

SAFETY DATA SHEET

[In accordance with the criteria of Regulation No 1907/2006 (REACH) as amended]

Date of issue: 02.04.2021

Version: 1.0/EN

Section 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Trade name: **TECHNIPLAST 3D-MC**

1.2 Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses: raw material for industrial and consumer uses.

Uses advised against: not determined.

1.3 Details of the supplier of the safety data sheet

Manufacturer: **TECHNIART Sp. z o.o.**

Address: ul. Rumiankowa 2, Nowa Bukówka, 96-321 Żabia Wola, Poland

Telephone: +48 46 857 83 94, +48 46 857 83 95

E-mail address for a competent person responsible for sds: biuro@techniart.pl

1.4 Emergency telephone number

112

Section 2: Hazards identification

2.1 Classification of the substance or mixture

Acute Tox. 4 H302, **Skin Corr. 1B** H314, **Skin Sens. 1** H317, **Eye Dam. 1** H318, **Aquatic Chronic 3** H412

Harmful if swallowed. Causes severe skin burns and eye damage. May cause an allergic skin reaction. Causes serious eye damage. Harmful to aquatic life with long lasting effects.

2.2 Label elements

Hazard pictograms and signal words



DANGER

Names of substances that have to be mentioned on the label

Contains: trimethylolpropane poly(oxypropylene)triamine; 3-aminomethyl-3,5,5-trimethylcyclohexyl-amine; 2,2,4(or 2,4,4)-trimethylhexane-1,6-diamine; 2,2-bis[4-(2,3-epoxypropoxy)-phenyl]propane.

Hazard statements

H302 Harmful if swallowed.
H314 Causes severe skin burns and eye damage.
H317 May cause an allergic skin reaction.
H412 Harmful to aquatic life with long lasting effects.

Precautionary statements

P102 Keep out of reach of children.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.

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P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P310 Immediately call a POISON CENTER/doctor.

P501 Dispose of contents/container to properly labelled waste containers according to national law.

2.3 Other hazards

Product does not contain ingredients, which meet criteria for PBT or vPvB in accordance with Annex XIII of REACH Regulation. The product does not contain substances included in the list established in accordance with Article 59(1) for having endocrine disrupting properties, or substances identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 (3) or Commission Regulation (EU) 2018/605 at a concentration equal to or greater than 0,1% by weight.

Section 3: Composition/information on ingredients

3.1 Substances

Not applicable.

3.2 Mixtures

trimethylolpropane poly(oxypropylene)triamine

Concentration range: 10-30%

CAS number: 39423-51-3

EC number: 500-105-6

INDEX number: -

REACH registration number: -

Classification: Skin Corr. 1B H314, Acute Tox. 4 H302, Aquatic Chronic 3 H412

3-aminomethyl-3,5,5-trimethylcyclohexylamine

Concentration range: 10-30%

CAS number: 2855-13-2

EC number: 220-666-8

INDEX number: 612-067-00-9

REACH registration number: 01-2119514687-32-XXXX

Classification: Skin Corr. 1B H314, Acute Tox. 4 H312, Acute Tox. 4 H302, Skin Sens. 1 H317, Aquatic Chronic 3 H412

2,2,4(or 2,4,4)-trimethylhexane-1,6-diamine

Concentration range: 5-15%

CAS number: 25513-64-8

EC number: 247-063-2

INDEX number: -

REACH registration number: 01-2119560598-25-XXXX

Classification: Skin Corr. 1B H314, Acute Tox. 4 H302, Skin Sens. 1 H317

2,2-bis[4-(2,3-epoxypropoxy)phenyl]propane

Concentration range: 5-15%

CAS number: 1675-54-3

EC number: 216-823-5

INDEX number: 603-073-00-2

REACH registration number: 01-2119456619-26-XXXX

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Classification: Skin Irrit. 2 H315, Eye Irrit. 2 H319, Skin Sens. 1A H317, Aquatic Chronic 2 H411

Concentration limits:

Eye Irrit. 2 H319: C ≥ 5 %; Skin Irrit. 2 H315 : C ≥ 5 %

Full text of each relevant H phrase is given in section 16 of SDS.

Section 4: First aid measures

4.1 Description of first aid measures

Skin contact: take off contaminated clothes immediately. Wash contaminated skin with a large amount of water and soap. Put on sterile dressing. Contact a doctor immediately.

Eye contact: contact an ophthalmologist immediately. Protect non-irritated eye, remove contact lenses. Rinse contaminated eyes with water for at 10-15 minutes. Avoid strong stream of water – risk of damage of the cornea.

Ingestion: do not induce vomiting. Rinse mouth with water. Do not drink alcohol! Never give anything by mouth to an unconscious person. Contact a doctor immediately, show container or label.

Inhalation: remove the victim to fresh air. Keep warm and calm. Consult a doctor.

4.2 Most important symptoms and effects, both acute and delayed

Skin contact: possible redness, burning sensation, burns, allergic reaction.

Eye contact: possible tearing, burning sensation, pain, irritation, risk of serious eye damage.

Ingestion: causes burns of mouth, throat, oesophagus, may cause perforation of stomach.

Inhalation: may cause irritation of respiratory tract.

4.3 Indication of any immediate medical attention and special treatment needed

Physician makes a decision regarding further medical treatment after thoroughly examination of the injured. Symptomatic treatment.

Section 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media: CO₂, extinguishing powder, extinguishing foam.

Unsuitable extinguishing media: water jet – risk of propagation of the flame.

