ADMAT
Advanced Materials

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-CAST**

1.2 – Product class and use

Mixture of (meth)acrylic acid esters, (meth)acrylated monomers, oligomers and photoinitiators.
Use for stereolitography 3D printers with UV-Visible light systems.

1.3 – Informations 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

Date of Preparation: 22th November 2018

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.

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 hazard : the product may cause an allergic skin reaction.
Environmental hazard : the product is harmful to aquatic organisms, with long-term effects.

Classification and hazard indication :

Skin irritation	Category 2	H315
Skin sensitization	Category 1	H317
Eye irritation	Category 2	H319
Hazardous to aquatic environment	Category 3	H412

2.2 – Label elements

Regulation (EC) No. 1272/2008.

Hazard pictograms :

Warnings : Warning

Hazard Statements :

H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H413	May cause long lasting harmful effects to the aquatic life.

Precautionary statements :

Prevention:

P261	Avoid breathing dust/fumes/gas/mist/vapours/spray.
P272	Contaminated work clothing should not be allowed out of the workplace.
P273	Avoid release to the environment.
P280	Wear protective gloves.

Response:

P302+P352	IF ON SKIN (or hair) : wash with plenty of soap and water.
P305+351+338	IF ON EYES : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P333+313	If skin irritation or rash occurs : Get medical advice and attention.
P337 + P313	If eye irritation persists: Get medical advice and attention.
P362+P364	Take off contaminated clothing and wash before reuse.

Disposal :

P410+403	Protect from sunlight. Store in a well ventilated place.
P501	Dispose of contents / container in accordance with local/regional regulations.

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

Chemical Name	% W/W	CAS No.	Regulation (EC) No. 1272/2008 **
(Meth)acrylated monomers	Proprietary*	Proprietary*	Eye Irrit.2, H319, Skin Irrit.2, H315 Skin Sens.1, H317 Aqu. Chron.3, H412
(Meth)acrylated oligomers	Proprietary*	Proprietary*	Eye Irrit.2, H319, Skin Irrit.2, H315 Skin Sens.1, H317 Aqu. Chron.2, H411
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 (meth)acrylic based resin with an acrylat 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: May cause respiratory irritation. Move affected person to fresh air. If respiratory irritation occurs, if breathing becomes difficult seek medical attention immediately.

Skin Contact: May cause irritation or sensitization by skin contact , including redness and/or swelling. Immediately flush skin with plenty of soap and water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse.

Eye Contact: Irritating to eyes. Causes redness, swelling and pain. Immediately flush eyes with plenty of water for at least 15-20 minutes. Get medical attention if symptoms persist.

Ingestion: Irritating to mouth, throat and stomach. If ingested, drink plenty of water/milk and seek immediate medical attention. Do not induce vomiting.

5. FIRE-FIGHTING MEASURES

Extinguishing media : Suitable extinguishing media: Water mist, dry chemical, carbon dioxide, or appropriate foam.
Extinguishing media which must not be used for safety reasons: High volume water jet.

Special hazards arising from the substance or mixture : Thermal decomposition products can include CO2, CO, NOx and smoke.

Special protective equipment for fire-fighters : In case of fire, wear full protective clothing, including helmet, self contained positive-pressure or pressure demand breathing apparatus, protective clothing and face mask.

Additional information : Suppress gases/vapours/mists with water spray jet. Collect contaminated fire extinguishing water separately.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions: Keep unnecessary personnel away. Wear appropriate protective equipment and clothing. Consult expert immediately.

Environmental Precautions : Stop the flow of material, if this is without risk. Ventilate contaminated area, Eliminate sources of ignition. In case of contamination of aquatic environment inform local authorities.

Methods of Cleaning Up : Wear appropriate protective equipment and clothing. Absorb spillage with suitable absorbent materials. Place all waste in an appropriate container for disposal. The material and its container must be disposed of as hazardous waste. Keep away from sources of ignition.

Waste Disposal Method : Dispose of in accordance with all applicable federal, state and local regulations. National or regional provisions may also be in force.

