




**CADworks3D**  
 μ MICROFLUIDICS

**Material Safety Data Sheet**  
**Mastermold for PDMS Rapid HD**

**1. Chemical Product & Company Identification**

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|--|---|
| <b>Identification of the substance:</b>      | Mastermold for PDMS Rapid HD  |
| <b>Use of the substance / preparation:</b>   | UV photopolymer for 3D printers   |
| <b>Company / undertaking identification:</b> | Creative CADWorks Inc 30 Great Gulf Dr. Unit 28<br>Concord, Ontario, L4K0K7, Canada |
| <b>Emergency telephone:</b>                  | +1 416 368 7266   |

**2. Hazardous Identification**

|  |   |            |   |
|--|---|------------|---|
| <b>GHS</b>   | Regulation (EC) No. 1272/2008, HazCom 29 CFR 1910, Australian Dangerous Goods Code  |            |   |
|  | Reproductive toxicity   | Category 1 | H315 - Causes skin irritation.<br>H317 - May cause an allergic skin reaction<br>H319 - Causes serious eye irritation<br>H361f - Suspected of damaging fertility |
| <b>Classification/Symbols</b>                      | <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;"> <br/> <b>GHS07</b> </div> <div style="text-align: center;"> <br/> <b>GHS08</b> </div> <div style="text-align: center;">  </div> </div> |            |   |
| <b>Hazard determining components of labelling:</b> | Photoinitiator  |            |   |

|                                 |  |
|---------------------------------|--|
| <b>Hazard Statements</b>        | <p>H315 - Causes skin irritation.<br/> H317 - May cause an allergic skin reaction<br/> H319 - Causes serious eye irritation<br/> H361 - Suspected of damaging fertility</p>  |
| <b>Precautionary statements</b> | <p>P201 - Obtain special instructions before use<br/> P202 - Do not handle until all safety precautions have been read and understood<br/> P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking<br/> P233 - Keep container tightly closed<br/> P260 - Do not breathe dust/fume/gas/mist/vapors/spray P261 - Avoid breathing dust, fume, gas, mist, vapors, spray P262 - Do not get in eyes, on skin or on clothing<br/> P261 - Avoid breathing dust, fume, gas, mist, vapours, spray<br/> P264 - Wash thoroughly after handling<br/> P271 - Use only outdoors or in a well-ventilated area. Hazardous polymerization may occur upon depletion of inhibitor<br/> P272 - Contaminated work clothing should not be allowed out of the workplace<br/> P273 - Avoid release to the environment.<br/> P280 - Wear protective gloves, protective clothing, eye protection<br/> P301+P317 - IF SWALLOWED: Get medical help.<br/> P302 &amp; 352 - If on skin, wash with plenty of soap and water.<br/> P305+P354+P338 - IF IN EYES: Immediately rinse with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.<br/> P308 &amp; 313 - If exposed: Call a POISON CENTER or doctor/physician.<br/> P319 - Get medical help if you feel unwell.<br/> P333 P313 &amp; P317 If skin irritation or rash occurs: Get medical advice/ attention<br/> P362+P364 - Take off contaminated clothing and wash it before reuse.<br/> P391 - Collect spillage.<br/> P405 - Store locked up.<br/> P501 - Dispose of contents/container in accordance with local/regional regulations</p> |

### 3. Composition/Information on Ingredients

**Description:** Organic mixture containing acrylate monomers and oligomers

| Composition of components        | Weight% | EC No.      | Cas No.    | Regulation (EC) 1272/2008 - Warning                          |
|----------------------------------|---------|-------------|------------|--|
| <b>Methacrylate oligomer</b>     | 15-40%  | Proprietary | 72869-86-4 | H315, H317, H319   |
| <b>Modified Acrylate Monomer</b> | 15-50%  | Proprietary | 68987-79-1 | H315 H317  |
| <b>Photoinitiator</b>            | 0.5%-4% | 278-355-8   | 75980-60-8 | Skin Sensitivity - 1, H317: Reproductive Toxicity - 2, H361f |

### 4. First-aid measures

|                          |  |
|--------------------------|--|
| <b>Contact with skin</b> | Immediately take off all contaminated clothing. Wash skin immediately with mild soap/water for at least 15 minutes. If resin is not completely removed, use a waterless cleaner first. Seek medical advice if irritation persists. |
| <b>Contact with eyes</b> | Wash the eye and under eyelid immediately with water for 20-40 minutes. Seek medical advice if irritation, pain, tears or redness persists.  |
| <b>Swallowing</b>        | DO NOT INDUCE VOMITING. If vomiting occurs naturally, keep airways clear. Immediately obtain medical attention.  |

|            |   |
|------------|---|
| Inhalation | If overcome by exposure, ventilate the premises. Remove victim from contaminated area to well ventilated areas or outdoors. If needed, provide oxygen or artificial respiration. Get immediate medical attention. |
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### 5. Fire fighting measures

|                               |  |
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| Recommended extinguishers     | CO2, Foam, Chemical powders, sand or earth. Use water based extinguishing media with caution |
| Extinguishers not to be used  | None in particular.  |
| Risks arising from combustion | Avoid inhaling the fumes. Incomplete combustion releases toxic gases.                        |
| Protective equipment          | Use protection for the airways.  |

