

# **MATERIAL SAFETY DATA SHEET**

According to Regulation (EC) No 1272/2008 (CLP)

## 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY

### 1.1 – Product identification

Product name: **3DM-TOUGH**

### 1.2 – Product class and use

Mixture of acrylic-methacrylic acid esters, acrylate-methacrylate monomers and oligomers, photoinitiators and pigments. Use for stereolithography 3D printers equipped with UV-Visible light systems.

### 1.3 – Information on the supplier of the safety data sheet

Company name : ADMAT SASU – 870 Rue Denis Papin – 54710 Ludres - France  
E-Mail : admat54@hotmail.com  
Phone : +33617876754  
Website : www.3dm-shop.com

Creation date : 12<sup>th</sup> October 2020

### 1.4 – Emergency phone numbers

Please call +33617876754 (only available during office hours) or INRS +33145425959 (24h, 7/7)

## 2. HAZARDS IDENTIFICATION

### 2.1 – Classification of substance or mixture

The product is classified as hazardous pursuant to regulation (EC) No. 1272/2008 [EU-GHS/CLP].

Any additional information concerning health and/or environmental risks is shown in sections 9 and 12 of this sheet.

Physical and chemical hazards : The product is not classified for this type of hazard.

Health hazards : Harmful if swallowed. May cause an allergic skin reaction. Causes serious eye damage. May cause damage to organs through prolonged or repeated exposure..

Environmental hazard : The product is not classified for this type of hazard.

#### Classification and hazard indication :

Acute toxicity	Category 4	H302
Skin sensitizer	Category 1	H317
Eye damage	Category 1	H318
STOT RE	Category 2	H373

## 2.2 – Label elements

### Regulation (EC) No. 1272/2008.

Hazard pictograms :



Signal word : Danger

Hazard Statements :

<b>H302</b>	Harmful if swallowed.
<b>H317</b>	May cause an allergic skin reaction.
<b>H318</b>	Causes serious eye damage.
<b>H373</b>	May cause damage to organs through prolonged or repeated exposure.

Precautionary statements :

Prevention:

<b>P260</b>	Do not breathe dust/fume/gas/mist/ vapours/spray.
<b>P264</b>	Wash hands thoroughly after handling.
<b>P261</b>	Avoid breathing dust/fume/gas/mist/vapours/spray.
<b>P270</b>	Do not eat, drink or smoke when using this product.
<b>P272</b>	Contaminated work clothing should not be allowed out of the workplace.
<b>P280</b>	Wear protective gloves/eye protection/face protection.

Response:

<b>P301 + P312</b>	IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.
<b>P302+P352</b>	IF ON SKIN (or hair) : wash with plenty of soap and water.
<b>P305+351+338</b>	IF ON EYES : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
<b>P310</b>	Immediately call a POISON CENTER/doctor.
<b>P314</b>	Get medical advice/attention if you feel unwell.
<b>P330</b>	Rinse mouth.
<b>P333+313</b>	If skin irritation or rash occurs : Get medical advice/attention.
<b>P337 + P313</b>	If eye irritation persists: Get medical advice/attention.
<b>P362+P364</b>	Take off contaminated clothing and wash it before reuse.

Disposal :

<b>P501</b>	Dispose of contents / container in accordance with local/regional regulations.
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## 2.3 – Other hazards

On the basis of the available data, the product does not contain PBT or vPvB substances in a proportion greater than 0.1%.

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

<u>Chemical Name</u>	<u>% W/W</u>	<u>CAS No.</u>	<u>Regulation (EC) No. 1272/2008 **</u>
Acrylate- Methacrylate monomers	Proprietary*	Proprietary*	Acute Tox. 4, H302 Skin Sens. 1, H317 Eye Dam. 1, H318 STOT RE 2, H373
Acrylate- Methacrylate oligomers	Proprietary*	Proprietary*	Acute Tox. 4, H302 Skin Sens. 1, H317 Eye Dam. 1, H318 STOT RE 2, H373
Photoinitiators	Proprietary*	Proprietary*	Skin Sens.1, H317 Aqu. Chron.4, H413

\* The specific chemical identity is withheld because it is trade secret information of ADMAT.

\*\* For the full text of the H statements mentioned in this section, see section 16.

### 4. FIRST-AID MEASURES

**Emergency Overview:** This product is a liquid acrylic-methacrylic based resin with an acrylate characteristic odor. This product may cause skin and eye irritation. The inhalation of high vapor concentration may cause a headache and nausea. Ensure that eyewash stations and safety showers are close to the workstation location.