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: Provide adequate ventilation. Use suitable protective equipment. Avoid contact with skin and eyes.
Do not breathe vapors or mist. Avoid ignition sources. Do not allow to enter drains or watercourses.

Storage Precautions: Store sealed in the original container at room temperature. Keep this material indoors in a cool, dry, well ventilated place. Store out of direct sunlight or UV light sources. Storage temperature below 35°C (95°F). Keep containers closed and avoid all ignition sources.

Special Requirements: Do not heat containers with steam or electrical equipment. Heating this product above 100°C (210°F) in the presence of air may cause slow oxidative decomposition; above 150°C (300°F) polymerization may occur. Fumes and vapors from this thermal decomposition may be dangerous for health (nitrous vapors, carbon monoxide-carbon dioxide). Do not breathe fumes.

8. EXPOSURE CONTROLS & PERSONAL PROTECTION

8.1 – Exposure limits

No occupational exposure limits values have been established for this product.

8.1 – Exposure controls

Technical measures to prevent exposure : Use explosion-proof local exhaust ventilation.

Instructual measures to prevent exposure : When using, do not eat, drink or smoke. Wash hands after handling and before eating, smoking and using the lavatory and at the end of the day.

Respiratory protection : If ventilation cannot effectively keep vapor concentrations below established limits, appropriate certified respiratory protection must be provided.

Eye protection : Wear safety glasses or chemical goggles.

Hand and skin Protection : Avoid all skin contact. Depending on the conditions of use, cover as much of the exposed skin area as possible by wearing impervious nitrile gloves, apron, closed shoes., long pants, and long sleeved shirts.

General safety and hygiene measures : Handle in accordance with good industrial hygiene and safety practise. Wearing of closed work clothing is required additionally to the stated personal protection equipment. For operations where contact can occur a safety shower and eye wash facility must be available.

9. PHYSICAL & CHEMICAL PROPERTIES

Physical state :	Liquid
Odor :	Product specific
Color :	Various
Specific Gravity :	1.05 –1.15 g/cm³
Boiling Point :	Not determined
Flash Point :	> 100 °C
Ignition Temperature :	No data available
Lower Explosion Limit :	No data available
Upper Explosion Limit :	No data available
Viscosity @ 25°C (77°F) :	No data available
Vapour pressure :	Not determined
Solubility in water :	Not determined
Solubility in organic solvents :	Soluble
Volatile characteristics :	Negligible
Viscosity (mPa.s) :	45 - 50
pH :	Not determined

10. STABILITY AND REACTIVITY

Reactivity : No hazardous reaction when handled and stored according to provisions.

Chemical stability : The product is stable when stored in original container at normal ambient temperature.

Possibility of hazardous reactions : Polymerization with heat evolution may occur in the presence of peroxides and other radical components. The product is stabilized against spontaneous polymerization during their production.

Conditions to avoid : Protect from the action of UV light or other radiation with high energy. Keep only in the original container at a temperature between 5°C and 35°C. Can polymerize with intense heat release. Avoid heat.

Incompatible materials : Polymerization initiators, including peroxides, oxidizing agents, reducing agents, heavy metals and strong alkalies.

Hazardous decomposition products : Carbon dioxide, carbon monoxide and other toxic fumes can be released at high temperatures or upon burning.

11. TOXICOLOGICAL INFORMATION

Components	Data
(Meth)acrylated monomers	Acute Oral toxicity LD50 rat > 2000 mg/kg Acute Dermal toxicity LD50 rat > 2000 mg/kg
(Meth)acrylated oligomers	Acute Oral toxicity LD50 rat > 2000 mg/kg Acute Dermal toxicity LD50 rat > 2000 mg/kg
Photoinitiators	Acute Toxicity: Virtually non toxic after a single ingestion. Virtually non toxic after a single skin contact. Oral Toxicity: LD50 rat > 5000 mg/kg (OECD guidline 401). Inhalation Toxicity: LC50 not determined. No mortality within the stated exposition time as shown in animal studies (supplier infos). Dermal Toxicity: LD50 rat > 2000 mg/kg (OECD guidline 402). No mortality was observed (supplier infos).