### 6. Measures in case of accidental release

|                              |  |
|------------------------------|--|
| Measures for personal safety | Use a mask, gloves and protective clothing.  |
| Environmental measures       | Limit leakages with earth or sand. If the product has flown off into a water course, into the drainage system, or has contaminated the ground or vegetation, notify the responsible authorities.   |
| Cleaning methods             | Rapidly collect the product. To do so, wear a mask and protective clothing. If the product is in a liquid form, stop it from entering the drainage system. Recover the product for re-use if possible, or for elimination in compliance with waste disposal regulations in force. The product might, where appropriate, be absorbed by inert material. |

### 7. Handling and storage

|                        |  |
|------------------------|--|
| Handling precautions   | Avoid contact with and inhalation of vapours and/or dusts. Do not eat or drink or smoke while working.   |
| Incompatible materials | Keep away from amines, strong bases, acids and strong oxidants.  |
| Storage conditions     | Storage temperature: between 15°C/59°C to 35°C/95°F Keep in a dry place, in the original containers tightly closed, avoid heat/ignition and light sources. Prevent contamination by foreign materials and water. For industrial use only, keep away from children. |

### 8. Exposure control/personal protection

|                        |   |  |
|------------------------|---|--|
| Exposure limit values  | General Product Information: No occupational exposure limits (PEL/TWA) have been established for this product.  |  |
|                        | Component   | Component Manufacturer IEL (Internal Exposure Limit) |
|                        | Diphenyl (2,4,6-trimethylbenzoyl)phosphine oxide  | 3.5 mg/m <sup>3</sup>                                |
| Precautionary measures | Provide adequate ventilation to the areas where the product is stored and/or handled.   |  |
| Respiratory protection | Required where ventilation/aspiration is insufficient or exposure is prolonged, or for applications in which the product is sprayed or heated. Required in case of machining or applications that release dust. |  |

|                             |   |
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| <b>Protection for hands</b> | Use protective gloves. For an extended exposure of the product, wear nitrile/neoprene gloves. |
| <b>Eye protection</b>       | Safety goggles.   |
| <b>Protection for skin</b>  | Use clothing that provides complete protection to the skin.                                   |

### 9. Physical and chemical properties

|  |                                |
|--|--------------------------------|
| <b>Appearance and color</b>              | Liquid: Black opaque           |
| <b>Odour</b>                             | Light                          |
| <b>pH</b>                                | Not available                  |
| <b>Melting point</b>                     | Not available                  |
| <b>Boiling point</b>                     | Not available                  |
| <b>Flash point</b>                       | Not available                  |
| <b>Explosive properties</b>              | Not available                  |
| <b>Combustion-related properties</b>     | Not available                  |
| <b>Specific gravity<br/>ASTM D 1475</b>  | 1.0 g/cm <sup>3</sup> at 25° C |
| <b>Viscosity<br/>Solubility in water</b> | <300<br>Not available          |

### 10. Stability & Reactivity

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| <b>Conditions to avoid</b>              | Stable under normal conditions.  |
| <b>Substances to avoid</b>              | The product reacts exothermically with amines, Lewis acids and mercaptans. |
| <b>Hazardous decomposition products</b> | Upon incomplete combustion carbon monoxide is formed.                      |

### 11. Toxicological information

|  |   |                             |                               |                              |
|--|---|-----------------------------|-------------------------------|------------------------------|
| <b>Toxicokinetics, metabolism and distribution</b> | Not available                                     |                             |                               |                              |
| <b>Acute effects</b>                               | <b>Component</b>                                  | <b>LD<sub>50</sub> Oral</b> | <b>LD<sub>50</sub> Dermal</b> | <b>LC50<br/>(Inhalation)</b> |
|  | Diphenyl (2,4,6-trimethylbenzoyl) phosphine oxide | > 5000 mg/kg                | >2000 mg/kg                   |                              |

|  |   |
|--|---|
| <b>Irritation to respiratory tract<br/>Skin irritation, Eye irritation</b> | Irritating  |
| <b>Sensitisation</b>   | Causes sensitisation  |
| <b>General remarks</b>   | None of this product's components are listed by ACGIH, IARC, OSHA, NIOSH, or NTP. |

## 12. Ecological Information

The experimental information related to the eco-toxicological properties of the mixture itself is not available but it can be assumed that the material may have an adverse impact or may be harmful to aquatic organisms and aquatic environment.

