Appendix to:
EFSA (European Food Safety Authority), 2017. Conclusion on the peer review of the pesticide risk assessment of the active substance mecoprop-P. EFSA Journal 2017;15(6):4832, 64 pp. doi:10.2903/j.efsa.2017.4832
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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)

| Identity (Regulation (EU) N° 283/2013, Annex Part A, point 1) | Mecoprop-P |
|------------------------|-------------|
| Active substance (ISO Common Name) | Mecoprop-P |
| Function (e.g. fungicide) | Herbicide |
| Rapporteur Member State | UK |
| Co-rapporteur Member State | IE |
| Chemical name (IUPAC) | (R)-2-(4-chloro-2-tolyloxy)propionic acid |
| Chemical name (CA) | (2R)-2-(4-chloro-2-methylphenoxy)propanoic acid |
| CIPAC No | 475 |
| CAS No | 16484-77-8 |
| EC No (EINECS or ELINCS) | 240-539-0 |
| FAO Specification (including year of publication) | None |
| Minimum purity of the active substance as manufactured | 890 g/kg |
| Identity of relevant impurities (of toxicological, ecotoxicological and/or environmental concern) in the active substance as manufactured | 4-chloro-2-methylphenol (PCOC) max. 5 g/kg |
| Molecular formula | C_{10}H_{11}ClO_{3} |
| Molar mass | 214.65 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)                  | 93.5 – 97.5°C (99.8%)                                                |
| Boiling point (state purity)                  | Boiling point could not be determined. Decomposes above 240°C without boiling. |
| Temperature of decomposition (state purity)   | 240 °C (99.8%)                                                      |
| Appearance (state purity)                     | White solid at 20°C (99.8 %)                                         |
| Vapour pressure (state temperature, state purity) | 1.4 x 10⁻³ Pa at 25°C (99.8 %)                                     |
| Henry’s law constant                          | 1.7 x 10⁻⁴ Pa.m³.mol⁻¹                                              |
| Solubility in water (state temperature, state purity and pH) | Measured at 20°C (99.8 %) |
|                                                                 | pH 4 6.65 g/L                                                       |
|                                                                 | pH 7 >250 g/L                                                       |
|                                                                 | pH 10 >250 g/L                                                      |
|                                                                 | Purified water (pH3) 880 mg/L                                       |
| Solubility in organic solvents (state temperature, state purity) | Measured at 20°C (92.63 %)                                        |
|                                                                 | acetone >250 g/L                                                   |
|                                                                 | dichloromethane >250 g/L                                           |
|                                                                 | ethyl acetate >250 g/L                                            |
|                                                                 | methanol >250 g/L                                                  |
|                                                                 | heptane 7.69 g/L                                                   |
|                                                                 | toluene >250 g/L                                                   |
| Surface tension (state concentration and temperature, state purity) | 50.0 mN/m at 20 °C (90 % saturated solution) (99.8%)               |
| Partition coefficient (state temperature, pH and purity) | log $P_{OW} = 2.19$ at 20°C (pH 4) (99.8%) |
|                                                                 | log $P_{OW} = -0.19$ at 20°C (pH 7) (99.8%)                        |
|                                                                 | log $P_{OW} = -0.64$ at 20°C (pH 10) (99.8%)                       |
| Metabolite CCPP :                               | Log $P_{OW} = 0.23$ at 20°C (pH 4) (91.45%)                        |
|                                                                 | log $P_{OW} = -3.47$ at 20°C (pH 7) (91.45%)                       |
|                                                                 | log $P_{OW} = -3.57$ at 20°C (pH 10) (91.45%)                      |
| Calculated values of log$_{10}$Pow             | HMCCP = 1.47                                                       |
|                                                                 | Data on metabolite HMCCP should be provided, as this is included in the plant risk assessment residue definition. Only a calculated value has been supplied and test data is required. |
|                                                                 | o-cresol : data gap in section 5                                   |
| Dissociation constant (state purity)           | pKa = 3.7 (99.8%)                                                   |
| UV/VIS absorption (max.) incl. ε (state purity, pH) | Distilled water solution:                                           |
|                                                                 | $\lambda_{max}$ (nm) = 229 $\varepsilon$ (L mol⁻¹ cm⁻¹) = 9530   |
|                                                                 | $\lambda_{max}$ (nm) = 280 $\varepsilon$ (L mol⁻¹ cm⁻¹) = 1470    |
|                                                                 | $\lambda_{max}$ (nm) = 285 $\varepsilon$ (L mol⁻¹ cm⁻¹) = 1290    |
|                                                                 | No UV adsorption maxima > 400 nm. (99.8%)                           |
|                                                                 | 0.1M HCl solution:                                                 |
|                                                                 | $\lambda_{max}$ (nm) = 227 $\varepsilon$ (L mol⁻¹ cm⁻¹) = 8860    |
|                                                                 | $\lambda_{max}$ (nm) = 279 $\varepsilon$ (L mol⁻¹ cm⁻¹) = 1340    |
|                                                                 | $\lambda_{max}$ (nm) = 284 $\varepsilon$ (L mol⁻¹ cm⁻¹) = 1770    |
|                                                                 | No UV adsorption maxima > 400 nm. (99.8%)                           |
Flammability (state purity) Not flammable (91.5% technical)

Explosive properties (state purity) Not explosive (91.5% technical)

Oxidising properties (state purity) Not oxidising (91.5% technical)

| 0.1M NaOH solution: |
|----------------------|
| $\lambda_{\text{max}}$ (nm) = 229 $\varepsilon$ (L mol$^{-1}$ cm$^{-1}$) = 9520 |
| $\lambda_{\text{max}}$ (nm) = 280 $\varepsilon$ (L mol$^{-1}$ cm$^{-1}$) = 1560 |
| $\lambda_{\text{max}}$ (nm) = 286 $\varepsilon$ (L mol$^{-1}$ cm$^{-1}$) = 1360 |

No UV adsorption maxima > 400 nm. (99.8%)
Summary of representative uses evaluated, for which all risk assessments needed to be completed (mecoprop-P) (Regulation (EU) N° 284/2013, Annex Part A, points 3, 4)

| Crop and/or situation (a) | Member State or Country | Product name | Preparation | Application | Number of treatments | Interval between application | kg a.s./ha | Water L/ha | Remarks |
|---------------------------|--------------------------|--------------|-------------|-------------|----------------------|-----------------------------|-----------|-----------|---------|
| Winter Cereals - Wheat (including durum and spelt), Barley, Rye, Oats, Triticale | AT, BE, CY, CZ, EE, FI, FR, DE, GR, HU, IE, IT, LU, NL, SK, SI, UK | Mecoprop-P K 600 | F | Broadleaved weeds SL | 600 g/L | Tractor mounted boom spray | 1 | N/A | 0.3 - 0.6 | 200 – 400 L | 1.2 | N/A | Applied from 01/03 |
| Spring Cereals - Wheat (including durum and spelt), Barley, Rye, Oats, Triticale | AT, BE, CY, CZ, EE, FI, FR, DE, GR, HU, IE, IT, LU, NL, SK, SI, UK | Mecoprop-P K 600 | F | Broadleaved weeds SL | 600 g/L | Tractor mounted boom spray | 1 | N/A | 0.3 - 0.6 | 200 – 400 L | 1.2 | N/A | Applied from 01/03 |

SL – Soluble concentrate  
N/A – Not Applicable

(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. benthiavalicarb-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 (mecoprop-P)
Regulation (EC) N° 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) | Member State or Country | Product name | F, G or I (b) | Pests or Group of pests controlled (c) | Preparation Type (d-f) | Conc. a.s. (g) | 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) | PHI (day) (m) | Remarks |
|--------------------------|-------------------------|--------------|---------------|----------------------------------------|------------------------|---------------|-----------------|-------------------------------|-----------------|---------------------------|-----------------|-----------------|-----------------|------------|---------|
| MRL Application (according to Article 8.1(g) of Regulation (EC) No 1107/2009) | None | | | | | | | | | | | | | | |

(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. fluoroxypry). In certain cases, where only one variant is synthesised, it is more appropriate to give the rate for the variant (e.g. benthiavalicarb-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)**

| Control of broad-leaved weeds. Mecoprop-P, which is a hormone type herbicide, is absorbed mainly by the green parts of the plants, but with some absorption through the roots and is rapidly translocated within herbaceous plants. It has been used in broad leaved weed control for many years with product registration in many EU Member States. Details to be evaluated at product renewal. |

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

| Mecoprop-P has been used in broad leaved weed control for many years with product registration in many EU Member States. Details to be evaluated at product renewal. |

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

| Mecoprop-P has been used in broad leaved weed control for many years with product registration in many EU Member States. Details to be evaluated at product renewal. |

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

| Activity against target organism No metabolites reached levels that triggered assessment |
### 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)

| Technical a.s. (analytical technique) | HPLC with UV detection |
|--------------------------------------|------------------------|
| Impurities in technical a.s. (analytical technique) | HPLC with UV detection |
| Plant protection product (analytical technique) | HPLC with UV detection |

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

### Residue definitions for monitoring purposes

| Food of plant origin | Mecoprop-P |
|----------------------|------------|
| Food of animal origin | Open |
| Soil | Mecoprop-P |
| Sediment | Mecoprop-P |
| Water | Mecoprop-P |
| - surface | Mecoprop-P |
| - drinking/ground | Mecoprop-P |
| Air | Mecoprop-P |
| Body fluids and tissues | Mecoprop-P |

### Monitoring/Enforcement methods

| Food/feed of plant origin (analytical technique and LOQ for methods for monitoring purposes) | Single method LC-MS/MS (LOQ 0.01 mg/kg) Wheat grain and straw (dry), wheat foliage (high water), olives (high oil) and orange (high acid). Note: Method does not separate enantiomers |
|------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|
| Food/feed of animal origin (analytical technique and LOQ for methods for monitoring purposes) | Single method LC-MS/MS (LOQ 0.01 mg/kg) Note: Method does not separate enantiomers |
| Soil (analytical technique and LOQ) | Single method LC-MS/MS (LOQ 0.01 mg/kg) Note: Method does not separate enantiomers |
| Water (analytical technique and LOQ) | Single method LC-MS/MS (LOQ 0.02 µg/L) Note: Method does not separate enantiomers |
| Air (analytical technique and LOQ) | Single method LC-MS/MS (LOQ 0.28 µg/m³) Note: Method does not separate enantiomers |
| Body fluids and tissues (analytical technique and LOQ) | Data gap |
### Classification and labelling with regard to physical and chemical data (Regulation (EU) N° 283/2013, Annex Part A, point 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]¹: |
|-----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Mecoprop-P | Not classified.                                                                                                                                                                                                                                                  |

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

- Not classified.

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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.
### 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 | In rats 90 to 100 % in males and 80 to 95% in females (based on urinary excretion within 168 h) (based on available data, single administration) 100% oral absorption assumed for AOEL |
| --- | --- |
| Toxicokinetics | Following single oral dose of 5 mg/kg bw: Cmax 27.8/31.5 µg equivalents/g T max 1.8/2.7 hr Plasma T1/2 6.4/4.2 hr in males/females respectively |
| Distribution | Thyroid, kidney, blood and plasma were main organs of exposure. |
| Potential for bioaccumulation | Elimination from fat and skin slower than for other tissues but no clear evidence of accumulation. |
| Rate and extent of excretion | Rapid, > 95% (low dose) within 48 hours, mainly via urine (>90%) |
| Metabolism in animals | Limited, 66-83% excreted as parent. Main metabolic step hydroxylation. |
| *In vitro* metabolism | Mouse and rat considered more relevant to humans. Limited metabolism (only 3 to 5%) in *in vitro* comparative metabolism study in human, rat, mouse, dog, rabbit microsomes. |

**Toxicologically relevant compounds (animals and plants)**

Parent compound (Mecoprop-P; toxicity of individual metabolites not known)

**Toxicologically relevant compounds (environment)**

None

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

| Rat LD<sub>50</sub> oral (Mecoprop-P) | 431 mg/kg bw | H302 |
| Rat LD<sub>50</sub> dermal (Mecoprop-P) | > 2000 mg/kg bw |
| Rat LC<sub>50</sub> inhalation (Mecoprop-P) | > 2.13 mg/L air /4h (whole body exposure) |
| Skin irritation (Mecoprop-P) | Non-irritant |
| Eye irritation (Mecoprop-P) | Severe irritant | H318 |
| Skin sensitisation (Mecoprop-P) | Not sensitising |
| Phototoxicity (Mecoprop-P) | Not phototoxic |

### Short-term toxicity (Regulation (EU) N° 283/2013, Annex Part A, point 5.3)

| Target organ / critical effect | Rat: kidney (increased weight, increased blood urea nitrogen) Dog: Haematological changes |
| Relevant oral NOAEL | 90-day, dog (Mecoprop): 4 mg/kg bw per day 7 week rat (Mecoprop): 4.4 mg/kg bw |
## Relevant dermal NOAEL

| per day |
|------------------|
| 90-day, rabbit (Mecoprop-P): 1000 mg/kg bw per day |

## Relevant inhalation NOAEL

| No data - not required |

## Genotoxicity (Regulation (EU) N° 283/2013, Annex Part A, point 5.4)

**In vitro studies (Mecoprop-P)**

- Ames tests and mammalian cell gene mutation studies negative. Equivocal findings for clastogenicity in human lymphocytes.

**In vivo studies (Mecoprop-P)**

- Mouse micronucleus and Chinese hamster cytogenetic tests negative for clastogenicity

## Photomutagenicity

| Not provided |

## Potential for genotoxicity

Taking a weight of evidence approach, mecoprop-P is unlikely to be genotoxic.

## Long-term toxicity and carcinogenicity (Regulation (EU) N°283/2013, Annex Part A, point 5.5)

### Long-term effects (target organ/critical effect)

- Rat & mouse: Kidney (increase weight, chronic nephropathy. Liver (increased weight, enzyme induction)

### Relevant long-term NOAEL

| 2-year, rat (Mecoprop): 1 mg/kg bw per day |
| 18-month, mouse (Mecoprop-P): 4 mg/kg bw per day |

### Carcinogenicity (target organ, tumour type)

- Rat: no neoplastic findings
- Mouse: slight increase in hepatocellular carcinoma in females considered equivocal and not sufficient for classification. However, the carcinogenic potential was not considered relevant for humans.

### Relevant NOAEL for carcinogenicity

| 2-year, rat: >65 mg/kg bw per day; 18-month, mouse: 4 mg/kg bw per day |

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

### Reproduction toxicity (Mecoprop)

**Reproduction target / critical effect**

- Parental toxicity: 50% reduction in bw gain in females on days 0-7 during gestation
- Reproductive toxicity: 21% reduction in implantation sites
- Offspring’s toxicity: increased pup mortality days 0 to 4 post-partum. Up to 11% reduction in body weight

### Relevant parental NOAEL

| 40 mg/kg bw per day |

### Relevant reproductive NOAEL

| 8.0 mg/kg bw per day |

### Relevant offspring NOAEL

| 8.0 mg/kg bw per day |
**Developmental toxicity**

**Developmental target / critical effect**

| Animal | Maternal toxicity | Developmental toxicity |
|--------|-------------------|------------------------|
| Rat (Mecoprop-P): | 22% ↓ food consumption, 18% ↓ bodyweight gain | 2% ↓ foetal weight, four fold ↑ rudimentary cervical ribs, four fold ↑ sternebrae not ossified |
| Rabbit (Mecoprop-P): | no adverse findings | no adverse findings |

**Relevant maternal NOAEL**

| Animal | NOAEL |
|--------|-------|
| Rat (Mecoprop-P): | 50 mg/kg bw per day |
| Rabbit (Mecoprop-P): | >50 mg/kg bw per day |

**Relevant developmental NOAEL**

| Animal | NOAEL |
|--------|-------|
| Rat (Mecoprop-P): | 50 mg/kg bw per day |
| Rabbit (Mecoprop-P): | 20 mg/kg bw per day |

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

**Acute neurotoxicity**

No evidence of neurotoxicity up to maximum dose of 700 mg/kg bw. NOAEL < 175 mg/kg bw (general toxicity)

**Repeated neurotoxicity**

Study not required

**Additional studies (e.g. delayed neurotoxicity, developmental neurotoxicity)**

Study not required

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

**Supplementary studies on the active substance**

Evidence of liver enzyme induction in the mouse. Immunotoxicity studies in rats suggested indirect effects related to a stress-induced release of steroid hormones from adrenals.

