
AOEL acceptable operator exposure level
AP alkaline phosphatase
AR applied radioactivity
ARfD acute reference dose
AST aspartate aminotransferase (SGOT)
AUC area under the blood concentration/time curve
AV avoidance factor
BCF bioconcentration factor
BUN blood urea nitrogen
bw body weight
CAS Chemical Abstracts Service
CFU colony-forming units
ChE cholinesterase
CI confidence interval
CIPAC Collaborative International Pesticides Analytical Council Limited
CL confidence limits
Cmax concentration achieved at peak blood level
DAA days after application
DAT days after treatment
DDD daily dietary dose
DM dry matter
DT_{50} period required for 50% dissipation (define method of estimation)
DT_{90} period required for 90% dissipation (define method of estimation)
dw dry weight
EbC_{50} effective concentration (biomass)
EC_{50} effective concentration
ECHA European Chemicals Agency
| Acronym | Description |
|---------|-------------|
| EEC     | European Economic Community |
| EMDI    | estimated maximum daily intake |
| ER$_{50}$ | emergence rate/effective rate, median |
| ErC$_{50}$ | effective concentration (growth rate) |
| ETR | exposure toxicity ratio |
| ETR$_{acute}$ | exposure toxicity ratio for acute exposure |
| ETR$_{larvae}$ | exposure toxicity ratio for chronic exposure |
| ETR$_{larvae}$ | exposure toxicity ratio for larvae |
| ETR$_{HPG}$ | exposure toxicity ratio for effects on honeybee hypopharygeal glands |
| EU | European Union |
| EUROPOEM | European Predictive Operator Exposure Model |
| f(twa) | Time-weighted average factor |
| FAO | Food and Agriculture Organization of the United Nations |
| FID | flame ionisation detector |
| FIR | food intake rate |
| FOB | functional observation battery |
| FOCUS | Forum for the Co-ordination of Pesticide Fate Models and their Use |
| GAP | Good Agricultural Practice |
| GC | gas chromatography |
| GCPF | Global Crop Protection Federation (formerly known as International Group of National Associations of Manufacturers of Agrochemical Products; GIFAP) |
| GGT | gamma glutamyl transferase |
| GM | geometric mean |
| GS | growth stage |
| GSH | glutathione |
| Hb | haemoglobin |
| Hct | haematocrit |
| HPLC | high-pressure liquid chromatography |
| HPLC-MS | high-pressure liquid chromatography–mass spectrometry |
| HPG | hypopharygeal glands |
| HQ | hazard quotient |
| HQ$_{contact}$ | hazard quotient for contact exposure |
| HR | hazard rate |
| IEDI | international estimated daily intake |
| IESTI | international estimated short-term intake |
| ISO | International Organization for Standardization |
| IUPAC | International Union of Pure and Applied Chemistry |
| iv | intravenous |
| Acronym | Definition |
|---------|------------|
| JMPR   | Joint Meeting of the FAO Panel of Experts on Pesticide Residues in Food and the Environment and the WHO Expert Group on Pesticide Residues (Joint Meeting on Pesticide Residues) |
| K_{soc} | organic carbon linear adsorption coefficient |
| K_{Fre} | Freundlich organic carbon adsorption coefficient |
| LC     | liquid chromatography |
| LC_{50} | lethal concentration, median |
| LC-MS  | liquid chromatography–mass spectrometry |
| LC-MS-MS | liquid chromatography with tandem mass spectrometry |
| LD_{50} | lethal dose, median; dosis letalis media |
| LDD_{50} | lethal dietary dose; median |
| LDH    | lactate dehydrogenase |
| LOAEL  | lowest observable adverse effect level |
| LOD    | limit of detection |
| LOQ    | limit of quantification |
| M/L    | mixing and loading |
| MAF    | multiple application factor |
| MCH    | mean corpuscular haemoglobin |
| MCHC   | mean corpuscular haemoglobin concentration |
| MCV    | mean corpuscular volume |
| mm     | millimetre (also used for mean measured concentrations) |
| mN     | milli-newton |
| MRL    | maximum residue level |
| MS     | mass spectrometry |
| MSDS   | material safety data sheet |
| MTD    | maximum tolerated dose |
| MWHC   | maximum water-holding capacity |
| NESTI  | national estimated short-term intake |
| NOAEC  | no observed adverse effect concentration |
| NOAEL  | no observed adverse effect level |
| NOEC   | no observed effect concentration |
| NOEL   | no observed effect level |
| NPD    | nitrogen–phosphorus detector |
| OECD   | Organisation for Economic Co-operation and Development |
| OM     | organic matter content |
| Pa     | pascal |
| PD     | proportion of different food types |
| PEC    | predicted environmental concentration |
| PEC_{air} | predicted environmental concentration in air |
### Glossary

| Acronym | Definition |
|---------|------------|
| PEC<sub>gw</sub> | predicted environmental concentration in groundwater |
| PEC<sub>sed</sub> | predicted environmental concentration in sediment |
| PEC<sub>soil</sub> | predicted environmental concentration in soil |
| PEC<sub>sw</sub> | predicted environmental concentration in surface water |
| PHED | pesticide handler’s exposure data |
| PHI | pre-harvest interval |
| PIE | potential inhalation exposure |
| pH<sub>a</sub> | negative logarithm (to the base 10) of the dissociation constant |
| P<sub>ow</sub> | partition coefficient between n-octanol and water |
| PPE | personal protective equipment |
| ppm | parts per million (10<sup>-6</sup>) |
| PT | proportion of diet obtained in the treated area |
| PTT | partial thromboplastin time |
| QSAR | quantitative structure–activity relationship |
| r<sup>2</sup> | coefficient of determination |
| RPE | respiratory protective equipment |
| RUD | residue per unit dose |
| SC | suspension concentrate |
| SD | standard deviation |
| SFO | single first-order |
| SMILES | simplified molecular-input line-entry system |
| SPG | specific protection goal |
| SSD | species sensitivity distribution |
| STMR | supervised trials median residue |
| t<sub>1/2</sub> | half-life (define method of estimation) |
| TER | toxicity exposure ratio |
| TER<sub>A</sub> | toxicity exposure ratio for acute exposure |
| TER<sub>LT</sub> | toxicity exposure ratio following chronic exposure |
| TER<sub>ST</sub> | toxicity exposure ratio following repeated exposure |
| TK | technical concentrate |
| TWA | time-weighted average |
| TLV | threshold limit value |
| Tmax | time until peak blood levels achieved |
| TMDI | theoretical maximum daily intake |
| TRR | total radioactive residue |
| TSH | thyroid-stimulating hormone (thyrotropin) |
| TWA | time-weighted average |
| UDS | unscheduled DNA synthesis |
| UF | uncertainty factor |
| Abbreviation | Description                          |
|--------------|--------------------------------------|
| UV           | ultraviolet                          |
| W/S          | water/sediment                       |
| w/v          | weight per unit volume               |
| w/w          | weight per unit weight               |
| WBC          | white blood cell                     |
| WG           | water-dispersible granule            |
| WHO          | World Health Organization            |