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|---|---|
| <b>Toxicity</b>                           | Diphenyl (2,4,6-trimethylbenzoyl) phosphine oxide:<br>EC50 – 3.53mg/l (daphnia)<br>LC50 (48h) – 6.53 mg/l (oryzias latipes) |
| <b>Persistence and degradability</b>      | Not available   |
| <b>Bioaccumulative potential</b>          | Not available   |
| <b>Mobility in soil</b>                   | Not available   |
| <b>Results of PBT and vPvB assessment</b> | Non-applicable  |
| <b>Other adverse effects</b>              | Non-applicable  |

## 13. Disposal Considerations

Recover if possible. In doing so, comply with the local and national regulations currently in force. Avoid release to the environment. Refer to special instructions/Safety data sheets. Where applicable, refer to the following regulatory provisions : 91/156/EEC, 91/689/EEC, 94/62/EC and subsequent amendments. Additionally, where possible follow waste codes / waste designations according to EWC / AVV: 070208

## 14. Transport information

|   |               |
|---|---------------|
| <b>US Department of Transportation (DOT)</b>              | Not Regulated |
| <b>International Maritime Dangerous Goods Code (IMDG)</b> | Not Regulated |
| <b>IATA</b>   | Not Regulated |
| <b>Land transport (ADR/RID/GGVSE)</b>                     | Not Regulated |

## 15. Regulatory Information

All components are in compliance with the following inventories

|   |   |
|---|---|
| <p><b>US FEDERAL</b></p>                | <p><b>TSCA Section 6 restricted substances</b> This formulation DO NOT contain substances listed under the EPA Regulation of Persistent, Bioaccumulative, and Toxic Chemicals Under TSCA Section 6(h).<br/> <b>TSCA (Toxic Substances Control Act) - Section 5(a)(2)</b> - Chemicals with Significant New Use Rules (SNURs) – None<br/> <b>TSCA (Toxic Substances Control Act) - Section 12(b)</b> - Export Notification – None<br/> <b>California Prop. 65 Components</b> This product does not contain any chemicals known to the State of California to cause cancer, birth defects, or any other reproductive harm.</p>   |
| <p><b>Australian regulations</b></p>    | <p>SUSDP, Industrial Chemicals Act 1989: Australian Inventory of Chemical Substances, AICS: Listed</p>  |
| <p><b>EU regulations</b></p>            | <p>EINEC/ELINCS/NLP: All materials are listed REACH Annex XVII: None listed</p>   |
| <p><b>National EU regulations</b></p>   | <p>Water Hazard - Germany.<br/>         WGK2: Hazard to waters</p>  |
| <p><b>International Inventories</b></p> | <p><b>TSCA</b> All ingredients are listed (Active) or exempt.<br/> <b>DSL/NDSL</b> All ingredients are listed or exempt.<br/> <b>EINECS/ELINCS</b> All ingredients are listed or exempt.<br/> <b>IECSC</b> All ingredients are listed or exempt.<br/> <b>KECL</b> All ingredients are listed or exempt.<br/> <b>PICCS</b> Contact supplier for inventory compliance status.<br/> <b>AICS</b> All ingredients are listed or exempt.<br/> <b>TCSI</b> All ingredients are listed or exempt.<br/> <b>NZIoC</b> All ingredients are listed or exempt.</p> <p><b>Legend:</b><br/> <b>TSCA</b> - United States Toxic Substances Control Act Section 8(b) Inventory<br/> <b>DSL/NDSL</b> - Canadian Domestic Substances List/Non-Domestic Substances List<br/> <b>EINECS/ELINCS</b> - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances<br/> <b>IECSC</b> - China Inventory of Existing Chemical Substances<br/> <b>KECL</b> - Korean Existing and Evaluated Chemical Substances<br/> <b>PICCS</b> - Philippines Inventory of Chemicals and Chemical Substances<br/> <b>AICS</b> - Australian Inventory of Chemical Substances<br/>         All ingredients are listed or exempt.</p> |

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|---------------------------------------|--|
| <p><b>Information provided by</b></p> | <p><b>Creative CADWorks</b><br/>         30 Great Gulf Dr., Unit 28<br/>         Concord, Ontario, L45K0K7, Canada</p> |
| <p><b>Date</b></p>                    | <p>May 30 2024</p>   |
| <p><b>Version</b></p>                 | <p>2.0</p>   |

## 16. Disclaimer:

The information contained herein is based on our state of knowledge at the above-specified date. It refers solely to the product indicated and constitutes no guarantee of particular quality. It is the duty of the user to ensure that this information is appropriate and complete with respect to the specific intended use.