**Endocrine disrupting properties**

No studies available - no endocrine mode of action was observed

**Studies performed on metabolites or impurities**

- Hydroxymethyl-mecoprop-P (HMCPP):
  - Acute oral LD50 concluded to be > 2150 mg/kg bw.
  - Negative in Ames test.
- Mouse in vivo micronucleus bone marrow test negative but not reliable.
- 28 day rat NOAEL > 1487 mg/kg bw/day.
- 4-chloro-2-methylphenol (CCPP) and 4-glucosyl-MPP metabolites: data gap

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

Cases of acute poisoning have been reported. Available epidemiological data are inadequate for determining an association between exposure and cancer in humans.
Summary (Regulation (EU) N°1107/2009, Annex II, point 3.1 and 3.6)

| Study | Uncertainty factor |
|-------|--------------------|
| Acceptable Daily Intake (ADI) | 0.01(1) rat, 2-year 100 |
| Acute Reference Dose (ARfD) | 0.2(2) rabbit developmental 100 |
| Acceptable Operator Exposure Level (AOEL) | 0.04(1) dog, 90-day 100* |
| Acute Acceptable Operator Exposure Level (AAOEL) | 0.2(2) rabbit developmental 100* |

* No correction required for oral absorption
(1) Same reference values as in the first review (European Commission, 2003b)
(2) Not set in the first review (European Commission, 2003b)

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

Representative formulation: Mecoprop-P K 600 g/L (CA3015).

| Study | Uncertainty factor |
|-------|--------------------|
| Concentrate: 25% (600g/L) Spray dilution 75% for all dilutions. |

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

Operators

| Use: cereals, tractor mounted /trailed field crop sprayer, application rate 1.2 kg a.s./ha |
| Exposure estimates (model): % of AOEL |
| UK POEM4 | Gloves during mixing/loading and application: 1381% |
| German model5 | Gloves during mixing/loading, and gloves, coveralls and sturdy footwear during application: 99% |
| EFSA calculator | Gloves during mixing/loading 72% of the AOEL and application 119% of the AAOEL |

Workers

| Activity: Crop inspection |
| Exposure estimates (model): % of AOEL |
| Europoem II worker re-entry model6 | Without PPE: 563% |
| EFSA calculator | % of AOEL |
| Without PPE | 315% |

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1 If available include also reference values for metabolites
4 Estimation of Exposure and Absorption of Pesticides by Spray Operators, Scientific subcommittee on Pesticides and British Agrochemical association Joint Medical Panel Report (UK MAFF), 1986 and the Predictive Operator Exposure Model (POEM) V 1.0, (UK MAFF), 1992, 2007 version. ("UK POEM").
5 Uniform Principles for Safeguarding the Health of Applicators of Plant Protection Products (Uniform Principles for Operator Protection), Mitteilungen aus der Biologischen Bundesanstalt für Land-und Forstwirtschaft, Berlin-Dahlem, Heft 277, 1992. ("German Model").
6 van Hemmen et al (2002). Post-application exposure of workers to pesticides in agriculture. Report of the re-entry working group, EUROPOEM II project: FAIR3-CT96-1406
### Bystanders and residents

| Modelling Approach: UK | % of AOEL |
|------------------------|-----------|
| • Bystander and resident exposure to vapour (surrogate value derived from 10% adult Californian Environmental Protection Agency studies) | 21% |
| • Bystander and resident exposure to 20% spray drift (measurements of simulated bystander exposure for field crop sprayers in a UK study) | |
| • Bystander and resident exposure to fallout (children model) | 8% |

| EFSA calculator (residents) | % of AOEL |
|----------------------------|-----------|
| Spray drift (75\textsuperscript{th} percentile) | 302% child 72% adult |
| Vapour (75\textsuperscript{th} percentile) | 3% child <1% adult |
| Surface deposits (75\textsuperscript{th} percentile) | 35% child 15% adult |
| Entry into treated crops (75\textsuperscript{th} percentile) | 380% child 211% adult |
| All pathways (mean) | 497% child 214% adult |

| EFSA calculator (bystanders) | % of AAOEL |
|----------------------------|-----------|
| Spray drift (95\textsuperscript{th} percentile) | 137% child 37% adult |
| Vapour (95\textsuperscript{th} percentile) | <1% child <1% adult |
| Surface deposits (95\textsuperscript{th} percentile) | 21% child 9% adult |
| Entry into treated crops (95\textsuperscript{th} percentile) | 76% child 42% adult |

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\(^7\) California Environmental Protection Agency, Air Resources Board (1998). Report for the application and ambient air monitoring for chlorpyrifos (and the oxon analogue) in Tulare County during spring/summer 1996.

\(^8\) Lloyd G.A. and Bell G.J. (1983). Hydraulic nozzles: comparative spray drift study (MAFF/ADAS).

\(^9\) Series 875, Occupational and Residential Exposure Test Guidelines: Group B – Postapplication Exposure Monitoring Test Guidelines (v 5.4, February 1998). USA EPA, Science Advisory Council for Exposure Policy 12, (February 2001): Recommended Revisions to the Standard Operating Procedures (SOPs) for Residential Exposure Assessment, USA EPA and Overview of Issues Related to the Standard Operating Procedures for Residential Exposure Assessment (August 1999 Presentation to the FIFRA Scientific Appraisal Panel), US EPA. Rautmann, D., Strelke, M. and Winkler, R. (2001). New basic drift values in the authorisation procedure for plant protection Products. In Forster, R. and Strelke, M. Workshop on risk assessment and risk mitigation measures in the context of the authorisation of plant protection Products (WORMM). Mitt. Biol. Bundesanst. Land-Forstwirtsch. Berlin-Dahlem, Heft 381
Classification with regard to toxicological data (Regulation (EU) No 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]\(^\text{10}\):

Peer review proposal \(^\text{11}\) for harmonised classification according to Regulation (EC) No 1272/2008:

| Mecoprop-P |
|------------|
| **H302** Harmful if swallowed (Category 4 for acute oral toxicity) |
| **H318** Causes serious eye damage (Category 1 for eye irritancy/corrosion) |
| **H361** Suspected of damaging fertility or the unborn child |

\(^\text{10}\) 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.

\(^\text{11}\) It should be noted that harmonised classification and labelling is formally proposed and decided in accordance with Regulation (EC) No 1272/2008.
Residues in or on treated products food and feed
Metabolism in plants (Regulation (EU) N° 283/2013, Annex Part A, points 6.2.1, 6.5.1, 6.6.1 and 6.7.1)

| Primary crops (Plant groups covered) | Crop groups | Crop(s) | Application(s) | DAT (days) |
|--------------------------------------|-------------|---------|----------------|------------|
| Fruit crops                          | N/A         |         |                |            |
| Root crops                           | N/A         |         |                |            |
| Leafy crops                          | N/A         |         |                |            |
| Cereals/grass crops                  | Wheat       | 1st study: 1.41 kg as/ha at BBCH 32 (post-emergence) | Foliage: 28 Straw: 103 Grain: 103 |
|                                      |             | 2nd study: 14.1 kg as/ha at BBCH 32 |            |
| Pulses/Oilseeds                      | N/A         |         |                |            |
| Miscellaneous                        | N/A         |         |                |            |

| Rotational crops (metabolic pattern) | Crop groups | PBI (days) | Comments |
|--------------------------------------|-------------|------------|----------|
| Root/tuber crops                     |             |            |          |
| Leafy crops                          |             |            |          |
| Cereal (small grain)                 |             |            |          |
| Other                                |             |            |          |

Rotational crop and primary crop metabolism similar? No data required. Mecoprop-P showed a very low persistence in soil (DT$_{90}$ 20-33 days)

| Processed commodities (standard hydrolysis study) | Conditions |
|---------------------------------------------------|------------|
|                                                   | 20 min, 90°C, pH 4 |
|                                                   | 60 min, 100°C, pH 5 |
|                                                   | 20 min, 120°C, pH 6 |

Residue pattern in processed commodities similar to residue pattern in raw commodities? The requirement for standard hydrolysis studies is pending upon the outcome of the requested residue field trials to address the magnitude of residues of the different relevant compounds in cereal grain.

| Plant residue definition for monitoring (RD-Mo) | Mecoprop-P |
|-----------------------------------------------|------------|
| OECD Guidance, series on pesticides No 31   | Cereal whole plant, straw, grain: mecoprop-P, HMCPP (free and conjugated), CCPP and 4-glucosyl-MPP (provisional) |

| Plant residue definition for risk assessment (RD-RA) | Conversion factor (monitoring to risk assessment) |
|-----------------------------------------------------|--------------------------------------------------|
| Mecoprop-P                                           | Based on the metabolism data:                   |
|                                                     | -Cereal grain: 4                                |
|                                                     | -Cereal straw: 2.2                              |
|                                                     | -Cereal whole plant (forage): 6                 |
|                                                     | To be reconsidered pending upon the outcome of  |
|                                                     | the requested residue trials analyzing for all  |
|                                                     | compounds included in the residue definition for |
|                                                     | risk assessment (data gap) and their relative    |
|                                                     | toxicity profile.                               |
Metabolism in livestock (Regulation (EU) N° 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) | Animals covered | Dose (mg/kg bw/d) | Duration (days) | N rate/comment |
|------------------------------------------------------|-----------------|------------------|-----------------|----------------|
| Laying hen                                           | Study not submitted |                  |                 |                |
| Goat                                                 | 0.13 mecoprop-P  | 1.27 mecoprop-P  | 7               | 5 N (lamb sheep) |
|                                                      | 7               |                  | 50 N (lamb sheep) |
| Pig                                                  | Open            |                  |                 |                |
| Fish                                                 | Open            |                  |                 |                |

Data gap: All analytical evidence available in the raw data from the goat metabolism study for further metabolites' identification in ruminants' matrices.

Time needed to reach a plateau concentration in milk and eggs (days) 2 days
Animal residue definition for monitoring (RD-Mo) Open
OECD Guidance, series on pesticides No 31
Animal residue definition for risk assessment (RD-RA) Open
Conversion factor (monitoring to risk assessment) Open
Metabolism in rat and ruminant similar (Yes/No) Open
Fat soluble residues (Yes/No) (FAO, 2009) Open

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

Confined rotational crop study (Quantitative aspect) No data required (DT₉₀ Mecoprop-P: 20-33 days)
OECD Guideline 502
Field rotational crop study No data required.
OECD Guideline 504

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

| Plant products (Category) | Commodity        | T (°C) | Stability (Months) |
|---------------------------|------------------|--------|-------------------|
| High water content        | wheat green plant| < -18  | 12                |
| High starch content       | wheat grain      | < -18  | 12                |
| Wheat straw               | < -18            | 12     |

| Animal | Animal commodity | T (°C) | Mecoprop-P | HMCPP | CCPP | PCOC |
|--------|------------------|--------|------------|-------|------|------|
| Cattle | Muscle           | ≤ -18  | 9          | 9     | 9    | 3    |
|        | Fat              | ≤ -18  | 9          | 9     | 9    | 0    |
|        | Liver            | ≤ -18  | 9          | 9     | 9    | 3    |
|                        | ≤ -18 | 9 | 9 | 9 | 0 |
|------------------------|-------|---|---|---|---|
| Kidney                 |       |   |   |   |   |
| Whole Milk/skimmed milk/cream | ≤ -18 | 9 | 9 | 9 | 9 |

### 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) | Supervised residue trials results (mg/kg) and other studies (pollen and bee products) (b) | Recommendations/comments (OECD calculations) | MRL proposals (mg/kg) (c) | HR (mg/kg) (c) | STMR (mg/kg) (d) |
|---------------|-------------------|--------------------------------------------------------------------------------------------|---------------------------------------------|----------------------------|----------------|----------------|
| **Representative uses** | | Combined residue trials on wheat and barley with a possible extrapolation to rye, oats and triticale. NEU and SEU residue datasets on wheat straw can be merged as considered as similar (Mann-Whitney U-test; α=0.05) | | | | |
| Wheat grain   | SEU               | **Mo:** 8 x < 0.05  
**RA:** 8 x <0.2 | - | 0.05* | 0.2 (0.05) | 0.2 (0.05) |
| Wheat grain   | NEU               | **Mo:** 4 x < 0.01  
**RA:** 4 x <0.04 | 0.01* | 0.04 (0.01) | 0.04 (0.01) |
| Wheat straw   | NEU + SEU         | **Mo:** <0.01, 2 x <0.05, 0.06, 0.07, 0.10, 0.11, 0.20, 0.27, 0.28, 0.29, 0.32  
**RA:** 0.022, 2 x 0.11, 0.13, 0.15, 0.22, 0.24, 0.44, 0.59, 0.62, 0.64, 0.70 | - | 0.70 (0.32) | 0.23 (0.11) |

Data gap: NEU and SEU GAP-compliant residue trials to address the magnitude of residues of mecoprop-P, HMCPP (free and conjugated), CCPP and 4-glucosyl-MPP in cereals whole plant, grain and straw.

Data gap: Sufficient residue trials on cereal grain and compliant with the NEU and SEU GAP on cereals for the determination of mecoprop-P residues at a lower limit of determination (0.01 mg/kg).

**MRL application**

N/A

**Summary of the data on formulation equivalence OECD Guideline 509**

| Crop | Region | Residue data (mg/kg) | Recommendations/comments |
|------|--------|----------------------|-------------------------|
| N/A  |        |                      |                         |

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

Data gap: Based on the metabolism data non negligible translocation of the residues throughout plant parts are expected as attested by TRRs observed in cereals grains (0.165 mg eq/kg) at an application rate of 1.41 kg/ha (1.2N). Information is requested on the potential residues of mecoprop-P and its degradation products in pollen and bee products.

(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, 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<sub>mo</sub>).

(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<sub>mo</sub>).

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### Inputs for animal burden calculations

| Feed commodity                                      | Median dietary burden (mg/kg) | Comment | Maximum dietary burden (mg/kg) | Comment |
|------------------------------------------------------|-------------------------------|---------|-------------------------------|---------|
| **Representative uses**                              |                               |         |                               |         |
| Cereal (wheat, barley, oats, rye and triticale) grain| 0.2                           | STMR<sub>M</sub> x CF          | 0.2                           | STMR<sub>M</sub> x CF          |
| Cereal (wheat, barley, oats, rye and triticale) straw| 0.23                          | STMR<sub>M</sub> x CF          | 0.70                          | HR<sub>M</sub> x CF            |
| **MRL application**                                  | N/A                           |         |                               |         |

(1) Provisional inputs for livestock dietary burden calculation considering HR/STMR values for mecoprop-P and conversion factors for risk assessment (CF) derived for cereal grain and straw based on the metabolism data. These input values will be reassessed considering the outcome of the requested NEU and SEU residue trials to address the magnitude of residues of mecoprop-P, HMCPP (free and conjugated), CCPP and 4-glucosyl-MPP in cereals whole plant, grain and straw and the relative toxicity of these compounds.
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)

Animal dietary burden calculation have been performed in line with OECD 73

### MRL calculations

| Highest expected intake (mg/kg bw/d) | Ruminant | Pig/Swine | Poultry | Fish |
|-------------------------------------|----------|-----------|---------|------|
| Beef cattle (mg/kg DM for fish)     | 0.009    | 0.019     | 0.004   | 0.011 |
| Dairy cattle                        | 0.013    | 0.024     | 0.005   | 0.019 |

Intake >0.004 mg/kg bw

Feeding study submitted

- Open

Representative feeding level (mg/kg bw/d, mg/kg DM for fish) and N rates

| Muscle | Fat | Meat | Liver | Kidney | Milk | Eggs |
|--------|-----|------|-------|--------|------|------|
| Level  | Level | Level | Level | Level | N rates | Level |
| Beef: N | Dairy: N | Beef: N | Dairy: N | Level | N rate | Level |
| MRL proposals | MRL proposals | MRL proposals | MRL proposals | Level | MRL proposals | MRL proposals |
| Estimated HR at 1N | Estimated HR at 1N | Estimated HR at 1N | Estimated HR at 1N | Level | Estimated HR at 1N | Estimated HR at 1N |

Method of calculation:

1. Estimated HR calculated at 1N level (estimated mean level for milk).
2. HR in meat calculated for mammalian on the basis of 20% fat + 80% muscle and 10% fat + 90% muscle for poultry
3. 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 extrapolation (It) or by linear regression (Ln). Fill in method(s) considered to derive the MRL proposals.
4. Provisional livestock dietary burden calculation to be reconsidered pending upon the outcome of the requested residue trials to determine the magnitude of mecoprop-P, HMCPP (free and conjugated), CCPP and 4-glucosyl-MPP residues in feed items and the relative toxicity of these compounds.
5. If significant transfer of residues of HMCPP (free and conjugated), CCPP and 4-glucosyl-MPP into animal commodities is observed, the magnitude of these compounds or their degradation products should be further investigated in livestock feeding studies dosing with a representative mixture of mecoprop-P and these compounds in feed items.

