

Section 1: Product and Company Identification

Product Identifier:

- Product Name: MD-Series
- Identified Uses: Resin for 3D printing
- Uses Advised Against: Not determined or not applicable
- Reasons Why Uses Advised Against: Not determined or not applicable.

Details of the Supplier of the Safety Data Sheet:

- Company: Resinify Technology LLC
- Address: 22350 W Warren Ave, Detroit, MI 48239
- Telephone: 1-810-888-7373
- Emergency Telephone Number:
 - Transportation: CHEMTREC: (800) 424-9300 (24 hrs., 7 days a week)
 - Medical: Rocky Mountain Poison Center: (866) 767-5089 (24 hrs., 7 days a week)

Section 2: Hazards Identification

GHS Classification:

- Tricyclodecanedimethanol Diacrylate:
 - Skin Corrosion/Irritation, Category 2
 - Serious Eye Damage/Eye Irritation, Category 2A
- Acryloyl Morpholine:
 - Skin Corrosion/Irritation, Category 2
 - Serious Eye Damage/Eye Irritation, Category 2A
- Monomer Blend (CN985b88):
 - Skin Corrosion/Irritation, Category 2
 - Serious Eye Damage/Eye Irritation, Category 2A
 - Sensitization, Skin, Category 1
- Diphenyl(2,4,6-trimethylbenzoyl) phosphine oxide:
 - Reproductive Toxicity, Category 2 (H361)

GHS Label Elements:

- Pictogram:



- Signal Word: Warning
- Hazard Statements:



- *H315: Causes skin irritation*
- *H319: Causes serious eye irritation*
- *H317: May cause an allergic skin reaction*
- *H361: Suspected of damaging fertility or the unborn child*
- **Precautionary Statements:**
 - *P201: Obtain special instructions before use.*
 - *P202: Do not handle until all safety precautions have been read and understood.*
 - *P264: Wash skin thoroughly after handling.*
 - *P280: Wear protective gloves/protective clothing/eye protection/face protection.*
 - *P302+P352: IF ON SKIN: Wash with plenty of water.*
 - *P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.*
 - *P308+P313: IF exposed or concerned: Get medical advice/attention.*
 - *P362+P364: Take off contaminated clothing and wash it before reuse.*
 - *P501: Dispose of contents/container in accordance with local/regional/national/international regulations.*

Section 3: Composition/Information on Ingredients

<i>Ingredient</i>	<i>CAS No.</i>	<i>% by Weight</i>
<i>Tricyclodecanedimethanol Diacrylate</i>	<i>Trade Secret</i>	<i>75%-80%</i>
<i>Acryloyl Morpholine</i>	<i>5117-12-4</i>	<i>15%-10%</i>
<i>Monomer Blend</i>	<i>Trade Secret</i>	<i>15%-10%</i>
<i>Diphenyl(2,4,6-trimethylbenzoyl) phosphine oxide</i>	<i>Trade Secret</i>	<i><1%</i>

Section 4: First-Aid Measures

-
- *General Advice: If potential for exposure exists, refer to Section 8 for specific personal protective equipment. First Aid responders should pay attention to self-protection and use the recommended protective clothing.*
 - *Inhalation: Remove from exposure to fresh air, restore breathing using oxygen if needed. Keep warm and quiet. Immediately notify a physician.*
 - *Skin Contact: Wash affected area with soap and large amounts of water. Remove contaminated clothing. Consult a physician if irritation persists.*
 - *Eye Contact: Immediately flush eyes with water for 15 minutes. Hold eyelids open for complete irrigation. Remove contact lenses, if worn, after initial flush. Immediately take to a physician.*
 - *Ingestion: Do NOT induce vomiting. Have victim drink 8-10 ounces of water to dilute material in the stomach. Never give anything by mouth to an unconscious person. Consult a physician or poison control center, treat symptomatically.*
 - *Most Important Symptoms and Effects, Both Acute and Delayed:*
 - *Ingestion: Can severely irritate mouth, throat, and stomach.*
 - *Eye Contact: Causes severe eye irritation.*
 - *Inhalation: May cause respiratory irritation.*
 - *Skin Contact: Causes skin irritation and may cause allergic skin reaction.*
 - *Indication of Any Immediate Medical Attention and Special Treatment Needed: This material will have corrosive effects in which case it may not be advisable to induce vomiting. Acute effects can include mucosal damage and severe laryngeal edema associated with corrosive agents.*

Section 5: Fire-Fighting Measures

- *Extinguishing Media:*
 - *Suitable Extinguishing Media: Foam, CO2, Dry Chemical, Water-fog*
 - *Unsuitable Extinguishing Media: Do not use waterjet*
- *Special Hazards Arising from the Substance or Mixture:*
 - *Dangerous fire hazard when exposed to heat or flame. Vapors can travel to a source of ignition and flash back. Heat can cause polymerization. Heated containers can explode. Keep containers tightly closed. Combustible liquid; isolate from all sources of ignition. Closed containers may explode when exposed to extreme heat. Containers that rupture explosively due to polymerization may auto-ignite.*
 - *Rapid uncontrolled polymerization can cause an explosion.*

