Supplementary Files

1. Supplementary Table 1. 3D printing parameter

| Print mixture (first layer/the other layers) | SILBIONE® RTV 4410 1:1 A&B + 0.2/2.0 wt% THI-VEXTM |
|---------------------------------------------|-----------------------------------------------------|
| Nozzle diameter (mm)                        | 0.4                                                 |
| Printing speed (mm/s)                       | 20                                                  |
| Build platform temperature (°C)             | 70                                                  |
| Head temperature (°C)                       | 0                                                   |
| Path width (mm)                             | ~0.6                                                |
| Inner structure pattern(°)                  | 0.90                                                |

2. Supplementary Table 2. Specification of the warp knitted fabric

| Thickness (mm) | 0.224 |
|----------------|-------|
| Weight (g/m²)  | 165   |
| Appearance     | ![Image](image.png) |
| Content (nylon%/spandex%) | 83/17  |

3. Supplementary Table 3. Parameters for the finite element model

| Component       | Material model | Young’s modulus (MPa) | Poisson’s ratio | Type of element | Mesh size (mm) | Mesh type     |
|-----------------|----------------|-----------------------|-----------------|-----------------|----------------|---------------|
| Wrist bones     | Surface        | Nil                   | Nil             | Nil             | Nil            | Nil           |
| Hand            | Elastic        | 0.177                 | 0.4             | Solid           | 1              | Tetra element |
| Silicone elastomer | Elastic | 0.17                  | 0.48            | Solid           | 1              | Tetra element |
| Garment         | Elastic        | 1.02                  | 0.42            | Shell           | 1              | Quadrilateral |
4. **Supplementary Figure 1.** Force extension curve of the warp knitted fabric