### STMR calculations

| Median expected intake (mg/kg bw/d) | Ruminant | Pig/Swine | Poultry | Fish |
|-------------------------------------|----------|-----------|---------|------|
| Beef cattle (mg/kg DM for fish)     | 0.0057   | 0.0082    | 0.004   | 0.011 |
| Dairy cattle                        | 0.0065   | 0.0105    | 0.005   | 0.016 |

Intake >0.1 mg/kg DM

Feeding study submitted

- Open

Representative feeding level (mg/kg bw/d, mg/kg DM for fish) and N rates

| Muscle | Fat | Meat | Liver | Kidney | Milk | Eggs |
|--------|-----|------|-------|--------|------|------|
| Level  | Level | Level | Level | Level | N rates | Level |
| Beef: N | Dairy: N | Beef: N | Dairy: N | Level | N rate | Level |
| Estimated | Estimated | Estimated | Estimated | Level | Estimated | Estimated |

Method of calculation:

1. Estimated HR calculated at 1N level (estimated mean level for milk).
2. HR in meat calculated for mammalian on the basis of 20% fat + 80% muscle and 10% fat + 90% muscle for poultry
3. 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 extrapolation (It) or by linear regression (Ln). Fill in method(s) considered to derive the MRL proposals.
4. Provisional livestock dietary burden calculation to be reconsidered pending upon the outcome of the requested residue trials to determine the magnitude of mecoprop-P, HMCPP (free and conjugated), CCPP and 4-glucosyl-MPP residues in feed items and the relative toxicity of these compounds.
5. If significant transfer of residues of HMCPP (free and conjugated), CCPP and 4-glucosyl-MPP into animal commodities is observed, the magnitude of these compounds or their degradation products should be further investigated in livestock feeding studies dosing with a representative mixture of mecoprop-P and these compounds in feed items.
| tissue          | in feeding level | STMR<sup>(b)</sup> at 1N | in feeding level | STMR<sup>(b)</sup> at 1N | in feeding level | STMR<sup>(b)</sup> at 1N | in feeding level | STMR<sup>(b)</sup> at 1N | in feeding level |
|-----------------|------------------|---------------------------|------------------|---------------------------|------------------|---------------------------|------------------|---------------------------|------------------|
| Muscle          |                  |                           |                  |                           |                  |                           |                  |                           |                  |
| Fat             |                  |                           |                  |                           |                  |                           |                  |                           |                  |
| Meat<sup>(a)</sup> |                |                           |                  |                           |                  |                           |                  |                           |                  |
| Liver           |                  |                           |                  |                           |                  |                           |                  |                           |                  |
| Kidney          |                  |                           |                  |                           |                  |                           |                  |                           |                  |
| Milk            |                  |                           |                  |                           |                  |                           |                  |                           |                  |
| Eggs            |                  |                           |                  |                           |                  |                           |                  |                           |                  |

Method of calculation<sup>(c)</sup>

- STMR in meat calculated for mammalian on the basis of 20% fat + 80% muscle and 10% fat + 90% muscle for poultry
- When the mean level is set at the LOQ, the STMR is set at the LOQ.
- The OECD guidance document on residues in livestock (series on pesticide 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**
Open

**Plant products**
Open

**Processing factors (Regulation (EU) N° 283/2013, Annex Part A, points 6.5.2 and 6.5.3)**
No data required.

**Consumer risk assessment (Regulation (EU) N° 283/2013, Annex Part A, point 6.9)**

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

| ADI | 0.01 mg/kg bw per day |
|-----|-----------------------|
| TMDI according to EFSA PRIMo | Not relevant |
| NTMDI, according to (to be specified) | |
| IEDI (% ADI), according to EFSA PRIMo | |
| NEDI (% ADI), according to (to be specified) | |
| Factors included in the calculations | N/A |

| ARfD | 0.2 mg/kg bw |
|------|--------------|
| IESTI (% ARfD), according to EFSA PRIMo | Not relevant |
| NESTI (% ARfD), according to (to be specified) | |
| Factors included in IESTI and NESTI | N/A |

**Consumer risk assessment limited to the representative uses**

| TMDI (% ADI), according to EFSA PRIMo | Highest TMDI: 20.6% ADI (Danish child) (provisional) |
| NTMDI (% ADI), according to UK | Highest NTMDI: 46% ADI (UK infant, UK chronic consumer version 1.1) (provisional) |
| IEDI (% ADI), according to EFSA PRIMo | Not relevant |
| NEDI (% ADI), according to UK | Not relevant |
| Factors included in the calculations | N/A |
| IESTI (% ARfD, according to EFSA PRIMo) | Highest IESTI: 1.4% ARfD (wheat) (provisional) |
| NESTI (% ARfD, according to UK) | Highest NESTI: 2.5% ARfD (Milk) (provisional) |
| Factors included in IESTI and NESTI | N/A |

**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 |
|---------|-----------------|-------------------------------------------|
| Plant commodities (RD-Mo = Mecoprop-P) | | |

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(a) Code

(b) MRL/Import tolerance

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| Commodity Code | Commodity      | MRL          |
|----------------|----------------|--------------|
| 0500090        | Wheat (including triticale) | 0.05* (provisional) |
| 0500010        | Barley         | 0.05* (provisional) |
| 0500050        | Oat            | 0.05* (provisional) |
| 0500070        | Rye            | 0.05* (provisional) |

**Animal commodities (RD-Mo: open\(^{(4)}\))**

| Commodity Code | Commodity          | MRL          |
|----------------|--------------------|--------------|
| 1012000        | Bovine (all commodities) | Open         |
| 1013000        | Sheep (all commodities) | Open        |
| 1014000        | Goat (all commodities) | Open        |
| 1020000        | Milk (cattle, sheep, goat) | Open       |

\(^{(a)}\): 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.

\(^{(4)}\): Livestock exposure assessment not finalised.
### Environmental Fate and Behaviour

#### Route of Degradation (Aerobic) in Soil
(Regulation (EU) N° 283/2013, Annex Part A, point 7.1.1.1)

| Parameter                                           | Value                                                                 |
|-----------------------------------------------------|----------------------------------------------------------------------|
| Mineralisation after 100 days                       | 39.7% after 191 d, $[^{14}\text{C}]$-phenyl-label (n= 1)              |
|                                                     | 42-51% after 100 d, $[^{14}\text{C}]$-phenyl-label (n = 3)             |
| Non-extractable residues after 100 days             | 44.4% after 191 d, $[^{14}\text{C}]$-phenyl-label (n= 1)               |
|                                                     | 43-51% after 100 d, $[^{14}\text{C}]$-phenyl-label (n= 3)              |
| Metabolites requiring further consideration         | No metabolites that required further consideration                   |
| - name and/or code, % of applied (range and maximum)|                                                                      |

#### Route of Degradation (Anaerobic) in Soil
(Regulation (EU) N° 283/2013, Annex Part A, point 7.1.1.2)

| Parameter                                           | Value                                                                 |
|-----------------------------------------------------|----------------------------------------------------------------------|
| Mineralisation after 100 days                       | No data – not required                                               |
| Non-extractable residues after 100 days             | No data – not required                                               |
| Metabolites that may require further consideration  | No data – not required                                               |
| - name and/or code, % of applied (range and maximum)|                                                                      |

#### Route of Degradation (Photolysis) on Soil
(Regulation (EU) N° 283/2013, Annex Part A, point 7.1.1.3)

| Parameter                                           | Value                                                                 |
|-----------------------------------------------------|----------------------------------------------------------------------|
| Mineralisation at study end                         | 3% after 30 d, $[^{14}\text{C}]$-phenyl-label (n= 1)                 |
| Non-extractable residues at study end               | 15% after 30 d, $[^{14}\text{C}]$-phenyl-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)

| Parent                                      | Soil type           | pH$^{(a)}$ | t. °C / % FMC (1/3 bar) | DT$_{50}$/DT$_{90}$ (d) | DT$_{50}$ (d) 20 °C pH2/10kPa$^{(b)}$ | St. ($\chi^2$) | Method of calculation |
|---------------------------------------------|---------------------|------------|------------------------|-------------------------|----------------------------------------|---------------|----------------------|
| Sandy Loam (Timmerman)                      | 7.4                 | 20 / 75    | 7.67 / 25.5            | 4.7                     | 8.52                                   | SFO           |                      |
| Sand (Speyer 2.1)                           | 6.9                 | 20 / 75    | 7.0 / 23.1             | 4.0                     | 10.5                                   | SFO           |                      |
| Loamy Sand (Speyer 2.2)                     | 6.0                 | 20 / 75    | 10.12$^*$ / 33.6       | 8.2                     | 4.9                                    | FOMC $^*$DT$_{50}$/3.32 |
| Sandy Loam (Speyer 2.3)                     | 7.4                 | 20 / 75    | 6.0 / 19.9             | 4.9                     | 3.98                                   | SFO           |                      |
| Geometric mean (if not pH dependent)        |                     |            |                        |                         |                                        |               | 5.24                 |
| pH dependence                               | No                  |            |                        |                         |                                        |               |                      |

$(a)$: Solution measured in is not reported
$(b)$: Normalised using a Q10 of 2.58 and Walker equation coefficient of 0.7

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1  $^{14}$ n corresponds to the number of soils.
Rate of degradation in soil (aerobic) laboratory studies transformation products (Regulation (EU) N° 283/2013, Annex Part A, point 7.1.2.1.2 and Regulation (EU) N° 284/2013, Annex Part A, point 9.1.1.1)
Not required / no aerobic soil transformation products to consider

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 9.1.1.1.2.1)
No field dissipation data available, not required

Combined laboratory and field kinetic endpoints for modelling (when not from different populations)
Not required / no field data available

Soil accumulation (Regulation (EU) N° 283/2013, Annex Part A, point 7.1.2.2.2 and Regulation (EU) N° 284/2013, Annex Part A, point 9.1.1.2.2)
Soil accumulation and plateau concentration 

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)
Not required / no anaerobic soil studies available

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)
Not required / no anaerobic soil studies available

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 |
|----------------|-----------------|
| Soil type      | pH[^a] | t. °C / % FMC (1/3bar) | DT₅₀ / DT₉₀ (d) calculated at 42ºN | St. (χ²) | Method of calculation |
| Sandy Loam     | 7.4    | 25 / 75               | 20.7 / 68.6                    | 3.96    | SFO                 |

[^a]: Solution measured in is not reported
### 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)

| Soil Type                 | OC % | Soil pH* | $K_d$ (mL/g) | $K_{doc}$ (mL/g) | $K_F$ (mL/g) | $K_{Foc}$ (mL/g) | 1/n |
|---------------------------|------|----------|--------------|------------------|--------------|------------------|-----|
| Sandy (Zeist)             | 3.2  | 5.2*     | -            | -                | 4.5          | 139              | 0.66|
| Sandy (De Krakeling)      | 2.1  | 5.3*     | -            | -                | 3.5          | 167              | 0.69|
| Sandy (Maarn)             | 2.4  | 5.2*     | -            | -                | 3.3          | 135              | 0.75|
| Sandy Loam (Fox)          | 1.3  | 7.6**    | -            | -                | 0.30         | 22               | 0.94|
| Silty Clay Loam (Hagerstown) | 1.5  | 6.6**    | -            | -                | 0.43         | 30               | 1.01|
| Silt Loam (Plano)         | 3.4  | 6.8**    | -            | -                | 0.69         | 20               | 0.96|
| sandy Loam (Calke)        | 3.1  | 5.8      | -            | -                | 0.56         | 18               | 0.85|
| Clay Loam (South Witham)  | 3.7  | 7.3      | -            | -                | 0.46         | 12               | 0.89|
| Sandy Clay Loam (Lockington) | 3.1  | 5.7      | -            | -                | 0.64         | 21               | 0.85|
| Loamy Sand (Hagen)        | 2.9  | 5.7      | -            | -                | 0.98         | 34               | 0.93|

| Geometric mean pH <5.5 (n = 3) | 3.7 | 0.54 | 146 | 21 |

| pH >5.5 (n = 7) | 0.70 | 0.92 |

**Measured in water**

* Calculated from $\text{pH(H}_2\text{O)} = 0.820 \text{pH(KCl)} + 1.69$

** Solution not reported in study, assumed to be H$_2$O

### 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)

Not required / no transformation products to consider

### 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)

Not required / no data available

### Mobility in soil column leaching transformation products (Regulation (EU) N° 283/2013, Annex Part A, point 7.1.4.1.2 and Regulation (EU) N° 284/2013, Annex Part A, point 9.1.2.1)

Not required / no data available

### 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)

| Lysimeter/ field leaching studies | Location: Fraunhofer, Germany |
|-----------------------------------|--------------------------------|
| Study type (e.g. lysimeter, field): lysisimeter |
| Soil properties: sandy loam, 0-30cm depth - pH = 5.7, OC = 1.5, FMC = 20-30% |
| Dates of application : 18th May 1989 |
| Crop : summer wheat (seeded April 1989), winter |
wheat (seeded September 1989), winter rape (seeded September 1990)
Interception estimated: 0% (applied to bare soil)
Number of applications: 1 years, 1 applications per year
Duration – 2 years
Application rate: 1200 g/ha/year
Average annual rainfall (mm): 868 mm
Average annual leachate volume (mm): 443 mm
Neither Mecoprop-P nor 4-chloro-2-methylphenol were detected at concentrations > 0.03µg/L.
Unidentified compounds were present at 0.4-0.5 and 0.1-0.2µg/L a.s. equivalents 1 and 2 years after application, respectively.

**Hydrolytic degradation (Regulation (EU) N° 283/2013, Annex Part A, point 7.2.1.1)**

| pH 5: stable to hydrolysis at 25 and 70 °C |
| pH 7: stable to hydrolysis at 25 and 70 °C |
| pH 9: stable to hydrolysis at 25 and 70 °C |

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

| DT50: 7 days (SFO, determined at pH 7) |
| Natural light, 42°N; DT50 4.65 days (SFO) |
| o-cresol: max 30.4 % AR (30 d) |
| Estimated DT50 at 42°N 42 days (SFO-SFO, formation fraction from parent 0.38) |

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

Not calculated

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

| Readily biodegradable (yes/no) |
| Yes |
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)

| Parent | System identifier (indicate fresh, estuarine or marine) | pH water phase | pH sed a) | t. °C b) | DT<sub>50</sub> /DT<sub>90</sub> whole sys. (suspended sediment test) | St. (χ<sup>2</sup>) | DT<sub>50</sub> /DT<sub>90</sub> Water (pelagic test) | St. (χ<sup>2</sup>) | Method of calculation |
|--------|-----------------------------------------------------|----------------|-----------|---------|---------------------------------------------------------------|---------------|---------------------------------|---------------|---------------------|
| Rhineland-Palatinate (fresh) | 8.28 | - | 20 | - | - | - | >100 0days | - | Default value |

(a): Measured in [medium to be stated, usually calcium chloride solution or water]
(b): Temperature of incubation=temperature that the environmental media was collected or std temperature of 20°C
(c): Normalised using a Q10 of 2.58

Not required/no metabolites to consider

Mineralisation and non extractable residues (for parent dosed experiments)

| System identifier (indicate fresh, estuarine or marine) | pH water phase | pH sed | Mineralisation x % after n 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) |
|-----------------------------------------------------|----------------|--------|-----------------------------------------------|-------------------------------------------------|-------------------------------------------------|
| Rhineland-Palatinate (fresh) | 8.28 | - | 2% after 58 days | - | - |

Water / sediment study (Regulation (EU) N° 283/2013, Annex Part A, point 7.2.2.3 and Regulation (EU) N° 284/2013, Annex Part A, point 9.2.2)

| Parent | Distribution (Max. sed 22.13 % after 56 d) |
|--------|-----------------------------------------------|
| Water / sediment system | pH water phase | pH sed a) | t. °C | DT<sub>50</sub> whole sys. | St. (χ<sup>2</sup>) | DistT<sub>50</sub> water | St. (χ<sup>2</sup>) | DT<sub>50</sub> sed | St. (χ<sup>2</sup>) | Method of calculation |
| Manningtree | 5.57 | 6.7 | 20 | 59 | 8.7 | 83 | 6.12 | - | - | SFO (whole sys) |
| Ongar | 6.94 | 8.6 | 20 | 163 | 2.9 | 86 | 1.63 | - | - | HS, slow phase |
| Calwich Abbey | 8.2 | 7.2 | 20 | 171 | 1.2 | 73 | 2.89 | - | - | HS, slow phase |
| Swiss Lake | 7.1 | 6.6 | 20 | 244 | 2.4 | 171 | 3.95 | - | - | SFO |

Geometric mean at 20°C<sup>c)</sup> 141 92 -

(a): Measured in water
(b): Normalised using a Q10 of 2.58
No metabolites to consider

| Mineralisation and non extractable residues (from parent dosed experiments) |
|---------------------------------------------------------------|
| **Water / sediment system** | **pH** | **pH** | **Mineralisation x % after n d. (end of the study)** | **Non-extractable residues max x % after n d** | **Non-extractable residues max x % after n d** |
|---------------------------------|-------|-------|-------------------------------------------------|---------------------------------|---------------------------------|
| Manningtree                      | 5.57  | 6.7   | 55% after 100 d                                 | 28% after 100 d                 | 28% after 100 d                 |
| Ongar                            | 6.94  | 8.6   | 58% after 100 d                                 | 40% after 61 d                  | 24% after 100 d                 |
| Calwich Abbey                    | 8.2   | 7.2   | 50% after 98 d                                  | 32% after 98 d                  | 32% after 98 d                  |
| Swiss Lake                       | 7.1   | 6.6   | 13% after 98 d                                  | 10% after 98 d                  | 10% after 98 d                  |

**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 22 hours derived by the Atkinson model, OH ($24\; \text{h}$) concentration assumed = $5 \times 10^6 \text{cm}^{-3}$

- **Volatilisation**
  - from plant surfaces (BBA guideline): <0.1 % after 24 hours
  - from soil surfaces (BBA guideline): <1 % after 24 hours

**Metabolites**

- No data

**Residues requiring further assessment (Regulation (EU) N° 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: mecoprop-P
  - Surface water: mecoprop-P, o-cresol
  - Sediment: mecoprop-P
  - Ground water: mecoprop-P
  - Air: mecoprop-P

**Definition of the residue for monitoring (Regulation (EU) N° 283/2013, Annex Part A, point 7.4.2)**

- See section 5, Ecotoxicology

**Monitoring data, if available (Regulation (EU) N° 283/2013, Annex Part A, point 7.5**

- **Soil (indicate location and type of study)**
  - No monitoring data available

- **Surface water (indicate location and type of study)**
  - Survey of monitoring programmes (2009-2014) – 28 European Union Member States + Norway and Switzerland
  - Mecoprop-P monitored in Ireland, Italy, Luxembourg, Norway, Slovakia, Switzerland and the Netherlands.
  - Total 341 sites monitored and 4,169 samples analysed.
Ground water (indicate location and type of study)

Survey of monitoring programmes (2009-2014) – 28 European Union Member States + Norway and Switzerland.