-
- *Combustion Products: Highly dependent on combustion conditions. A complex mixture of airborne solids, liquids, and gases including carbon monoxide, carbon dioxide, carbon oxides, and other unidentified organic compounds evolve when this material undergoes combustion.*
 - *Advice for Firefighters: Explosion hazard. Shut off source. Water fog may be used to cool closed containers to prevent pressure build-up and possible auto-ignition or explosion when exposed to extreme heat. Fight advanced fires from a protected location. Wear self-contained breathing apparatus and turnout gear for confined spaces and where there is exposure to vapors. Isolate from all sources of ignition.*

Section 6: Accidental Release Measures

- *Personal Precautions, Protective Equipment, and Emergency Procedures: This material is corrosive; eliminate ignition sources in the vicinity of the spill or released vapor. Immediately evacuate all nonessential people. Verify that responders are properly trained and wearing appropriate respiratory equipment and fire-resistant protective clothing during cleanup operations.*
- *Environmental Precautions: Keep out of water sources and sewers. Do not flush into surface water or sanitary sewer system.*
- *Methods and Material for Containment and Cleaning Up: Use explosion-proof equipment. Shut off valves, contain the spill, keep out of water sources and sewers. For smaller spills, add non-flammable absorbent such as clay or silica in the spill area. If an odor or acidity problem exists, add lime or sodium bicarbonate. Place saturated absorbent in an approved container for disposal. For large spills, use foam on the spill to minimize vapors. Clean up by vacuuming and then using non-flammable absorbent.*
- *Methods for Disposal: Remove contaminated soil to remove contaminated trace residues. Place all saturated absorbent, using non-sparking tools, in an approved container for disposal. Flush with water to remove trace residues. Minimize breathing vapors and skin contact. Ventilate confined areas, open all windows and doors, and ensure conformity with applicable government regulations. Keep all nonessential people away. Caution: Spontaneous polymerization can occur if material is released or mixed with incompatibles.*
- *Reference to Other Sections: See Sections 8 and 13.*

Section 7: Handling and Storage

- **Precautions for Safe Handling:** This material is corrosive. Product freezes at 15°C/59°F; improper thawing can result in violent polymerization. Thaw frozen drums by placing them in a heated room up to 40°C/104°F for 48 hours. Do not remove any material if stock is frozen or partially frozen. Mix during and after thawing to properly distribute the inhibitor. Never use steam or electric heating bands. Avoid work practices that may release volatile components into the atmosphere. Avoid contaminating soil or releasing material into sewage and drainage systems. Use non-sparking tools to open or close containers. Do not take internally. Avoid prolonged or repeated contact with skin, eyes, and clothing. Avoid breathing vapors in the top of shipping containers. Use with adequate ventilation. Avoid work practices that may release volatile components into the atmosphere. Avoid contaminating soil or releasing material into sewage and drainage systems. Use non-sparking tools to open or close containers.
- **Conditions for Safe Storage, Including Any Incompatibilities:** Maintain contact with the atmosphere of 5-21% oxygen. Do not use an inert atmosphere as a blanket. Under proper storage conditions, a storage stability of one year can be expected. Store in original container. Keep containers tightly closed and away from sources of heat and ignition. Protect from freezing. Store in a cool, dry, well-ventilated area away from sunlight.

Section 8: Exposure Controls/Personal Protection

- **Control Parameters:**
 - Occupational Exposure Limits: No data available for the specific mixture.
- **Appropriate Engineering Controls:**
 - Ensure adequate ventilation, especially in confined areas. Provide eyewash stations and safety showers.
- **Individual Protection Measures:**
 - Eye Protection: Safety goggles or face shield.
 - Skin Protection: Wear suitable protective clothing and gloves (e.g., neoprene, nitrile).
 - Respiratory Protection: If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn.
 - Hygiene Measures: Avoid contact with skin, eyes, and clothing. Wash hands thoroughly after handling. Do not eat, drink, or smoke when using this product.