**Inhalation:** If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a doctor.

**Skin Contact:** Wash off with soap and plenty of water. Take victim immediately to hospital. Consult a doctor.

**Eye Contact:** Rinse thoroughly with plenty of water for at least 15 minutes and consult a doctor.

**Ingestion:** Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a doctor.

### 5. FIRE-FIGHTING MEASURES

**Extinguishing media :** Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

**Unsuitable extinguishing media :** High volume water jet.

**Special hazards arising from the substance or mixture :** Thermal decomposition products can include CO<sub>2</sub>, CO, NO<sub>x</sub> and smoke.

**Special protective equipment for fire-fighters :** Evacuate area and contact emergency services. Wear full protective equipment including Self Contained Breathing Apparatus (SCBA) when combating fire.

## 6. ACCIDENTAL RELEASE MEASURES

**Personal Precautions:** Wear respiratory protection. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas.

**Environmental Precautions :** Prevent further leakage or spillage if safe to do so. Do not let product enter drains, soil, ditches, sewers, waterways and/or groundwater. Release to water is prohibited, and restricted to a maximum concentration of 100 ppb.

**Methods of Cleaning Up :** Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal.

**Reference to other sections :** Information regarding safe handling, exposure controls/personal protection and disposal considerations can be found in section 7, 8 and 13.

## 7. HANDLING AND STORAGE

**Handling Precautions:** Avoid contact with skin and eyes. Avoid inhalation of vapour or mist. Normal measures for preventive fire protection.

**Storage Precautions:** Keep away from oxidizing materials, heat and flames. Keep away from hot surfaces, sparks, open flames and other ignition sources. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Keep container tightly closed in a dry and well-ventilated place. Store in a demarcated bunded area to prevent release to drains and watercourses. Recommended storage temperature: 7°C/44°F to 25°C/77°F. Protect from gel. Light sensitive.

## 8. EXPOSURE CONTROLS & PERSONAL PROTECTION

### 8.1 – Control parameters

**Occupational exposure limits :** No data available.

**Biological exposure indices (BEI) :** No data available.

**Additional exposure limits under the conditions of use :** No data available.No occupational exposure limits values have been established for this product.

### 8.1 – Exposure controls

**Protective equipment :**



**Appropriate engineering controls:** Use only with adequate ventilation. If user operations generate dust, fumes, gas, vapour or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

**Respiratory protection :** Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

**Eye protection :** Tightly fitting safety goggles. Face shield (8-inch minimum). Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

**Hand protection :** Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands. The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

**Skin and body protection:** Complete suit protecting against chemicals. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

**Hygiene measures:** Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

## 9. PHYSICAL & CHEMICAL PROPERTIES

<b>Appearance (form) :</b>	Liquid
<b>Odour :</b>	Product specific
<b>Colour :</b>	Clear
<b>Specific Gravity :</b>	1.05 –1.15 g/cm <sup>3</sup>
<b>Boiling Point :</b>	Not determined
<b>Flash Point :</b>	> 100 °C
<b>Ignition Temperature :</b>	No data available
<b>Lower Explosion Limit :</b>	No data available
<b>Upper Explosion Limit :</b>	No data available
<b>Vapour pressure :</b>	No data available
<b>Solubility in water :</b>	No data available
<b>Solubility in organic solvents :</b>	Soluble
<b>Viscosity (mPa.s) :</b>	110 - 130
<b>pH (concentration) :</b>	No data available

## 10. STABILITY AND REACTIVITY

**Reactivity:** No specific test data related to reactivity available for this product or its ingredients.

**Chemical stability:** Stable under recommended conditions of storage.

**Conditions to avoid:** No data available.

**Incompatible materials:** Strong oxidizing agents, polymerizing initiators, free radical initiators, and peroxides.

**Hazardous decomposition products:** Hazardous decomposition products formed under fire conditions: Carbon oxides, nitrogen oxides (NO<sub>x</sub>).