Mecoprop-P monitored in Luxembourg, Norway and the Netherlands – total 267 sites, 1047 samples

Mecoprop-P > 0.1µg/l in ≥43 samples. Maximum 1.8µg/l (Norway)

Air (indicate location and type of study)

No monitoring data available

**PEC soil (Regulation (EU) N° 284/2013, Annex Part A, points 9.1.3 / 9.3.1)**

Parent

Method of calculation

DT$_{50}$ (d): 10.12 days

Kinetics: pseudo-SFO (FOMC DT$_{90}$/3.32)

Field or Lab: worst case non-normalised from laboratory studies.

Application data

Crop: spring cereals

Depth of soil layer: 5cm

Soil bulk density: 1.5g/cm$^3$

% plant interception: 0%

Number of applications: 1

Interval (d): -

Application rate(s): 1200 g a.s./ha

| PEC$_{(s)}$ (mg/kg) | Single application | Single application | Multiple application | Multiple application |
|--------------------|--------------------|--------------------|----------------------|----------------------|
|                    | Actual             | Time weighted average | Actual              | Time weighted average |
| Initial            | 1.600              | -                  | -                    | -                    |
| Short term 24h     | 1.494              | 1.546              | -                    | -                    |
| 2d                 | 1.395              | 1.495              | -                    | -                    |
| 4d                 | 1.217              | 1.400              | -                    | -                    |
| Long term 7d       | 0.991              | 1.271              | -                    | -                    |
| 28d                | 0.613              | 1.029              | -                    | -                    |
| 50d                | 0.235              | 0.712              | -                    | -                    |
| 100d               | 0.052              | 0.452              | -                    | -                    |
| Plateau concentration | **Not calculated** |                    |                      |                      |

Not required/no metabolites to consider
PEC ground water (Regulation (EU) No 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, values used –

Modelling using FOCUS model(s), with appropriate FOCUSgw scenarios, according to FOCUS guidance.

Model(s) used: PEARL v4.4.4, PELMO v5.5.3, MACRO v4.4.2

Crop: Spring/winter cereals

Crop uptake factor: 0

Water solubility (mg/L): 250 000 mg/l at 20°C

Vapour pressure: 0.0014 Pa at 25°C

Geometric mean parent DT$_{50}^{lab}$ 5.24 d (normalisation to 10kPa or pF2, 20 °C with Q10 of 2.58 and Walker equation coefficient 0.7).

K$_{OC}$: 21 mL/g, $^{1}/_{n}$ = 0.92 (pH > 5.5).

Metabolites: not required

Application rate

Gross application rate: 1200 g/ha.

Crop growth stage: BBCH13-32 spring cereals / BBCH20-32 winter cereals

Canopy interception %: 0% spring cereals / 20% winter cereals

Application rate net of interception: 1200 g/ha spring cereals / 960 g/ha winter cereals.

No. of applications: 1

Time of application (absolute or relative application dates): 1st March

PEC(gw) - FOCUS modelling results (80th percentile annual average concentration at 1m)

| Scenario     | Parent (µg/L) |
|--------------|--------------|
|              | PEARL | PELMO | MACRO |
| Châteaudun   | <0.001 | <0.001 | 0.010 |
| Hamburg      | 0.024  | 0.052  | -     |
| Jokioinen    | 0.005  | 0.035  | -     |
| Kremsmünster | 0.010  | 0.007  | -     |
| Okehampton   | 0.023  | 0.056  | -     |
| Piacenza     | -      | -      | -     |
| Porto        | <0.001 | 0.002  | -     |
| Sevilla      | -      | -      | -     |
| Thiva        | -      | -      | -     |

| Scenario    | Parent (µg/L) |
|-------------|--------------|
|              | PEARL | PELMO | MACRO |
| Châteaudun  | <0.001 | 0.002 | <0.001 |
| Hamburg     | 0.015  | 0.073 | -     |
| Jokioinen   | 0.005  | 0.076 | -     |
| Kremsmünster| 0.009  | 0.017 | -     |
| Okehampton  | 0.031  | 0.115 | -     |
| Piacenza    | 0.015  | 0.047 | -     |
PEC surface water and PEC sediment (Regulation (EU) N° 284/2013, Annex Part A, points 9.2.5 / 9.3.1)

Parent

Parameters used in FOCUSsw step 1 and 2

| Parameter | Value |
|-----------|-------|
| Molecular weight (g/mol) | 214.65 |
| K<sub>OC</sub>/K<sub>OM</sub> (mL/g) | 21 / 12.18 |
| DT<sub>50</sub> soil (d) | 5.24 days (Lab) |
| DT<sub>50</sub> water/sediment system (d) | 141 d |
| DT<sub>50</sub> water (d) | 141 d |
| DT<sub>50</sub> sediment (d) | 1000 d |
| Crop interception (%) | spring cereals - 0 % (no interception) / winter cereals - 25% (minimal crop cover) |

Parameters used in FOCUSsw step 3 (if performed)

| Parameter | Value |
|-----------|-------|
| Version control no. ‘s of FOCUS software: SWASH v3.1 / SWAN v3.0 (MACRO v4.4.2, PRZM v3.1.1, TOXSWA v3.3.1) |
| Water solubility (mg/L) | 250000 |
| Vapour pressure: | 1.4 x 10^-3 Pa at 25°C |
| Kom/Koc (mL/g) | 12.18 / 21 |
| 1/n: (Freundlich exponent) | 0.92 |
| Q10=2.58, Walker equation coefficient | 0.7 |
| Crop uptake factor | 0 |

Application rate

Crop and growth stage: spring cereals BBCH 13-32 / winter cereals BBCH 20-32
Number of applications: 1
Interval (d): -
Application rate(s): 1200 g a.s./ha
Application window:
Step 1+2; Mar-May
Step 3:
Spring cereals – 7 days post emergence to 31<sup>st</sup> July
Winter cereals – 1<sup>st</sup> March to 31<sup>st</sup> July

| FOCUS STEP 1 Scenario | Day after overall maximum | PEC<sub>SW</sub> (µg/L) Actual | TWA | PEC<sub>SED</sub> (µg/kg) Actual | TWA |
|-----------------------|--------------------------|-----------------------------|-----|-------------------------------|-----|
| Spring and Winter Cereals | 0 h | 400.14 | | 81.71 |
|                        | 24 h | 397.88 | 399.01 | 83.55 | 82.63 |
|                        | 2 d | 395.93 | 397.96 | 83.15 | 82.99 |
|                        | 4 d | 392.05 | 395.97 | 82.33 | 82.86 |
|                        | 7 d | 386.32 | 393.06 | 81.13 | 82.38 |
|                        | 14 d | 373.25 | 386.40 | 78.38 | 81.06 |
|                        | 21 d | 360.62 | 379.90 | 75.73 | 79.72 |
|                        | 28 d | 348.42 | 373.55 | 73.17 | 78.40 |
### FOCUS STEP 1

| Scenario                      | Day after overall maximum | PEC_{SW} (µg/L) | PEC_{SED} (µg/kg) |                |         |         |
|-------------------------------|---------------------------|-----------------|-------------------|----------------|--------|--------|
|                               |                            | Actual          | TWA               | Actual         | TWA    |        |
| 42 d                          | 325.25                    | 361.27          | 68.30             | 75.84          |        |        |

### FOCUS STEP 2

| Scenario                      | Day after overall maximum | PEC_{SW} (µg/L) | PEC_{SED} (µg/kg) |                |         |         |
|-------------------------------|---------------------------|-----------------|-------------------|----------------|--------|--------|
|                               |                            | Actual          | TWA               | Actual         | TWA    |        |
| **Northern EU (Spring Cereals / March-May)** |                          |                 |                   |                |        |        |
| 0 h                           | 56.47                      |                 |                   | 11.83          |        |        |
| 24 h                          | 56.10                      | 56.29            | 11.77             | 11.80          |        |        |
| 2 d                           | 55.83                      | 56.13            | 11.72             | 11.77          |        |        |
| 4 d                           | 55.30                      | 55.84            | 11.61             | 11.72          |        |        |
| 7 d                           | 54.51                      | 55.44            | 11.44             | 11.63          |        |        |
| 14 d                          | 52.71                      | 54.52            | 11.06             | 11.44          |        |        |
| 21 d                          | 50.96                      | 53.62            | 10.70             | 11.25          |        |        |
| 28 d                          | 49.28                      | 52.77            | 10.34             | 11.07          |        |        |
| 42 d                          | 46.08                      | 51.05            | 9.67              | 10.71          |        |        |
| **Southern EU (Spring Cereals / March-May)** |                          |                 |                   |                |        |        |
| 0 h                           | 102.32                     |                 |                   | 21.45          |        |        |
| 24 h                          | 101.72                     | 102.01           | 21.35             | 21.40          |        |        |
| 2 d                           | 101.23                     | 101.79           | 21.25             | 21.35          |        |        |
| 4 d                           | 100.27                     | 101.29           | 21.04             | 21.25          |        |        |
| 7 d                           | 98.83                      | 100.52           | 20.74             | 21.10          |        |        |
| 14 d                          | 95.57                      | 98.86            | 20.06             | 20.75          |        |        |
| 21 d                          | 92.40                      | 97.23            | 19.39             | 20.41          |        |        |
| 28 d                          | 89.35                      | 95.64            | 18.75             | 20.07          |        |        |
| 42 d                          | 83.55                      | 92.57            | 17.53             | 19.43          |        |        |
| **Northern EU (Winter Cereals / March-May)** |                          |                 |                   |                |        |        |
| 0 h                           | 45.01                      |                 |                   | 9.43           |        |        |
| 24 h                          | 44.69                      | 44.85            | 9.38              | 9.40           |        |        |
| 2 d                           | 44.48                      | 44.72            | 9.34              | 9.38           |        |        |
| 4 d                           | 44.05                      | 44.49            | 9.25              | 9.34           |        |        |
| 7 d                           | 43.43                      | 44.17            | 9.11              | 9.27           |        |        |
| 14 d                          | 41.99                      | 43.44            | 8.81              | 9.12           |        |        |
| 21 d                          | 40.60                      | 42.72            | 8.52              | 8.97           |        |        |
| 28 d                          | 39.26                      | 42.02            | 8.24              | 8.82           |        |        |
| 42 d                          | 36.71                      | 40.67            | 7.70              | 8.54           |        |        |
| **Southern EU (Winter Cereals / March-May)** |                          |                 |                   |                |        |        |
| 0 h                           | 79.39                      |                 |                   | 16.64          |        |        |
| 24 h                          | 78.91                      | 79.15            | 16.56             | 16.60          |        |        |
| 2 d                           | 78.53                      | 78.94            | 16.48             | 16.56          |        |        |
| 4 d                           | 77.78                      | 78.55            | 16.32             | 16.48          |        |        |
| 7 d                           | 76.67                      | 77.98            | 16.09             | 16.36          |        |        |
| 14 d                          | 74.14                      | 76.69            | 15.56             | 16.09          |        |        |
| 21 d                          | 71.69                      | 75.43            | 15.05             | 15.83          |        |        |
| 28 d                          | 69.32                      | 74.19            | 14.55             | 15.57          |        |        |
| 42 d                          | 64.81                      | 71.81            | 13.60             | 15.07          |        |        |
| FOCUS STEP 3 Scenario | Water body | Day after overall maximum | PEC\(_{SW}\) (µg/L) Actual | PEC\(_{SED}\) (µg/kg) Actual | PEC\(_{SW}\) TWA | PEC\(_{SED}\) TWA |
|----------------------|------------|---------------------------|-----------------------------|-----------------------------|----------------|----------------|
| D1                  | Ditch      | 0                         | 13.363                      | 8.248                       |                |                |
|                     |            | 24                        | 13.320                      | 8.244                       | 8.247          | 8.247          |
|                     |            | 2d                        | 13.214                      | 8.237                       | 8.232          | 8.246          |
|                     |            | 4d                        | 12.883                      | 8.187                       | 8.187          | 8.242          |
|                     |            | 7d                        | 12.225                      | 8.078                       | 8.078          | 8.231          |
|                     |            | 14d                       | 9.855                       | 7.679                       | 7.679          | 8.180          |
|                     |            | 21d                       | 7.724                       | 7.153                       | 7.153          | 8.099          |
|                     |            | 28d                       | 5.956                       | 6.584                       | 6.584          | 7.987          |
|                     |            | 42d                       | 3.440                       | 5.481                       | 5.481          | 7.685          |
|                     |            | 50d                       | 2.504                       | 4.918                       | 4.918          | 7.480          |
|                     |            | 100d                      | 0.407                       | 2.744                       | 2.744          | 6.076          |
| D1                  | Stream     | 0 h                       | 8.276                       | 4.214                       |                |                |
|                     |            | 24 h                      | 8.233                       | 4.177                       | 4.177          | 4.212          |
|                     |            | 2 d                       | 8.122                       | 4.023                       | 4.023          | 4.204          |
|                     |            | 4 d                       | 7.764                       | 3.280                       | 3.280          | 4.172          |
|                     |            | 7 d                       | 6.899                       | 2.732                       | 2.732          | 4.085          |
|                     |            | 14 d                      | 0.0238                      | 2.135                       | 2.135          | 3.730          |
|                     |            | 21 d                      | 0.00797                     | 1.793                       | 1.793          | 3.359          |
|                     |            | 28 d                      | 0.00460                     | 1.548                       | 1.548          | 3.055          |
|                     |            | 42 d                      | 0.00231                     | 1.201                       | 1.201          | 2.604          |
|                     |            | 50d                       | 0.00175                     | 1.057                       | 1.057          | 2.407          |
|                     |            | 100d                      | 0.000624                    | 0.569                       | 0.569          | 1.666          |
| D3                  | Ditch      | 0 h                       | 7.599                       | 0.810                       |                |                |
|                     |            | 24 h                      | 3.405                       | 0.577                       | 0.577          | 0.765          |
|                     |            | 2 d                       | 0.346                       | 0.414                       | 0.414          | 0.676          |
|                     |            | 4 d                       | 0.00663                     | 0.295                       | 0.295          | 0.536          |
|                     |            | 7 d                       | 0.00183                     | 0.225                       | 0.225          | 0.424          |
|                     |            | 14 d                      | 0.000583                    | 0.161                       | 0.161          | 0.310          |
|                     |            | 21 d                      | 0.000317                    | 0.131                       | 0.131          | 0.256          |
|                     |            | 28 d                      | 0.000200                    | 0.112                       | 0.112          | 0.223          |
|                     |            | 42 d                      | 0.000112                    | 0.0868                      | 0.0868         | 0.182          |
|                     |            | 50d                       | 0.000106                    | 0.0763                      | 0.0763         | 0.166          |
|                     |            | 100d                      | 0.000059                    | 0.0404                      | 0.0404         | 0.111          |
| D4                  | Pond       | 0 h                       | 0.263                       | 0.249                       |                |                |
|                     |            | 24 h                      | 0.260                       | 0.249                       | 0.249          | 0.249          |
|                     |            | 2 d                       | 0.257                       | 0.249                       | 0.249          | 0.249          |
|                     |            | 4 d                       | 0.253                       | 0.249                       | 0.249          | 0.249          |
|                     |            | 7 d                       | 0.246                       | 0.248                       | 0.248          | 0.249          |
|                     |            | 14 d                      | 0.233                       | 0.247                       | 0.247          | 0.249          |
|                     |            | 21 d                      | 0.221                       | 0.245                       | 0.245          | 0.248          |
|                     |            | 28 d                      | 0.210                       | 0.243                       | 0.243          | 0.248          |
|                     |            | 42 d                      | 0.190                       | 0.237                       | 0.237          | 0.247          |
|                     |            | 50 d                      | 0.178                       | 0.233                       | 0.233          | 0.247          |
|                     |            | 100 d                     | 0.125                       | 0.203                       | 0.203          | 0.241          |
| D4                  | Stream     | 0 h                       | 6.304                       | 0.235                       |                |                |
|                     |            | 24 h                      | 0.000523                    | 0.0581                      | 0.0581         | 0.108          |
|                     |            | 2 d                       | 0.000333                    | 0.0421                      | 0.0421         | 0.0791         |
|                     |            | 4 d                       | 0.000269                    | 0.0304                      | 0.0304         | 0.0574         |
|                     |            | 7 d                       | 0.000233                    | 0.0233                      | 0.0233         | 0.0442         |
|                     |            | 14 d                      | 0.000177                    | 0.0169                      | 0.0169         | 0.0319         |
### Spring Cereals