Section 9: Physical and Chemical Properties

- **Physical State:** Liquid
- **Odor:** Mild
- **Odor Threshold:** Not determined

- **pH:** Not applicable
- **Melting Point/Freezing Point:** Not determined
- **Initial Boiling Point/Boiling Range:** Not determined
- **Flash Point:** 67°C (153°F) TCC
- **Evaporation Rate:** Not determined
- **Flammability (solid, gas):** Not applicable
- **Upper/Lower Flammability or Explosive Limits:** Not determined
- **Vapor Pressure:** Not determined
- **Vapor Density:** Not determined
- **Relative Density:** Not determined
- **Solubility:** Insoluble in water
- **Partition Coefficient (n-octanol/water):** Not determined
- **Auto-Ignition Temperature:** 400°C (752°F)
- **Decomposition Temperature:** Not determined
- **Viscosity:** Not determined

Section 10: Stability and Reactivity

- **Reactivity:** Not reactive under normal conditions.
- **Chemical Stability:** Stable under recommended storage conditions.
- **Possibility of Hazardous Reactions:** Hazardous polymerization may occur.
- **Conditions to Avoid:** Heat, flames, sparks, and other sources of ignition.
- **Incompatible Materials:** Strong oxidizing agents, acids, bases, and amines.
- **Hazardous Decomposition Products:** Carbon oxides, nitrogen oxides, and other potentially toxic fumes.

Section 11: Toxicological Information

- **Information on Toxicological Effects:**
 - **Acute Toxicity:** Not determined for the mixture.
 - **Skin Corrosion/Irritation:** Causes skin irritation.
 - **Serious Eye Damage/Eye Irritation:** Causes serious eye irritation.
 - **Respiratory or Skin Sensitization:** May cause an allergic skin reaction.
 - **Germ Cell Mutagenicity:** Not determined.
 - **Carcinogenicity:** Not determined.
 - **Reproductive Toxicity:** Suspected of damaging fertility or the unborn child.
 - **STOT-Single Exposure:** Not determined.
 - **STOT-Repeated Exposure:** Not determined.
 - **Aspiration Hazard:** Not determined.



Section 12: Ecological Information

- Toxicity: No information available.
- Persistence and Degradability: No information available.
- Bioaccumulative Potential: No information available.
- Mobility in Soil: No information available.
- Other Adverse Effects: No known significant effects or critical hazards.

Section 13: Disposal Considerations

- Waste Treatment Methods:
 - Disposal of Wastes: Dispose of in accordance with local, state, and federal regulations. Do not discharge into drains or the environment.
 - Contaminated Packaging: Dispose of as unused product. Do not reuse empty containers.

Section 14: Transport Information

US Department of Transportation (DOT)

- UN Number: 3082
- Proper Shipping Name: Environmentally hazardous substance, liquid, n.o.s.
- Technical Name: (Tricyclodecanedimethanol Diacrylate)
- Class: 9
- Packaging Group: III
- Marine Pollutant: Yes

International Maritime Dangerous Goods Code (IMDG)

- UN Number: 3082
- Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
- Technical Name: (TRICYCLODECANEDIMETHANOL DIACRYLATE)
- Class: 9
- Packaging Group: III
- Marine Pollutant: Yes
- Flash Point: > 201 °F (94 °C)

Section 15: Regulatory Information

Chemical Inventory Status

-
- US. Toxic Substances Control Act (TSCA): The components of this product are all on the TSCA Inventory.

Canadian Domestic Substances List (DSL): This product contains one or several components listed in the Canadian NDSL list. All other components are on the DSL list.

- China. Inventory of Existing Chemical Substances in China (IECSC): IECSC (CN) Conforms to.
- Japan. ENCS - Existing and New Chemical Substances Inventory: ENCS (JP) Does not conform.
- Japan. ISHL - Inventory of Chemical Substances: ISHL (JP) Does not conform.
- Korea. Korean Existing Chemicals Inventory (KECI): KECI (KR) Conforms to.
- Philippines Inventory of Chemicals and Chemical Substances (PICCS): PICCS (PH) Does not conform.
- Australia Inventory of Chemical Substances (AICS): AICS Conforms to.

United States – Federal Regulations

- SARA Title III – Section 302 Extremely Hazardous Chemicals: The components in this product are either not SARA Section 302 regulated or regulated but present in negligible concentrations.
- SARA Title III - Section 311/312 Hazard Categories: Acute Health Hazard, Reactivity Hazard.
- SARA Title III – Section 313 Toxic Chemicals: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.
- Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) - Reportable Quantity (RQ): The components in this product are either not CERCLA regulated, regulated but present in negligible concentrations, or regulated with no assigned reportable quantity.

United States – State Regulations

- New Jersey Right to Know: No components are subject to the New Jersey Right to Know Act.
- Pennsylvania Right to Know:
 - Chemical Name: Acryloyl Morpholine
 - CAS-No: 5117-12-4



Section 16: Other Information

- Revision Date: 09.04.2024
- Disclaimer: The information provided in this Safety Data Sheet is based on data considered to be accurate as of the date of preparation of this document. No warranty or representation, expressed or implied, is made as to the accuracy or completeness of the data and safety information contained herein. The company assumes no responsibility for injury or damage resulting from the inappropriate use of this product.

End of Safety Data Sheet