## 11. TOXICOLOGICAL INFORMATION

**Acute toxicity:** May be harmful if swallowed.

Acrylate-Methacrylate monomers, Acute Oral toxicity LD50 rat > 2000 mg/kg

Acrylate-Methacrylate oligomers, Acute Oral toxicity LD50 rat > 2000 mg/kg

**Skin corrosion/irritation:** No data available.

**Serious eye damage/irritation:** Causes serious eye damage.

**Respiratory or skin sensitization:** May cause an allergic skin reaction.

**Germ cell mutagenicity:** No data available.

**Carcinogenicity:** No data available.

**Reproductive toxicity:** No data available.

**STOT-single exposure:** No data available.

**STOT-repeated exposure:** No data available.

**Aspiration hazard:** No data available.

## 12. ECOLOGICAL INFORMATION

**Toxicity:** No data available.

**Persistence and degradability:** No data available.

**Bioaccumulative potential:** No data available.

**Mobility in soil:** No data available.

**Results of PBT& vPvB assessment:** No data available.

**Other adverse effects:** No data available.

**Additional information :** Do not allow uncontrolled discharge of product into the environment. Do not allow to enter into surface water or drains.

## 13. DISPOSAL CONSIDERATIONS

**Product:** Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.

**Contaminated packaging:** Dispose of as unused product.

## 14. TRANSPORT INFORMATION

No hazardous material as defined by the prescriptions. No specific regulation for transport necessary.

**UN number :** Not regulated as a dangerous good.

**UN proper shipping name:** Not regulated as a dangerous good.

**Transport hazard class(es):** Not regulated as a dangerous good.

**Packing group :** Not regulated as a dangerous good.

**Environmental hazards:** Not regulated as a dangerous good.

**International Air Transport Association (ICAO-IATA-DGR) :** Not regulated as dangerous good.

**International Maritime Dangerous Goods (IMDG)** : Not regulated as hazardous material.

**Land transport Dangerous Goods (ADR/RID/GGVSE)**: Not regulated as hazardous material.

**Transport in bulk according to Annex II of Marpol and the IBC Code** : Not applicable.

## 15. REGULATORY INFORMATION

15.1 – Safety, health and environmental regulations/legislation specific for the substance or mixture

**Relevant information regarding restrictions:** None known

### **EU regulations**

EINECS/ELINCS/NLP : All materials are listed.

REACH Annex XVII : None listed.

### **US Federal regulations**

TSCA : All active materials are listed on the TSCA Inventory. For reporting requirements refer to TSCA Section 12(b) Export Notification Requirements.

SARA Title III Section 302/304 Extremely Hazardous Substance: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA Title III Section 311/312 Hazard Categorization: Acute Health Hazard, Chronic Health Hazard.

SARA Title III Section 313 Supplier Information: None listed.

CERCLA Section 102(a) Hazardous Substance: None listed.

California Proposition 65: This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

### **Canadian regulations**

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

### **Chinese regulations**

IECSC (CN) - Inventory of Existing Chemical Substances in China : Listed.

### **Japanese regulations**

ENCS (JP) - Existing and New Chemical Substances Inventory : Listed.

ISHL (JP) - Inventory of Chemical Substances : Listed.

### **Korean regulations**

KECI (KR) - Korean Existing Chemicals Inventory : Listed.

### **Philippines regulations**

PICCS (PH) - Philippines Inventory of Chemicals and Chemical Substances : Listed.

### **Australian regulations**

AICS - Australian Inventory of Chemical Substances : Listed.

### **New Zealand regulations**

NZIOC - New Zealand Inventory of Chemical : Listed.

### **Switzerland regulations**

ChemO - Swiss Chemicals Ordinance : Listed.

## 15.2 – Chemical safety assessment

No chemical safety assessment has been carried out.

## 16. OTHER INFORMATION

Indication of changes : GHS aligned.

16.1 - Relevant Hazard Statements (number and full text) referred to in sections 2 and 3 (according to (EC) No. 1272/2008)

H302 - Harmful if swallowed.

H317 - May cause an allergic skin reaction.

H318 - Causes serious eye damage.

H373 - May cause damage to organs through prolonged or repeated exposure.

H413 - Harmful to aquatic life with long lasting effects.

### 16.2 – Further information

**Training instructions:** Use as instructed.

**Further information:** This information is based upon the present state of our knowledge. This Safety Data Sheet has been compiled and is solely intended for this product.

**Notice to readers:** Employers should use this information only as a supplement to other information gathered by them, and should make independent judgment of suitability of this information to ensure proper use and protect the health and safety of employees.

**Disclaimer :** This information is furnished without warranty, and any use of the product not in conformance with this Safety Data Sheet, or in combination with any other product or process, is the responsibility of the user.