**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 |
| 21 d       | 0.000113 | 0.0343 | 0.0138 | 0.0264 |
| 28 d       | 0.000067 | 0.0258 | 0.0119 | 0.0230 |
| 42 d       | 0.000003 | 0.0173 | 0.00938 | 0.0188 |
| 50 d       | 0.000002 | 0.0146 | 0.00834 | 0.0172 |
| 100 d      | 0.000005 | 0.00755 | 0.00464 | 0.0117 |

**D5**

| Water body | Day after overall maximum | PEC<sub>SW</sub> (µg/L) | PEC<sub>SED</sub> (µg/kg) |
|------------|---------------------------|--------------------------|--------------------------|
|            | Actual | TWA | Actual | TWA |
| 0 h        | 0.262 | 0.257 |             |             |
| 24 h       | 0.258 | 0.260 | 0.257 | 0.257 |
| 2 d        | 0.256 | 0.259 | 0.256 | 0.257 |
| 4 d        | 0.251 | 0.256 | 0.256 | 0.257 |
| 7 d        | 0.245 | 0.252 | 0.256 | 0.256 |
| 14 d       | 0.233 | 0.245 | 0.255 | 0.256 |
| 21 d       | 0.222 | 0.239 | 0.252 | 0.256 |
| 28 d       | 0.211 | 0.234 | 0.250 | 0.256 |
| 42 d       | 0.191 | 0.223 | 0.243 | 0.255 |
| 50 d       | 0.182 | 0.217 | 0.239 | 0.254 |
| 100 d      | 0.134 | 0.187 | 0.210 | 0.248 |

**D5**

| Water body | Day after overall maximum | PEC<sub>SW</sub> (µg/L) | PEC<sub>SED</sub> (µg/kg) |
|------------|---------------------------|--------------------------|--------------------------|
|            | Actual | TWA | Actual | TWA |
| 0 h        | 5.958 | 0.107 |             |             |
| 24 h       | 0.000028 | 0.221 | 0.0172 | 0.0329 |
| 2 d        | 0.000014 | 0.110 | 0.0124 | 0.0237 |
| 4 d        | 0.000009 | 0.0552 | 0.00894 | 0.0171 |
| 7 d        | 0.000007 | 0.0316 | 0.00682 | 0.0131 |
| 14 d       | 0.000005 | 0.0158 | 0.00489 | 0.00940 |
| 21 d       | 0.000004 | 0.0105 | 0.00401 | 0.00774 |
| 28 d       | 0.000004 | 0.00789 | 0.00345 | 0.00673 |
| 42 d       | 0.000003 | 0.00526 | 0.00274 | 0.00551 |
| 50 d       | 0.000002 | 0.00442 | 0.00245 | 0.00504 |
| 100 d      | 0.000000 | 0.00222 | 0.00139 | 0.00344 |

**R4**

| Water body | Day after overall maximum | PEC<sub>SW</sub> (µg/L) | PEC<sub>SED</sub> (µg/kg) |
|------------|---------------------------|--------------------------|--------------------------|
|            | Actual | TWA | Actual | TWA |
| 0 h        | 32.316 | 3.377 |             |             |
| 24 h       | 0.0137 | 20.891 | 1.474 | 2.627 |
| 2 d        | 0.00494 | 10.459 | 1.106 | 2.056 |
| 4 d        | 2.125 | 6.808 | 1.515 | 1.746 |
| 7 d        | 0.00175 | 4.202 | 0.968 | 1.545 |
| 14 d       | 0.000494 | 2.119 | 0.664 | 1.181 |
| 21 d       | 0.000252 | 1.463 | 0.530 | 0.988 |
| 28 d       | 0.000159 | 1.098 | 0.447 | 0.864 |
| 42 d       | 0.000084 | 0.732 | 0.340 | 0.707 |
| 50 d       | 0.000064 | 0.615 | 0.296 | 0.645 |
| 100 d      | 0.000000 | 0.308 | 0.150 | 0.428 |

### Winter Cereals

**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 |
| 0          | 158.372 | 3.777 |             |             |
| 24         | 151.690 | 157.712 | 54.830 | 54.826 |
| 2d         | 137.512 | 155.477 | 54.787 | 54.826 |
| 4d         | 115.752 | 148.964 | 54.678 | 54.813 |
| 7d         | 93.779 | 136.698 | 54.342 | 54.764 |
| 14d        | 63.302 | 113.633 | 53.696 | 54.641 |
| 21d        | 48.843 | 96.932 | 53.411 | 54.199 |
| 28d        | 43.743 | 85.352 | 53.120 | 53.806 |
| 42d        | 28.095 | 69.997 | 51.473 | 51.824 |
| Water body | Day after overall maximum | PEC<sub>SW</sub> (µg/L) Actual | PEC<sub>SW</sub> (µg/L) TWA | PEC<sub>SED</sub> (µg/kg) Actual | PEC<sub>SED</sub> (µg/kg) TWA |
|------------|---------------------------|-------------------------------|-------------------------|-------------------------------|-------------------------|
| **D1** Stream | 0 h | 98.801 | 54.630 |
| | 24 h | 94.401 | 54.787 | 54.826 |
| | 2 d | 84.822 | 54.678 | 54.813 |
| | 4 d | 71.331 | 54.342 | 54.764 |
| | 7 d | 57.289 | 53.696 | 54.641 |
| | 14 d | 37.524 | 53.411 | 54.199 |
| | 21 d | 27.780 | 51.260 | 53.806 |
| | 28 d | 26.634 | 48.167 | 51.824 |
| | 42 d | 12.373 | 42.412 | 51.824 |
| | 50 d | 0.0583 | 37.357 | 50.667 |
| | 100 d | 0.0118 | 37.357 | 50.667 |
| **D2** Ditch | 0 h | 184.278 | 33.285 |
| | 24 h | 87.999 | 33.210 | 33.269 |
| | 2 d | 70.834 | 33.053 | 33.241 |
| | 4 d | 142.741 | 32.203 | 33.113 |
| | 7 d | 69.496 | 30.734 | 32.720 |
| | 14 d | 31.306 | 30.488 | 32.067 |
| | 21 d | 25.102 | 31.307 | 31.885 |
| | 28 d | 14.342 | 27.755 | 31.570 |
| | 42 d | 10.230 | 22.525 | 30.488 |
| | 50 d | 8.723 | 21.426 | 29.729 |
| | 100 d | 2.614 | 19.395 | 28.569 |
| **D2** Stream | 0 h | 116.438 | 19.447 |
| | 24 h | 43.514 | 19.402 | 19.427 |
| | 2 d | 89.013 | 18.405 | 19.206 |
| | 4 d | 89.013 | 18.405 | 19.206 |
| | 7 d | 90.13 | 17.195 | 18.815 |
| | 14 d | 16.457 | 16.809 | 18.199 |
| | 21 d | 31.306 | 18.191 | 18.031 |
| | 28 d | 15.550 | 17.934 | 17.934 |
| | 42 d | 4.855 | 16.879 | 17.934 |
| | 50 d | 8.723 | 16.196 | 16.196 |
| | 100 d | 2.614 | 10.900 | 12.134 |
| **D3** Ditch | 0 h | 7.583 | 0.724 |
| | 24 h | 2.031 | 0.314 | 0.666 |
| | 2 d | 0.104 | 0.333 | 0.568 |
| | 4 d | 0.104 | 0.333 | 0.568 |
| | 7 d | 0.00345 | 0.182 | 0.345 |
| | 14 d | 0.00345 | 0.182 | 0.345 |
| | 21 d | 0.00345 | 0.182 | 0.345 |
| | 28 d | 0.00345 | 0.182 | 0.345 |
| | 42 d | 0.00345 | 0.182 | 0.345 |
| | 50 d | 0.00345 | 0.182 | 0.345 |
| | 100 d | 0.00345 | 0.182 | 0.345 |
| **D4** Pond | 0 h | 0.263 | 0.314 |
| | 24 h | 0.260 | 0.314 | 0.314 |
| | 2 d | 0.260 | 0.314 | 0.314 |
| | 4 d | 0.260 | 0.314 | 0.314 |
| | 7 d | 0.260 | 0.314 | 0.314 |
| | 14 d | 0.260 | 0.314 | 0.314 |
| | 21 d | 0.260 | 0.314 | 0.314 |
| | 28 d | 0.260 | 0.314 | 0.314 |
| | 42 d | 0.260 | 0.314 | 0.314 |
| | 50 d | 0.260 | 0.314 | 0.314 |
| | 100 d | 0.260 | 0.314 | 0.314 |
## Spring Cereals

### FOCUS STEP 3 Scenario

| Water body | Day after overall maximum | PEC<sub>SW</sub> (µg/L) Actual | PEC<sub>SW</sub> TWA | PEC<sub>SED</sub> (µg/kg) Actual | PEC<sub>SED</sub> TWA |
|------------|---------------------------|-----------------------------|-------------------|-------------------------------|-------------------|
| **D4** Stream | 0 h                       | 6.187                       | 0.203             |                               |                   |
|            | 24 h                      | 0.000421                    | 0.545             | 0.0440                        | 0.122             |
|            | 2 d                       | 0.000308                    | 0.297             | 0.0320                        | 0.122             |
|            | 4 d                       | 0.000261                    | 0.280             | 0.0232                        | 0.121             |
|            | 7 d                       | 0.000306                    | 0.250             | 0.0178                        | 0.119             |
|            | 14 d                      | 0.000560                    | 0.193             | 0.0130                        | 0.112             |
|            | 21 d                      | 0.00136                     | 0.148             | 0.0111                        | 0.104             |
|            | 28 d                      | 0.0383                      | 0.116             | 0.0157                        | 0.0963            |
|            | 42 d                      | 0.102                       | 0.0808            | 0.114                         | 0.0846            |
|            | 50 d                      | 0.0278                      | 0.0745            | 0.0881                        | 0.0795            |
|            | 100 d                     | 0.000382                    | 0.0409            | 0.0368                        | 0.0575            |
| **D5** Pond | 0 h                       | 0.262                       | 0.250             |                               |                   |
|            | 24 h                      | 0.258                       | 0.260             | 0.250                         | 0.250             |
|            | 2 d                       | 0.256                       | 0.259             | 0.250                         | 0.250             |
|            | 4 d                       | 0.251                       | 0.256             | 0.249                         | 0.250             |
|            | 7 d                       | 0.244                       | 0.252             | 0.249                         | 0.250             |
|            | 14 d                      | 0.232                       | 0.245             | 0.248                         | 0.249             |
|            | 21 d                      | 0.218                       | 0.238             | 0.246                         | 0.249             |
|            | 28 d                      | 0.204                       | 0.231             | 0.244                         | 0.249             |
|            | 42 d                      | 0.183                       | 0.218             | 0.238                         | 0.248             |
|            | 50 d                      | 0.175                       | 0.212             | 0.233                         | 0.248             |
|            | 100 d                     | 0.132                       | 0.182             | 0.203                         | 0.242             |
| **D5** Stream | 0 h                      | 5.978                       | 0.109             |                               |                   |
|            | 24 h                      | 0.000037                    | 0.225             | 0.0176                        | 0.0336            |
|            | 2 d                       | 0.000023                    | 0.131             | 0.0127                        | 0.0243            |
|            | 4 d                       | 0.000018                    | 0.0563            | 0.00915                       | 0.0175            |
|            | 7 d                       | 0.000016                    | 0.0322            | 0.00698                       | 0.0134            |
|            | 14 d                      | 0.000014                    | 0.0161            | 0.00501                       | 0.00961           |
|            | 21 d                      | 0.000010                    | 0.0107            | 0.00411                       | 0.00792           |
|            | 28 d                      | 0.000009                    | 0.00806           | 0.00354                       | 0.00689           |
|            | 42 d                      | 0.000008                    | 0.00538           | 0.00282                       | 0.00564           |
|            | 50 d                      | 0.000007                    | 0.00452           | 0.00252                       | 0.00517           |
|            | 100 d                     | 0.000000                    | 0.00227           | 0.00143                       | 0.00353           |
| **D6** Ditch | 0 h                       | 8.127                       | 1.397             |                               |                   |
|            | 24 h                      | 4.483                       | 6.680             | 1.176                         | 1.357             |
|            | 2 d                       | 1.059                       | 4.526             | 1.009                         | 1.274             |
|            | 4 d                       | 0.530                       | 2.587             | 0.888                         | 1.133             |
|            | 7 d                       | 0.491                       | 1.703             | 0.819                         | 1.021             |
|            | 14 d                      | 0.450                       | 1.100             | 0.761                         | 0.906             |
|            | 21 d                      | 0.316                       | 0.887             | 0.702                         | 0.851             |
|            | 28 d                      | 0.347                       | 0.779             | 0.664                         | 0.806             |
|            | 42 d                      | 0.115                       | 0.673             | 0.590                         | 0.761             |
|            | 50 d                      | 0.0140                      | 0.675             | 0.486                         | 0.728             |
|            | 100 d                     | 0.00141                     | 0.499             | 0.237                         | 0.586             |
| **R1** Pond | 0 h                       | 0.662                       | 0.598             |                               |                   |
|            | 24 h                      | 0.655                       | 0.658             | 0.598                         | 0.598             |
|            | 2 d                       | 0.648                       | 0.655             | 0.598                         | 0.598             |
|            | 4 d                       | 0.636                       | 0.649             | 0.597                         | 0.598             |
|            | 7 d                       | 0.619                       | 0.640             | 0.595                         | 0.598             |
|            | 14 d                      | 0.582                       | 0.620             | 0.589                         | 0.597             |
|            | 21 d                      | 0.547                       | 0.602             | 0.581                         | 0.596             |
|            | 28 d                      | 0.515                       | 0.584             | 0.568                         | 0.595             |
|            | 42 d                      | 0.453                       | 0.551             | 0.541                         | 0.591             |
|            | 50 d                      | 0.418                       | 0.533             | 0.524                         | 0.598             |
|            | 100 d                     | 0.249                       | 0.430             | 0.411                         | 0.562             |
### Spring Cereals

#### 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             |
| R1 Stream  | 0 h                       | 19.599                 | 1.825                  |
|            | 24 h                      | 0.0120                 | 9.663                  |
|            | 2 d                       | 0.00277                | 4.984                  |
|            | 4 d                       | 0.000898               | 2.493                  |
|            | 7 d                       | 0.000368               | 1.425                  |
|            | 14 d                      | 0.000133               | 0.715                  |
|            | 21 d                      | 0.000072               | 0.525                  |
|            | 28 d                      | 0.000046               | 0.395                  |
|            | 42 d                      | 0.000024               | 0.264                  |
|            | 50 d                      | 0.000022               | 0.221                  |
|            | 100 d                     | 0.000008               | 0.111                  |
| R3 Stream  | 0 h                       | 44.152                 | 4.230                  |
|            | 24 h                      | 0.0466                 | 27.071                 |
|            | 2 d                       | 0.0126                 | 13.603                 |
|            | 4 d                       | 0.00451                | 6.806                  |
|            | 7 d                       | 0.00193                | 3.891                  |
|            | 14 d                      | 1.397                  | 2.089                  |
|            | 21 d                      | 0.000454               | 1.418                  |
|            | 28 d                      | 0.000341               | 1.079                  |
|            | 42 d                      | 0.000180               | 0.719                  |
|            | 50 d                      | 0.000140               | 0.604                  |
|            | 100 d                     | 0.000054               | 0.302                  |
| R4 Stream  | 0 h                       | 5.012                  | 0.261                  |
|            | 24 h                      | 0.000545               | 0.952                  |
|            | 2 d                       | 0.000161               | 0.476                  |
|            | 4 d                       | 0.000055               | 0.238                  |
|            | 7 d                       | 0.000023               | 0.136                  |
|            | 14 d                      | 0.000008               | 0.0681                 |
|            | 21 d                      | 0.000005               | 0.0454                 |
|            | 28 d                      | 0.000017               | 0.0355                 |
|            | 42 d                      | 0.000002               | 0.0237                 |
|            | 50 d                      | 0.000002               | 0.0199                 |
|            | 100 d                     | 0.000001               | 0.0102                 |