Inhalation : Irritating to respiratory system. High atmospheric concentrations may lead to irritation of the respiratory tract, dizziness, headache and anaesthetic effects.

Skin contact : May cause sensitation by skin contact. Irritating to skin, Repeated and/or prolonged contact may cause dermatitis.

Eye contact : High vapour concentration may cause irritation.

Ingestion : Low oral toxicity, but ingestion may cause irritation of the gastrointestinal tract.

Carcinogenicity : None of the components of this material are listed by IARC, NTP, OSHA or ACGIH as carcinogens.

Other informations : Individual components of this product are not reported to produce mutagenic effects in humans. This mixture is classified as hazardous according to regulation (EC) No. 1272/2008 [CLP].

12. ECOLOGICAL INFORMATION

Ecotoxicity : The aquatic toxicity of the product is unknown; however based on components, it is predicted that this material may be harmful to aquatic organisms or cause long-term adverse effects in the aquatic environment. Prevent contamination of soil, drains and surface waters.

Components	Aquatic toxicity	Data
(Meth)acrylated monomers	No data available	No data available
(Meth)acrylated oligomers	No data available	No data available
Photoinitiators	No data available	No data available

Bioaccumulative potential : The product has not been tested.

Mobility in soil : The product has not been tested.

Persistence and degradability : The product has not been tested.

Results of PBT & vPvB assessment : The product has not been tested.

Other adverse effects : No information 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

Appropriate disposal : Do not allow to enter into surface water or drains. Disposal should be in accordance with local, state or national legislation. Contact a licensed professional waste disposal service to dispose of this mixture. Incinerate under approved controlled conditions, using incinerators for the disposal for organic chemicals. Decontaminate empty bottles/canisters before recycling.

Waste codes according to EWC/AVV : 070208

Appropriate packaging : NA

Additional information : Reduce the waste by attempting to utilize product completely. Prior to disposal, ADMAT recommends consulting an approved waste disposal firm to ensure regulatory compliance.

14. TRANSPORT INFORMATION

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

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.

15. REGULATORY INFORMATION

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

EU regulations
EINEC/ELINCS/NLP : All materials are listed.
REACH Annex XVII : None listed.

National EU regulations
Wassergefährdungsklasse (water hazard class, Germany): WGK 2: Hazard to waters.

US Federal regulations
TSCA : All materials are listed on the TSCA Inventory or are not subject to TSCA requirements.
SARA 302 EHS List (40 CFR 355 Appendix A) : None listed.
SARA 313 (40 CFR 372.65) : None listed.
CERCLA (40 CFR 302.4) : None listed.

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.
Japan 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.

15.2 – Chemical safety assessment

The obligation to register according to the REACH Regulation (EC) N° 1907/2006 does not apply to polymers..

16. OTHER INFORMATION

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

H315 - Causes skin irritation.
H317 - May cause an allergic skin reaction.
H319 - Causes serious eye irritation.
H411 - Toxic to aquatic life with long lasting effects.
H412 - Harmful to aquatic organisms with long term effects.
H413 - May cause long lasting harmful effect to aquatic life.

16.2 – Futher information

The information provided in this Material Safety Data Sheet describes exclusively the safety requirements of the product and is based on our present-day knowledge at the date of publication. The information given is designed only as guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made material. The data for the hazardous ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.

DISCLAIMER OF LIABILITY: The following supersedes any provision in the forms, letters and agreements between your business and ADMAT.
ADMAT makes no direct or indirect guarantee for this product, including warranties of merchantability or fitness for a particular purpose. ADMAT shall in no event be liable for incidental, consequential or other resulting from alleged negligence, breach of warranty, strict liability or any other theory is, after the use or handling of this product. The sole liability of ADMAT, as part of an application any compensation in connection with the manufacture, use or sale of its products is limited to the purchase price paid by the purchaser.
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