### Spring Cereals – Surface Water

#### Max PEC<sub>sw</sub> (µg/L)

| Step 4 Scenario | 5m NSBZ | 10m NSBZ | 5m VFS | 10m VFS | 50% DRT | 75% DRT | 95% DRT | 5m NSBZ + 5m VFS | 10m NSBZ + 5m VFS | 10m NSBZ + 10m VFS |
|-----------------|--------|---------|--------|--------|--------|--------|--------|----------------|----------------|------------------|
| D1 (Ditch)      | 13.36  | 13.36   | N/A    | N/A    | 13.36  | 13.36  | 13.36  | 13.36          | 13.36          | 13.36            |
| D1 (Stream)     | 8.276  | 8.276   | N/A    | N/A    | 8.276  | 8.276  | 8.276  | 8.276          | 8.276          | 8.276            |
| D3 (Ditch)      | 2.060  | 1.092   | N/A    | N/A    | 3.800  | 1.900  | 0.487  | 2.060          | 1.093          | 1.092            |
| D4 (Pond)       | 0.259  | 0.188   | N/A    | N/A    | 0.173  | 0.108  | 0.057  | 0.259          | 0.196          | 0.188            |
| D4 (Stream)     | 2.334  | 1.245   | N/A    | N/A    | 3.192  | 1.617  | 0.373  | 2.334          | 1.255          | 1.245            |
| D5 (Pond)       | 0.258  | 0.187   | N/A    | N/A    | 0.172  | 0.107  | 0.056  | 0.258          | 0.195          | 0.187            |
| D5 (Stream)     | 2.193  | 1.167   | N/A    | N/A    | 3.001  | 1.511  | 0.320  | 2.193          | 1.172          | 1.167            |
| R4 (Stream)     | 32.31  | 32.31   | 5.033  | 7.640  | 32.31  | 32.31  | 32.31  | 32.31          | 1.838          | 14.62            |

NSBZ = No spray buffer zone
VFS – Vegetated filter strip: 5m VFS – run-off and erosion reduction calculated using VFS mod. 10m VFS – Run-off reduction 0.6, Erosion reduction 0.85. 20m VFS – Run-off reduction 0.8, Erosion reduction 0.95.
DRT – Drift reduction technology

### Winter Cereals – Surface Water

| Scenario | Step 4 | Max PECsw (µg/L) |
|----------|--------|------------------|
|          | 5m NSBZ | 10m NSBZ | 5m VFS | 10m VFS | 20m VFS | 50% DRT | 75% DRT | 95% DRT | 5m NSBZ + 5m VFS | 10m NSBZ + 5m VFS | 10m NSBZ |
| D1 (Ditch) | 158.3 72 | 158.3 72 | N/A | N/A | N/A | 158.3 72 | 158.3 72 | 158.3 72 | 158.3 72 | 158.3 72 | 158.37 2 |
| D1 (Stream) | 98.80 1 | 98.80 1 | N/A | N/A | N/A | 98.80 1 | 98.80 1 | 98.80 1 | 98.80 1 | 98.80 1 | 98.801 |
| D2 (Ditch) | 184.2 78 | 184.2 78 | N/A | N/A | N/A | 184.2 78 | 184.2 78 | 184.2 78 | 184.2 78 | 184.2 78 | 184.27 8 |
| D2 (Stream) | 116.4 38 | 116.4 38 | N/A | N/A | N/A | 116.4 38 | 116.4 38 | 116.4 38 | 116.4 38 | 116.4 38 | 116.43 8 |
| D3 (Ditch) | 2.055 1090 | 2.055 1090 | N/A | N/A | N/A | 3.792 1896 | 0.522 | 2.055 1090 | 1.090 | 1.090 |
| D4 (Pond) | 0.273 0.204 | 0.273 0.204 | N/A | N/A | N/A | 0.198 0.154 | 0.119 | 0.273 0.204 | 0.204 |
| D4 (Stream) | 2.308 1.236 | 2.308 1.236 | N/A | N/A | N/A | 3.154 1.607 | 0.370 | 2.308 1.236 | 1.236 |
| D5 (Pond) | 0.272 0.197 | 0.272 0.197 | N/A | N/A | N/A | 0.189 0.125 | 0.073 | 0.272 0.197 | 0.197 |
| D5 (Stream) | 2.208 1.177 | 2.208 1.177 | N/A | N/A | N/A | 3.020 1.526 | 0.330 | 2.208 1.177 | 1.177 |
| D6 (Ditch) | 2.586 1.638 | 2.586 1.638 | N/A | N/A | N/A | 4.327 2.450 | 1.105 | 2.586 1.638 | 1.638 |
| R1 (Pond) | 0.674 0.609 | 0.674 0.609 | 0.262 0.402 | 0.315 | 0.602 0.545 | 0.499 0.273 | 0.208 0.349 |
| R1 (Stream) | 19.59 9 | 19.59 9 | 5.030 8.866 | 5.030 | 19.59 9 | 19.59 9 | 19.59 9 | 1.837 | 1.829 | 8.866 |
| R3 (Stream) | 44.15 2 | 44.15 2 | 10.08 | 10.51 | 10.08 | 44.15 2 | 44.15 2 | 44.15 2 | 2.571 | 2.136 | 20.082 |
| R4 (Stream) | 1.830 0.971 | 1.830 0.971 | 5.012 5.012 | 5.012 5.012 | 2.506 1.253 | 0.251 | 1.830 0.971 | 0.971 |

NSBZ - No spray buffer zone
VFS – Vegetated filter strip: 5m VFS – run-off and erosion reduction calculated using VFS mod. 10m VFS – Run-off reduction 0.6, Erosion reduction 0.85. 20m VFS – Run-off reduction 0.8, Erosion reduction 0.95.
DRT – Drift reduction technology

### Spring Cereals - Sediment

| Scenario | Step 4 | Max PECsed (µg/kg) |
|----------|--------|-------------------|
|          | 5m NSBZ | 10m NSBZ | 5m VFS | 10m VFS | 20m VFS | 50% DRT | 75% DRT | 95% DRT | 5m NSBZ + 5m VFS | 10m NSBZ + 5m VFS | 10m NSBZ |
| D1 (Ditch) | 8.101 8.072 | N/A | N/A | N/A | 8.150 8.098 | 8.056 | 8.101 8.074 | 8.072 |
| D1 (Stream) | 4.211 4.210 | N/A | N/A | N/A | 4.212 4.210 | 4.209 | 4.211 4.210 | 4.210 |
| D3 (Ditch) | 0.247 0.138 | N/A | N/A | N/A | 0.436 0.234 | 0.071 | 0.247 0.143 | 0.138 |
| D4 (Pond) | 0.248 0.182 | N/A | N/A | N/A | 0.168 0.107 | 0.058 | 0.248 0.190 | 0.182 |
| D4 | 0.090 0.050 | N/A | N/A | N/A | 0.122 0.064 | 0.017 | 0.090 0.050 | 0.050 |

NSBZ - No spray buffer zone
VFS – Vegetated filter strip: 5m VFS – run-off and erosion reduction calculated using VFS mod. 10m VFS – Run-off reduction 0.6, Erosion reduction 0.85. 20m VFS – Run-off reduction 0.8, Erosion reduction 0.95.
DRT – Drift reduction technology
### Winter Cereals - Sediment

| Step 4 Scenario | Max PECsed (µg/kg) |
|-----------------|--------------------|
|                 | 5m NSBZ | 10m NSBZ | 5m VFS | 10m VFS | 20m DRT | 50% DRT | 75% DRT | 95% DRT | 5m NSBZ + 5m VFS | 10m NSBZ + 5m VFS | 10m NSBZ + 10m VFS |
| D1 (Ditch)      | 54.76   | 54.75   | N/A    | N/A    | 54.78   | 54.76   | 54.74   | 54.76   | 54.75        | 54.75          | 54.75            |
| D1 (Stream)     | 33.94   | 33.94   | N/A    | N/A    | 33.94   | 33.94   | 33.94   | 33.94   | 33.94        | 33.94          | 33.94            |
| D2 (Ditch)      | 32.60   | 32.47   | N/A    | N/A    | 32.84   | 32.59   | 32.40   | 32.60   | 32.47        | 32.47          | 32.47            |
| D2 (Stream)     | 19.01   | 18.88   | N/A    | N/A    | 19.10   | 18.93   | 18.79   | 19.01   | 18.88        | 18.88          | 18.88            |
| D3 (Ditch)      | 0.225   | 0.127   | N/A    | N/A    | 0.395   | 0.215   | 0.071   | 0.225   | 0.127        | 0.127          | 0.127            |
| D4 (Pond)       | 0.326   | 0.260   | N/A    | N/A    | 0.252   | 0.195   | 0.148   | 0.326   | 0.260        | 0.260          | 0.260            |
| D4 (Stream)     | 0.118   | 0.117   | N/A    | N/A    | 0.119   | 0.118   | 0.116   | 0.118   | 0.117        | 0.117          | 0.117            |
| D5 (Pond)       | 0.262   | 0.193   | N/A    | N/A    | 0.185   | 0.124   | 0.074   | 0.262   | 0.193        | 0.193          | 0.193            |
| D5 (Stream)     | 0.042   | 0.023   | N/A    | N/A    | 0.057   | 0.030   | 0.007   | 0.042   | 0.023        | 0.023          | 0.023            |
| D6 (Ditch)      | 0.816   | 0.701   | N/A    | N/A    | 1.016   | 0.806   | 0.639   | 0.816   | 0.701        | 0.701          | 0.701            |
| R1 (Pond)       | 0.610   | 0.547   | 0.264  | 0.383  | 0.310   | 0.540   | 0.485   | 0.440   | 0.276        | 0.211          | 0.330            |
| R1 (Stream)     | 1.812   | 1.808   | 0.276  | 0.857  | 0.467   | 1.816   | 1.810   | 1.805   | 0.190        | 0.186          | 0.840            |
| R3 (Stream)     | 4.195   | 4.183   | 0.433  | 2.004  | 1.099   | 4.204   | 4.189   | 4.176   | 0.163        | 0.088          | 1.958            |
| R4 (Stream)     | 0.098   | 0.053   | 0.261  | 0.261  | 0.261   | 0.133   | 0.068   | 0.015   | 0.098        | 0.053          | 0.053            |

**NSBZ** - No spray buffer zone  
**VFS** - Vegetated filter strip: 5m VFS – run-off and erosion reduction calculated using VFS mod. 10m VFS – Run-off reduction 0.6, Erosion reduction 0.85. 20m VFS – Run-off reduction 0.8, Erosion reduction 0.95.  
**DRT** - Drift reduction technology
Metabolite *o*-cresol

Parameters used in FOCUSsw step 1 and 2

- Molecular weight: 108.14
- Soil or water metabolite: aqueous photolysis (water)
- Koc/Kom (mL/g): 1
- DT₅₀ soil (d): 1000
- DT₅₀ water/sediment system (d): 1000
- DT₅₀ water (d): 1000
- DT₅₀ sediment (d): 1000
- Crop interception (%): spring cereals - 0 % (no interception) / winter cereals - 25% (minimal crop cover)
- Maximum occurrence observed (% molar basis with respect to the parent):
  - Total Water and Sediment: 30.4 % (aqueous photolysis study)
  - Soil: 0% (value used in modelling 0.001%)

Parameters used in FOCUSsw step 3 (if performed)

- Not performed

Application rate

- Crop and growth stage: spring cereals BBCH 13-32 / winter cereals BBCH 20-32
- Number of applications: 1
- Interval (d): -
- Application rate(s): 1200 g a.s./ha
- Application window: Mar-May

Main routes of entry

- Formed in water

### FOCUS STEP 1

#### Scenario

**Spring and Winter Cereals**

| Day after overall maximum | PEC<sub>SW</sub> (µg/L) | PEC<sub>SED</sub> (µg/kg) |
|---------------------------|-------------------------|---------------------------|
| 0h                        | 1.68                    | <0.001                    |
| 24h                       | 1.68                    | 1.68                      |
| 7d                        | 1.67                    | 1.68                      |
| 14d                       | 1.66                    | 1.67                      |
| 28d                       | 1.65                    | 1.66                      |
| 42d                       | 1.63                    | 1.65                      |

### FOCUS STEP 2

#### Scenario

**Northern EU**

(Spring and Winter Cereals / March-May)

| Day after overall maximum | PEC<sub>SW</sub> (µg/L) | PEC<sub>SED</sub> (µg/kg) |
|---------------------------|-------------------------|---------------------------|
| 0 h                       | 1.68                    | 0.017                     |
| 24h                       | 1.68                    | 0.017                     |
| 7d                        | 1.67                    | 0.017                     |
| 14d                       | 1.66                    | 0.017                     |
| 21 d                      | 1.65                    | 0.017                     |
| 28 d                      | 1.65                    | 0.016                     |
| 42 d                      | 1.63                    | 0.016                     |

**Southern EU**

(Spring and Winter Cereals / March-May)

| Day after overall maximum | PEC<sub>SW</sub> (µg/L) | PEC<sub>SED</sub> (µg/kg) |
|---------------------------|-------------------------|---------------------------|
| 0 h                       | 1.68                    | 0.017                     |
| 24h                       | 1.68                    | 0.017                     |
| 7d                        | 1.67                    | 0.017                     |
| 14d                       | 1.66                    | 0.017                     |
| 21 d                      | 1.65                    | 0.017                     |
| 28 d                      | 1.65                    | 0.016                     |
FOCUS STEP 2 Scenario | Day after overall maximum | PEC<sub>sw</sub> (µg/L) | PEC<sub>sed</sub> (µg/kg) |
|-----------------|--------------------------|------------------|------------------|
|                 | Actual | TWA | Actual | TWA |
| 42 d            | 1.63   | 1.65 | 0.016  | 0.017 |

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

Method of calculation

Not required

**PEC**

Maximum concentration

Not required
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** | | | | |
| C. virginianus | a.s. | Acute | LD₅₀ | >500 |
| C. virginianus | a.s. | Acute | LD₅₀ | 500 |
| C. virginianus | a.s. | Acute | LD₅₀ | 497 |
| C. virginianus | a.s. | Acute | LD₅₀ | 648 |
| C. virginianus | a.s. | Acute | LD₅₀geomean | 532.7 |
| A. platyrhynchos | a.s. | Dietary | LD₅₀ | >712.2 |
| C. virginianus | a.s. | Long-term | LD₅₀/10 | 53.3 |
| C. japonica | a.s. | Long-term | NOAEL | 70.9⁴ |
| **Mammals** | | | | |
| Rat | a.s. | Acute | LD₅₀ | 1050 |
| Rat | a.s. | Acute | LD₅₀ | 431 |
| Rat | a.s. | Acute | LD₅₀ | 775 |
| Rat | a.s. | Acute | LD₅₀ | >700 ¹ |
| Rat | a.s. | Acute | LD₅₀geomean | 703.9 |
| Mouse | a.s. | Acute | LD₅₀ | >3393 ² |
| Rat | a.s. | Long-term | NOAEL | 8.5 ³ |

Endocrine disrupting properties (Annex Part A, points 8.1.5)
With regard to the endocrine disruption potential, as discussed in Section 2, it is unlikely that mecoprop-P is an endocrine disruptor in mammals, however, no firm conclusion can be drawn regarding fish and birds.

Additional higher tier studies (Annex Part A, points 10.1.1.2): None submitted

Terrestrial vertebrate wildlife (birds, mammals, reptile and amphibians) (Annex Part A, points 8.1.4, 10.1.3):
No data submitted

¹ Acute exposure neurotoxicity study
² dosed over 1 day duration as opposed to single gavage dose.
³ based upon consideration of available long-term, reproductive and developmental dataset
⁴ Sub-chronic toxicity study

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

Spring and winter cereals at 1200 g a.s./ha x 1 (BBCH 13-32)

| Growth stage | Indicator or focal species | Time scale | DDD (mg/kg bw per day) | TER | Trigger |
|--------------|---------------------------|------------|------------------------|-----|---------|
| **Screening Step (Birds)** | | | | | |
| All | Small omnivorous bird | Acute | 190.56 | 2.8 | 10 |
| All | Small omnivorous bird | Long-term | 41.2 | 1.3 | 5 |
| **Tier 1 (Birds)** | | | | | |
| BBCH 10-29 | Small omnivorous bird “lark” | Acute | 28.8 | 18.5 | 10 |
| BBCH 30-39 | Small omnivorous bird “lark” | Acute | 14.4 | 37.0 | 10 |
| Early (shoots) | Large herbivorous bird “goose” | Long-term | 36.6 | 14.5 | 10 |
| BBCH 10-29 | Small omnivorous bird “lark” | Long-term | 6.93 | 7.7 | 5 |
| Growth stage | Indicator or focal species | Time scale | DDD (mg/kg bw per day) | TER | Trigger |
|--------------|---------------------------|------------|------------------------|-----|---------|
| BBCH 30-39   | Small omnivorous bird “lark” | Long-term  | 3.43                   | 15.5| 5       |
| Early (shoots) autumn-winter BBCH 10-29 | Large herbivorous bird “goose” | Long-term  | 10.2                   | 5.21| 5       |
| Tier 1 (birds – risk from plant metabolite HMCPP)* |              |            |                        |     |         |
| BBCH 10-29   | Small omnivorous bird “lark” | Acute      | 4.30                   | 12.4| 10      |
| BBCH 30-39   | Small omnivorous bird “lark” |            | 2.15                   | 24.8|         |
| Early (shoots) autumn-winter BBCH 10-29 | Large herbivorous bird “goose” | Acute      | 5.5                    | 9.76|         |
| BBCH 10-29   | Small omnivorous bird “lark” | Long-term  | 1.03                   | 5.2 | 5       |
| BBCH 30-39   | Small omnivorous bird “lark” |            | 0.51                   | 10.5|         |
| Early (shoots) autumn-winter BBCH 10-29 | Large herbivorous bird “goose” | Long-term  | 1.5                    | 3.47|         |
| Tier 1 (birds – risk from plant metabolite CCPP)* |              |            |                        |     |         |
| BBCH 10-29   | Small omnivorous bird “lark” | Acute      | 4.13                   | 12.9| 10      |
| BBCH 30-39   | Small omnivorous bird “lark” |            | 2.06                   | 25.9|         |
| Early (shoots) autumn-winter BBCH 10-29 | Large herbivorous bird “goose” | Acute      | 5.2                    | 10.2|         |
| BBCH 10-29   | Small omnivorous bird “lark” | Long-term  | 0.99                   | 5.4 | 5       |
| BBCH 30-39   | Small omnivorous bird “lark” |            | 0.50                   | 10.7|         |
| Early (shoots) autumn-winter BBCH 10-29 | Large herbivorous bird “goose” | Long-term  | 1.5                    | 3.6 |         |

**Screening Step (Mammals)**

|             | Indicator or focal species | Time scale | DDD (mg/kg bw) | TER | Trigger |
|--------------|---------------------------|------------|----------------|-----|---------|
| All          | All small herbivorous mammal | Acute     | 142.08         | 5.0 | 10      |
| All          | All small herbivorous mammal | Long-term | 30.72           | 0.28| 5       |

**Tier 1 (Mammals)**

|             | Indicator or focal species | Time scale | DDD (mg/kg bw) | TER | Trigger |
|--------------|---------------------------|------------|----------------|-----|---------|
| BBCH 10-19   | Small insectivorous mammal “shrew” | Acute     | 9.12           | 77.2| 10      |
| BBCH ≥20     | Small insectivorous mammal “shrew” | Acute     | 6.48           | 108.6| 10      |
| Early (shoots) | Large herbivorous mammal “lagomorph” | Acute     | 50.52          | 13.9| 10      |
| BBCH 10-29   | Small omnivorous mammal “mouse” | Acute     | 20.64          | 34.1| 10      |
| BBCH 30-39   | Small omnivorous mammal “mouse” | Acute     | 10.32          | 68.2| 10      |
| BBCH 10-19   | Small insectivorous mammal “shrew” | Long-term | 2.67           | 3.2 | 5       |
| BBCH ≥20     | Small insectivorous mammal “shrew” | Long-term | 1.21           | 7.0 | 5       |
| Early (shoots) | Large herbivorous mammal “lagomorph” | Long-term | 14.18          | 0.60| 5       |
| BBCH 10-29   | Small omnivorous mammal “mouse” | Long-term | 4.96           | 1.7 | 5       |
| BBCH 30-39   | Small omnivorous mammal “mouse” | Long-term | 2.48           | 3.4 | 5       |

**Higher tier (Mammals) – Refined f_{max} = 0.08 (green plant food items only)**
| Growth stage       | Indicator or focal species            | Time scale   | DDD (mg/kg bw per day) | TER | Trigger |
|-------------------|--------------------------------------|--------------|------------------------|-----|---------|
| Early (shoots)    | Large herbivorous mammal “lagomorph” | Long-term    | 2.14                   | 4.0 | 5       |
| BBCH 10-29        | Small omnivorous mammal “mouse”      | Long-term    | 3.79                   | 2.2 | 5       |
| BBCH 30-39        | Small omnivorous mammal “mouse”      | Long-term    | 1.90                   | 4.5 | 5       |

Tier 1 (Mammals - risk from plant metabolite CCPP)*

| Growth stage       | Indicator or focal species            | Time scale   | DDD (mg/kg bw per day) | TER | Trigger |
|-------------------|--------------------------------------|--------------|------------------------|-----|---------|
| Early (shoots)    | Large herbivorous mammal “lagomorph” | Acute        | 7.24                   | 9.7 | 10      |
| BBCH 10-29        | Small omnivorous mammal “mouse”      | Acute        | 2.96                   | 23.8| 10      |
| BBCH 30-39        | Small omnivorous mammal “mouse”      | Acute        | 1.48                   | 47.6| 10      |
| Early (shoots)    | Large herbivorous mammal “lagomorph” | Long-term    | 2.03                   | 0.42| 5       |
| BBCH 10-29        | Small omnivorous mammal “mouse”      | Long-term    | 0.71                   | 1.2 | 5       |
| BBCH 30-39        | Small omnivorous mammal “mouse”      | Long-term    | 0.36                   | 2.4 | 5       |

**Risk from bioaccumulation and food chain behaviour**
Not required for mecoprop-P, data gap for o-cresol

**Risk from consumption of contaminated water**
**Leaf scenario:** Not required for representative crops

**Puddle scenario, Screening step**
Birds acute and long-term, mammals acute: Application rate (g a.s./ha)/relevant endpoint <50 (koc < 500 L/kg), TER calculation not needed

**Puddle scenario, risk assessment**

| Growth stage | Indicator or focal species            | Time scale   | DDD (mg/kg bw per day) | TER | Trigger |
|--------------|--------------------------------------|--------------|------------------------|-----|---------|
| Cereals      | Small granivorous mammal             | Long-term    | 0.56                   | 15.1| 5       |

*10 times parental toxicity assumed

**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)**

| Group              | Test substance | Time-scale (Test type) | End point | Toxicity |
|--------------------|----------------|------------------------|-----------|----------|
| Laboratory tests   |                |                        |           |          |
| Fish               |                |                        |           |          |
| *S.gairdneri*      | a.s.           | Acute 96 hr (static)   | Mortality, LC50 | 171 mg a.s./L (nom) |
| *L.macrophirus*    | a.s.           | Acute 96 hr (static)   | Mortality, LC50 | >100 mg a.s./L (nom) |
| *O.mykiss*         | a.s.           | Acute 96 hr (static)   | Mortality, LC50 | >93 mg a.s./L (nom) |
| *L.macrophirus*    | a.s.           | Acute 96 hr (static)   | Mortality, LC50 | >93 mg a.s./L (nom) |
| *O.mykiss*         | *Mecoprop-P K 600 g/L* | Acute 96 hr (static) | Mortality, LC50 | >100 mg form./L (>58.7 mg a.s./L (nom)) |
| Group          | Test substance | Time-scale (Test type) | End point                      | Toxicity[^1] |
|---------------|----------------|------------------------|--------------------------------|--------------|
| *O. mykiss*   | a.s.           | Chronic (flow-through) | 21-day adult NOEC             | 50 mg a.s./L (nom) |
| *O. mykiss*   | a.s.           | Chronic (flow-through) | 89-day NOEC                   | 11.1 mg a.s./L (mm) |
| Aquatic invertebrates |     |                       |                                |              |
| *D. magna*    | a.s.           | 48 h (static)          | Mortality, EC<sub>50</sub>    | >91 mg a.s./L (mm) |
| *D. magna*    | a.s.           | 48 h (static)          | Mortality, EC<sub>50</sub>    | >100 mg a.s./L (nom) |
| *D. magna*    | Mecoprop-P K 600 g/L | 48 h (static)         | Mortality, EC<sub>50</sub>    | >100 mg form./L (>58.7 mg a.s./L<sub>(nom)</sub>) |
| *D. magna*    | Duplosan KV    | 48 h (static)          | Mortality, EC<sub>50</sub>    | >1000 mg form./L (>600 mg a.s./L<sub>(nom)</sub>) |
| *D. magna*    | Optica MP      | 48 h (static)          | Mortality, EC<sub>50</sub>    | >272 mg form./L (>186 mg a.s./L<sub>(nom)</sub>) |
| *D. magna*    | a.s.           | 21 d (semi-static)     | Reproduction or development, NOEC | 50 mg a.s./L (nom) |
| *C. gigas*    | a.s.           | 36-hr (static)         | Development EC<sub>10</sub>   | 50.49 mg a.s./L (nom) |
| Sediment-dwelling organisms |     |                       |                                |              |
| No data submitted |               |                       |                                |              |
| Algae         |                |                        |                                |              |
| *P. subcapitata* | a.s.         | 72 h (static)          | Growth rate: E<sub>C</sub>50 \( (E<sub>C</sub>10) \) \[Biomass: E<sub>B</sub>C<sub>50</sub> \( (E<sub>B</sub>C<sub>10) \) \] | >729 mg a.s./L (nom) 145 mg a.s./L 270 mg a.s./L (nom) 35 mg a.s./L |
| *A. flos-aquae* | a.s.          | 72 h (static)          | Growth rate: E<sub>C</sub>50 \( (NOEC) \) \[Biomass: E<sub>B</sub>C<sub>50</sub> \( (NOEC) \) \] | 23.9 mg a.s./L (mm) 7.21 mg a.s./L 16.2 mg a.s./L (mm) 7.21 mg a.s./L |
| *N. pelliculosa* | a.s.          | 72 h (static)          | Growth rate: E<sub>C</sub>50 \( E<sub>C</sub>10 \) \( E<sub>C</sub>20 \) \( (NOEC) \) \[Biomass: E<sub>B</sub>C<sub>50</sub> \( E<sub>B</sub>C<sub>10 \) \( E<sub>B</sub>C<sub>20 \) \( (NOEC) \) \] | 105 mg a.s./L (mm) 40.2 mg a.s./L 60.9 mg a.s./L 21.1 mg a.s./L 57.8 mg a.s./L (mm) 24.5 mg a.s./L 34.6 mg a.s./L 10.3 mg a.s./L |
| Group         | Test substance | Time-scale (Test type) | End point                                                                 | Toxicity¹ |
|--------------|----------------|------------------------|---------------------------------------------------------------------------|-----------|
| *S. costatum*| a.s.           | 72 h (static)          | Growth rate: $E_{C50}$ $E_{C10}$ $E_{C20}$ (NOEC) [Biomass: $E_{bC50}$ $E_{bC10}$ $E_{bC20}$ (NOEC)] | 102 mg a.s./L (mm) 86 mg a.s./L 92 mg a.s./L 47 mg a.s./L 84 mg a.s./L (mm) 63 mg a.s./L 70 mg a.s./L 47 mg a.s./L |
| *P. subcapitata* | Mecoprop-P K 600 g/L | 72 h (static)          | Growth rate $E_{C50}$ $E_{C10}$ $E_{C20}$ (NOEC) [Biomass $E_{bC50}$ $E_{bC10}$ $E_{bC20}$ (NOEC)] | >100 mg form./L (>58.7 mg a.s./L) >100 mg form./L >100 mg form./L (>58.7 mg a.s./L) >100 mg form./L >100 mg form./L >100 mg form./L (>58.7 mg a.s./L) 19 mg form./L 38 mg form./L 12.5 mg form./L |
| Higher plant |                |                        |                                                                          |           |
| *L. minor*   | a.s.           | 7 d (semi-static)      | Fronds number $E_{C50}$ $E_{C10}$ $E_{C20}$ (NOEC) AUC EC50 AUC NOEC Biomass, $E_{bC50}$ Biomass, NOEC | >56 mg a.s./L (nom) 0.18 mg a.s./L 22.6 mg a.s./L (nom) 0.22 mg a.s./L 36.1 mg a.s./L (nom) 6.7 mg a.s./L |
| *L. gibba*   | a.s.           | 14 d (semi-static)     | Fronds number, EC50 (NOEC)                                               | 1.6 mg a.s./L (mm) <0.53 mg a.s./L |
| *L. gibba*   | Mecoprop-P K 600 g/L | 7 d (static)          | Frond number, $E_{C50}$ $E_{C10}$ $E_{C20}$ (NOEC) $E_{bC50}$ $E_{bC10}$ $E_{bC20}$ (NOEC) | 59 mg form./L (34.7 mg a.s./L) 1.9 mg form./L 6.2 mg form./L 1.0 mg prep./L 11 mg form./L (6.46 mg a.s./L) 0.61 mg form./L 1.6 mg form./L 0.32 mg form./L |
### Test results and conclusions

| Group          | Test substance | Time-scale (Test type) | End point                  | Toxicity\(^1\) |
|----------------|----------------|------------------------|----------------------------|----------------|
| *M. spicatum*  | Mecoprop-P K 600 g/L  | 14 d (static)         | Shoot length, ErC\(_{50}\)  | 56.1 µg form./L (26.9 µg a.s./L (nom)) |
|                |                |                        | ErC\(_{10}\) (NOEC)       | 3.12 µg form./L |
|                |                |                        | Shoot length, ErC\(_{50}\) | 19.15 µg form./L |
|                |                |                        | ErC\(_{10}\) (NOEC)       | 19.6 µg form./L (9.41 µg a.s./L (nom)) |
|                |                |                        | Biomass (dry wt.), ErC\(_{50}\) | 1.15 µg form./L |
|                |                |                        | ErC\(_{10}\) (NOEC)       | 1.91 µg form./L |
|                |                |                        | Biomass (wet wt.), ErC\(_{50}\) | <10 µg form./L |
|                |                |                        | ErC\(_{10}\) (NOEC)       | <10 µg form./L |

Further testing on aquatic organisms

No Further data submitted

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

With regard to the endocrine disruption potential, as discussed in Section 2, it is unlikely that mecoprop-P is an endocrine disruptor in mammals, however, no firm conclusion can be drawn regarding fish and birds.

\(^1\) (nom) nominal concentration; (mm) mean measured concentration; prep.: preparation; a.s.: active substance
**Bioconcentration in fish (Annex Part A, point 8.2.2.3)**

|                          | Active substance | o-cresol |  
|--------------------------|------------------|---------|
| logP<sub>O/W</sub>       | -0.19            | Data gap|
| Steady-state bioconcentration factor (BCF) (total wet weight) | 3.0             | -       |
| Uptake/depuration kinetics BCF (total wet weight/normalised to 5% lipid content) | -               | -       |
| Annex VI Trigger for the bioconcentration factor | -               | -       |
| Clearance time (days) (CT<sub>50</sub>) | ca 1            | -       |
| (CT<sub>90</sub>)        | -                | -       |
| Level and nature of residues (%) in organisms after the 14 day depuration phase | -               | -       |
| Higher tier study        |                  |         |
| No further data submitted|                  |         |
Toxicity/exposure ratios for the most sensitive aquatic organisms (Regulation (EU) No 284/2013, Annex Part A, point 10.2)

**FOCUS**<sub>sw</sub> step 1-3 - TERs for Mecoprop-P – Spring cereals at 1200 g a.s./ha x 1

| Scenario | PEC global max (µg L) | fish acute | fish chronic | Aquatic invertebrates | Aquatic invertebrates prolonged | Algae | Higher plant | Higher plant |
|----------|-----------------------|------------|--------------|-----------------------|---------------------------------|-------|--------------|--------------|
|          |                       | O.mykiss   | O.mykiss     | D.magna              | D.magna                        | A.flos-aquae | L.gibba     | M.spicatum*** |
|          |                       | LC<sub>50</sub> | NOEC         | EC<sub>50</sub>      | NOEC                            | ErC50  | EC<sub>50</sub> | ErC50        |
|          | >93 000 µg/L          | 11 100 µg/L | >91 000 µg/L | 50 000-µg/L          | 23900 µg/L                      | 1600 µg/L | 26.9 µg/L  |              |

|          |                      | FOCUS Step 1 | FOCUS Step 2 | FOCUS Step 3<sup>*</sup> | Trigger** |
|----------|---------------------|--------------|--------------|--------------------------|-----------|
|          |                     | 400.14       | 56.47        | 13.363                   | 100       |
|          |                     | 232          | 28           | 8.276                    | 10        |
|          |                     | 28           | 227          | 7.599                    | 10        |
|          |                     | 125          | 50           | 0.263                    | 100       |
|          |                     | 60           | 23900 µg/L   | 6.304                    | 10        |
|          |                     | 4.0          | 28           | 0.262                    | 10        |
|          |                     | 0.07         | 0.48         | 102.3                    | 10        |
|          |                     |              |              | 102.7                    | 10        |
|          |                     |              |              | 102.3                    | 10        |
|          |                     |              |              | 102.7                    | 10        |
|          |                     |              |              | 32.316                   | 10        |

<sup>*</sup>Only scenarios where the trigger is not met at FOCUS<sub>sw</sub> step 1-2 should be included in step 3.

<sup>**</sup>If the Trigger value has been adjusted during the risk assessment, it should always be clear on what basis the risk assessment has been performed, i.e. what the AF value is and for which organism and endpoint it refers.

<sup>***</sup>study with representative product, endpoint expressed in terms of a.s. content
**FOCUS\textsubscript{sw} Step 4 - TERs for Mecoprop-P – Spring cereals at 1200 g a.s./ha x 1**

| Organisms | M. spicatum |
|-----------|-------------|
| Toxicity endpoint: | 26.9 µg/L |

| Mitigation options | (m) non-spray buffer zone (corresponding to ≤ 95 % drift reduction) | (m) vegetated buffer strip (corresponding to ≤ 90 % run-off reduction) | PEC\textsubscript{sw} (µg/L) | TER | Trigger |
|-------------------|---------------------------------------------------------------|---------------------------------------------------------------|----------------------------|------|---------|
| FOCUS Step 4      |                                                               |                                                               |                            |      |         |
| D1 (Ditch)        | 5                                                             | 5                                                             | 13.36                      | **2.0** | 10      |
| D1 (Stream)       | 5                                                             | 5                                                             | 8.28                       | **3.2** | 10      |
| D3 (Ditch)        | 5                                                             | 5                                                             | 2.06                       | 13.1  | 10      |
| D4 (Pond)         | 5                                                             | 5                                                             | 0.26                       | 103.5 | 10      |
| D4 (Stream)       | 5                                                             | 5                                                             | 2.33                       | 11.5  | 10      |
| D5 (Pond)         | 5                                                             | 5                                                             | 0.26                       | 103.5 | 10      |
| D5 (Stream)       | 5                                                             | 5                                                             | 2.19                       | 12.3  | 10      |
| R4 (Stream)       | 5                                                             | 5                                                             | 1.84                       | 14.6  | 10      |
FOCUS\textsubscript{sw} step 1-3 - TERs for Mecoprop-P – Winter cereals at 1200 g a.s./ha x 1

| Scenario | PEC global max (µg L) | fish acute | fish chronic | Aquatic invertebrates | Aquatic invertebrates prolonged | Algae | Higher plant | Higher plant |
|----------|-----------------------|------------|-------------|-----------------------|-------------------------------|-------|--------------|--------------|
|          | O. mykiss | O. mykiss | D. magna | D. magna | N. pelliculosa | L. gibba | M. spicatum*** |
|          | LC\textsubscript{50} | NOEC | EC\textsubscript{50} | NOEC | ErC\textsubscript{50} | EC\textsubscript{50} | ErC\textsubscript{50} |
|          | >93 000 µg/L | 11 100 µg/L | >91 000 µg/L | 50 000 µg/L | 23900 µg/L | 1600 µg/L | 26.9 µg/L |

FOCUS Step 1

|          | 400.14 | 232 | 28 | 227 | 125 | 60 | 4.0 | 0.07 |

FOCUS Step 2

|          | 45.01 | 36 | 0.60 |
| North Europe | | | |
| South Europe | 79.39 | 20 | 0.34 |

FOCUS Step 3

|          | 158.372 | 0.2 |
| D1 ditch | 98.801 | 0.3 |
| D2 ditch | 184.278 | 0.1 |
| D2 stream | 116.438 | 0.2 |
| D3 ditch | 7.583 | 3.5 |
| D4 pond | 0.263 | 102.3 |
| D4 stream | 6.187 | 4.3 |
| D5 pond | 0.262 | 102.7 |
| D5 stream | 5.978 | 4.5 |
| D6 ditch | 8.127 | 3.3 |
| R1 pond | 0.662 | 40.6 |
| R1 stream | 19.599 | 1.4 |
FOCUS\textsubscript{sw} step 4 - TERs for Mecoprop-P – Winter cereals at 1200 g a.s./ha x 1

| Organisms | M. spicatum |
|------------------------|-------------|
| Toxicity endpoint: | 29.7 µg/L |

| Mitigation options | (m) non-spray buffer zone | (m) vegetated buffer strip | PEC\textsubscript{sw} (µg/L) | TER | Trigger |
|---------------------|--------------------------|--------------------------|------------------|------|--------|
|                     | (corresponding to ≤ 95 % drift reduction) | (corresponding to ≤ 90 % run-off reduction) |                  |      |        |
| FOCUS Step 4        |                          |                          |                  |      |        |
| D1 (Ditch)          | 5                        | 5                        | 158.37           | 0.17 | 10     |
| D1 (Stream)         | 5                        | 5                        | 98.80            | 0.27 | 10     |
| D2 (Ditch)          | 5                        | 5                        | 184.28           | 0.15 | 10     |
| D2 (Stream)         | 5                        | 5                        | 116.44           | 0.23 | 10     |
| D3 (Ditch)          | 5                        | 5                        | 2.06             | 13.06| 10     |
| D4 (Pond)           | 5                        | 5                        | 0.27             | 99.63| 10     |
| D4 (Stream)         | 5                        | 5                        | 2.31             | 11.65| 10     |
| D5 (Pond)           | 5                        | 5                        | 0.27             | 99.63| 10     |
| D5 (Stream)         | 5                        | 5                        | 2.21             | 12.17| 10     |
| D6 (Ditch)          | 5                        | 5                        | 2.59             | 10.39| 10     |
| R1 (Pond)           | 5                        | 5                        | 0.27             | 99.63| 10     |
| R1 (Stream)         | 5                        | 5                        | 1.84             | 14.62| 10     |
| R3 (Stream)         | 5                        | 5                        | 2.57             | 10.47| 10     |
| R4 (Stream)         | 5                        | 5                        | 1.83             | 14.70| 10     |

*Only scenarios where the trigger is not met at FOCUS\textsubscript{sw} step 1-2 should be included in step 3.*

**If the Trigger value has been adjusted during the risk assessment, it should always be clear on what basis the risk assessment has been performed, i.e. what the AF value is and for which organism and endpoint it refers.**

***Study with representative product, endpoint expressed in terms of a.s. content***
### FOCUS$_{sw}$ step 1 - TERs for metabolite $O$-cresol* – Spring and winter cereals at 1200 g a.s./ha x 1

| Scenario | PEC global max (µg L) | fish acute | fish chronic | Aquatic invertebrates | Aquatic invertebrates prolonged | Algae | Higher plant |
|----------|------------------------|------------|--------------|-----------------------|---------------------------------|-------|--------------|
|          |                        | $O$. mykiss| $O$. mykiss  | $D$. magna            | $D$. magna                     | $N$. pelliculosa               |       | $M$. spicatum|
|          |                        | LC$_{50}$  | NOEC         | EC$_{50}$             | NOEC                           | EC$_{50}$                      | EC$_{50}$ |
|          |                        | 9300 µg/L  | 1110µg/L     | 9100µg/L              | 5000µg/L                       | 2390µg/L                       | 2.69 µg/L |
| FOCUS Step 1 | 1.68                  | -5536      | 661          | 5417                  | 2976                           | 1423                           | **1.6**  |

*Assumed to be 10 times more toxic than the parent compound.
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)

| Species          | Test substance            | Time scale/type of endpoint | End point                              | toxicity          |
|------------------|---------------------------|-----------------------------|----------------------------------------|-------------------|
| A. mellifera a.s.|                          | Acute                       | 48 hr Oral toxicity (LD_{50})          | >83 µg/bee        |
| A. mellifera     | MCPP-P DMA formulated as water soluble concentrate liquid (SL) | Acute                       | 48 hr Contact toxicity (LD_{50})       | > 83 µg a.s./bee  |
| A. mellifera     | Mecoprop-P K 600 g/L      | Chronic                     | 10 d oral LC_{50}                      | 2.751 g a.s./kg food |
|                  |                           |                             | 10 d oral LDD_{50}                     | 89.3 µg a.s./bee/day |
|                  |                           |                             | 10 d NOEC                              | < 0.321 g a.s./kg food** |
|                  |                           |                             | 10 d NOED                              | < 10.9 µg a.s./bee/day** |
| A. mellifera     | a.s.                      | Acute (larval)*             | 7 d LD_{50}                            | 89.4 µg/bee       |
|                  |                           |                             | 7 d LD_{50}                            | 43.7 µg/bee       |
|                  |                           |                             | 7 d NOED                               | 49.6 µg/bee       |
| A. mellifera     | Mecoprop-P K 600 g/L      | Field study (brood development) | 27 d brood effects | No adverse effects at 0.15 g a.s./hive |
|                  |                           |                             |                                       | No statistically significant effects at 3.75 g a.s./hive |

*Single dose test type
** statistically significant reduction in the acini diameter between all the test item groups and the control group, therefore, a NOED could not be derived

Risk assessment for – Winter and spring cereals at 1200 g a.s./ha x 1

| Species          | Test substance | Risk quotient | HQ | Trigger |
|------------------|----------------|---------------|----|---------|
| A. mellifera a.s.|                | HQcontact     | <14.5 | 50   |
| A. mellifera a.s.|                | HQoral        | <14.5 | 50   |

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     | Mecoprop-P K 600 g/L | Mortality, LR_{50}  | >1468 g a.s./ha           |
|                       |                 | Reproduction         | 28.1% effects at 1468 g a.s./ha |
| Aphidius rhopalosiphi | Mecoprop-P K 600 g/L | Mortality, LR_{50}  | 447.6 g a.s./ha           |
|                       |                 | Reproduction         | -9.5% effects at 293.7 g a.s./ha |
| Additional species    |                 | Artificial substrate: | Not reported |
| Aleochara bilineata   | Optica MPK      | Mortality            | 2.8% effects at 1064 g a.s./ha |
First tier risk assessment for - Winter and spring cereals at 1200 g a.s./ha x 1

| Test substance       | Species               | Effect (LR$_{50}$ g/ha) | HQ in-field | HQ off-field$^1$ (1m) | Trigger |
|----------------------|-----------------------|--------------------------|-------------|-----------------------|---------|
| Mecoprop-P K 600 g/L | Typhlodromus pyri    | >1468                    | <0.82       | <0.03                 | 2       |
| Mecoprop-P K 600 g/L | Aphidius rhopalosiphi| 447.6                    | 2.7         | 0.07                  | 2       |

$^1$indicate distance assumed to calculate the drift rate

Extended laboratory tests, aged residue tests

| Species             | Life stage | Test substance, substrate | Time scale | Dose (g a.s./ha)$^1,2$ | End point(s)          | % effect$^3$ | ER$_{50}$ |
|---------------------|------------|---------------------------|------------|------------------------|----------------------|-------------|-----------|
| A.rhopalosiphi      | Adult      | Mecoprop-P K 600 g/L 3D natural substrate | 48 hr exposure | Initial residues 1457 | Mortality, reproduction | 13.3% 4.6% | -         |
| C.carnea            | Larvae     | Mecoprop-P K 600 g/L 2D natural substrate | Larval phase exposure | Initial residues 1457 | Mortality, reproduction | 2.8% -4.5% | -         |
| A.rhopalosiphi      | Adult      | BAS 037 29 H 3D natural substrate | 48 hr exposure | Initial residues 1800 | Mortality, reproduction | 0% 7.7%   | -         |

$^1$indicate whether initial or aged residues
$^2$ for preparations indicate whether dose is expressed in units of a.s. or preparation
$^3$positive percentages relate to adverse effects

First tier risk assessment for - Winter and spring cereals at 1200 g a.s./ha x 1 based on extended lab test or aged residue tests

| Species             | 50% effects (g a.s./ha) | In-field rate (g a.s./ha) | Off-field rate$^3$ (g a.s./ha) |
|---------------------|-------------------------|---------------------------|--------------------------------|
| A.rhopalosiphi      | >1457                   | 1200                      | 332.4 (1m distance, 3D)       |
| C.carnea            | >1457                   | 1200                      | 33.24 (1m distance, 2D)       |
| A.rhopalosiphi      | >1800                   | 1200                      | 332.4 (1m distance, 3D)       |
| A.bilineata         | >1064*                  | 1200                      | 33.24 (1m distance, 2D)       |

$^3$indicate distance assumed to calculate the drift rate if 3D or 2D.
$^*$Low in-field risk concluded due to low level of effects at limit rate tested.

Semi-field tests
No data submitted

Field studies
No data submitted

Additional specific test
No data submitted
Effects on non-target soil meso- and macro fauna; effects on soil nitrogen transformation (Regulation (EU) N° 283/2013, Annex Part A, points 8.4, 8.5, and Regulation (EU) N° 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 a.s./kg soil dry wt.) |
|----------------------|----------------|-----------------------------------|------------|--------------------------|-----------------------------------|
| **Earthworms**       |                |                                   |            |                          |                                   |
| E. fetida            | a.s.           | Soil incorporation (10% OM)       | Chronic    | Growth, reproduction, behaviour | EC_{10} 9.0 EC_{20} 26.4 NOEC 10.8 |
| **Other soil macro-organisms** | | | | | |
| Folsomia candida     | Mecoprop-P K 600 g/L | Soil incorporation (5% OM) | Chronic | Mortality, reproduction | EC_{10} 44.0 EC_{20} 68.6 NOEC 52.9 |
| Hypoaspis aculeifer  | Mecoprop-P K 600 g/L | Soil incorporation (5% OM) | Chronic | Mortality, reproduction | EC_{10} >1000 EC_{20} >1000 NOEC 1000 |
| **Soil micro-organisms** | | | | | |
| Nitrogen mineralisation | Mecoprop-P K 600 g/L | Soil incorporation (field soil) | 28-days | Treatment causing <25% deviation from control: | 8.98 |

1 To indicate whether the test substance was oversprayed/to indicate the organic content of the test soil (e.g. 5 % or 10 %).

Higher tier testing (e.g. modelling or field studies): No data submitted

Nitrogen transformation | No valid data submitted

Toxicity/exposure ratios for soil organisms

Winter and spring cereals at 1200 g a.s./ha x 1

| Test organism        | Test substance | Time scale | Soil PEC | TER | Trigger |
|----------------------|----------------|------------|----------|-----|---------|
| **Earthworms**       |                |            |          |     |         |
| E. fetida            | a.s.           | Chronic    | 1.600    | 6.8 | 5       |
|                      |                |            | 5.5      | 5   | 5       |
| **Other soil macroorganisms** | | | | | |
| Folsomia candida     | Mecoprop-P K 600 g/L | Chronic | 1.600    | 33  | 5       |
|                      |                |            |          | 28  | 5       |
| Hypoaspis aculeifer  | Mecoprop-P K 600 g/L | Chronic | 1.600    | 625 | 5       |
|                      |                |            |          | >625| 5       |

1 maximum initial PEC soil was used
2 Utilising study NOEC
3 Utilising study EC_{10}

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 ER_{50} tests should be provided

Laboratory dose response tests
### Peer review of the pesticide risk assessment of the active substance mecoprop-P

**Species** | **Test substance** | **ER$_{50}$ (g a.s./ha)$^2$** | **ER$_{50}$ (g a.s./ha)$^2$ emergence** | **Exposure$^1$ (g a.s./ha)$^2$** | **TER** | **Trigger** |
--- | --- | --- | --- | --- | --- | --- |
*Brassica napus* (oilseed rape) | Mecoprop-P K 600 g/L | - | 19.2 | 33.2 (1m) 6.84 (5m) 3.48 (10m) | **0.58** 2.80 5.52 | 5 |
*Cucumis stativa* (cucumber) | Mecoprop-P K 600 g/L | 19.9 | - | 33.2 (1m) 6.84 (5m) 3.48 (10m) | **0.60** 2.91 5.72 | 5 |
11 distinct species | Mecoprop-P K 600 g/L | Median HC$_S$ = 23.4 | - | 33.2 (1m) 6.84 (5m) | **0.7** 3.4 | 1 |
9 distinct species | Mecoprop-P K 600 g/L | - | Median HC$_S$ = 16.6 | 33.2 (1m) 6.84 (5m) | **0.5** 2.4 | 1 |

Extended laboratory studies: No data submitted  
Semi-field and field test: No valid data submitted

1 Exposure has been estimated based on Ganzelmeier drift data  
2 For preparations indicate whether dose is expressed in units of a.s. or preparation

### 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 | EC$_{50}$ = 319 mg a.s./L |

### 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.  
Available monitoring data concerning effect of the PPP.

### Definition of the residue for monitoring (Regulation (EU) N° 283/2013, Annex Part A, point 7.4.2) Ecotoxicologically relevant compounds$^1$

| Compartment | Mecoprop-P |
--- | --- |
soil | Mecoprop-P |
water | Mecoprop-P |
sediment | Mecoprop-P |
groundwater | Mecoprop-P |

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 | Mecoprop-P |
--- | --- |
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]13:

Peer review proposal14 for harmonised classification according to Regulation (EC) No 1272/2008:

| Aquatic Chronic 2 H411 |
|-------------------------|
| The lowest relevant LC/EC50 value used in support of the active substance is the ErC50 from testing with the aquatic plant *Myriophyllum spicatum*. The ErC50 is 0.0269 mg a.s./L. This is lower than the trigger for acute classification of 1.0 mg/L, meaning that the classification Acute category 1 (H400) - 'Very toxic to aquatic life' is triggered. The related acute M-factor is 10. In addition, the lowest NOEC value, also from the above study, is 0.00937 mg a.s./L (growth rate inhibition). According to the environmental fate data the active substance is classified as readily biodegradable. As this lowest NOEC is less than 0.01 mg a.s./L and the substance is readily biodegradable the classification Chronic category 1 (H410) 'very toxic to aquatic life with long lasting effects' is triggered. The related chronic M-factor is 1. |

13 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.

14 It should be noted that harmonised classification and labelling is formally proposed and decided in accordance with Regulation (EC) No 1272/2008.
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
EEC European Economic Community
EMDI  | estimated maximum daily intake  
ER<sub>50</sub>  | emergence rate/effective rate, median  
ErC<sub>50</sub>  | effective concentration (growth rate)  
ETR  | exposure toxicity ratio  
ETR<sub>acute</sub>  | exposure toxicity ratio for acute exposure  
ETR<sub>larvae</sub>  | exposure toxicity ratio for chronic exposure  
ETR<sub>larvae</sub>  | exposure toxicity ratio for larvae  
ETR<sub>HPG</sub>  | exposure toxicity ratio for effects on honeybee hypopharyngeal 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  | hypopharyngeal glands  
HQ  | hazard quotient  
HQ<sub>contact</sub>  | 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  
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

$K_{Foc}$: 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

PEC$_{gw}$: predicted environmental concentration in groundwater
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