5.2 Special hazards arising from the substance or mixture

During combustion carbon oxides [CO and CO₂], nitrogen oxides and ammonia may be produced. Do not inhale combustion products, it may cause health risk.

5.3 Advice for firefighters

Personal protection typical in case of fire. Do not stay in the fire zone without self-contained breathing apparatus and protective clothing resistant to chemicals. Do not let extinguishing water to reach sewage, surface and ground waters. Cool containers endangered with fire with water fog from a safe distance.

Section 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Limit the access for the outsiders into the breakdown area, until the suitable cleaning operations are completed. Ensure that the effects of breakdown are removed only by properly trained personnel. In case of large spills, isolate the exposed area. Wear personal protective equipment. Avoid contact with skin and eyes. Ensure adequate ventilation. Do not inhale vapours.

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6.2 Environmental precautions

If larger quantities of the product are released, steps must be taken to prevent its spreading in the environment. Notify relevant emergency services.

6.3 Methods and material for containment and cleaning up

Collect spilled product using liquid-binding materials (eg. sand, soil, universal binding substances, silica, etc.). Treat the collected material as waste. Clean and ventilate the contaminated place.

6.4 Reference to other sections

Appropriate conduct with waste product – section 13. Personal protection equipment – section 8.

Section 7: Handling and storage

7.1 Precautions for safe handling

Handle in accordance with good occupational hygiene and safety practices. Avoid eyes and skin contamination. Do not let product to enter mouth. Avoid vapours inhalation. Ensure adequate local and/or general ventilation. Wear personal protective equipment.

7.2 Conditions for safe storage, including any incompatibilities

Store in properly labelled, tightly sealed containers in a dry, cool and well ventilated place. Keep away from food, foodstuffs, animal feed. Recommended storage temperature: 15-30°C. Protect from water and moisture. Avoid fire. Protect from direct sunlight. Opened container should be resealed and kept upright to prevent leaking. Do not store in non-labelled containers.

7.3 Specific end use(s)

No information about uses other than mentioned in subsection 1.2.

Section 8: Exposure controls/personal protection

8.1 Control parameters

There are no occupational exposure limit values at working place for the substances present in the mixture at the European Union level. Please check any national occupational exposure limit values in your country.

Legal Basis: Commission Directive 2000/39/EC, 2006/15/EC, 2009/161/EU, 2017/164/EU, 2019/1831/EU.

Great Britain:

The product does not contain any components which are subject to control exposure in the workplace.

EH40/2005 Workplace exposure limits. Fourth Edition 2020.

8.2 Exposure controls

Appropriate engineering controls

Observe good occupational hygiene and safety practices. Avoid eyes and skin contamination. Take off contaminated clothes immediately. Ensure good general and/or local ventilation at workplace to ensure the maintenance of concentrations of hazardous components in the atmosphere below the permissible limit values. Do not eat, drink, smoke or take medications when using the product. Wash hands thoroughly before breaks and after work. Safety showers and eye washers should be installed near the workplaces.

Individual protection measures, such as personal protective equipment

The necessity to use and selection of appropriate personal protective equipment should take into account the type of risk posed by the product, working conditions and the way of handling the product. The personal protective equipment used must meet the requirements of Regulation (EU) 2016/425 and the relevant standards. The employer is obliged to provide protection measures appropriate to the activities performed and meeting all quality requirements, including their maintenance and cleaning. Any contaminated or damaged PPE must be replaced immediately.

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Hand and body protection

Wear protective gloves (EN ISO 374) e.g. made of nitrile rubber with minimal thickness 0,11 mm and effectiveness level 2 or higher.

The material that the gloves are made of must be impenetrable and resistant to the product's effects. The selection of material must be performed with consideration of breakthrough time, penetration speed and degradation. Moreover, the selection of proper gloves depends not only on the material, but also on other quality features and changes depending on the manufacturer. The producer should provide detailed information regarding the exact breakthrough time. This information should be followed

Eye protection

Wear tightly fitting protective glasses (EN 166).

Body protection

Protective clothes adequate to potential risk should be worn according to performed task (EN ISO 13688).

Respiratory protection

A properly fitted, contained breathing apparatus equipped with an absorber or filtering-absorber that is compliant with the approved standard should be used when a risk assessment indicates this is necessary. The selection of the respiratory mask should be made on the basis of the known or expected level of exposure, the danger of the product and the safety limits of the selected mask.

Protection classes (class 1/protection against gases or vapours with a concentration in the air volume not exceeding 0.1%, class 2 / protection against gases or vapours with a concentration in the air not exceeding 0.5%, class 3 / protect against gases or vapours at concentrations in the air volume to 1%). In cases where the oxygen concentration is $\leq 19\%$ and / or maximum concentration of toxic substances in the air is $\geq 1.0\%$ by volume breathing apparatus should be used.

Thermal hazards

Not applicable.

Environmental exposure controls

Prevent release to the environment/ surface waters. Surface waters and drains must not be contaminated with chemicals and used containers. Spilled product or uncontrolled leakages to surface waters should be notified to relevant emergency services according to local and national legislation. Product should be disposed as chemical waste, according to local and national legislation.

Section 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state	liquid
Colour	colourless
Odour	characteristic, slightly amine
Melting point/freezing point	not determined
Boiling point or initial boiling point and boiling range	not determined
Flammability	not applicable, incombustible
Lower and upper explosion limit	not determined
Flash point	not determined
Auto-ignition temperature	not determined
Decomposition temperature	not determined
pH	not determined
Kinematic viscosity	not determined
Solubility	insoluble in water
Partition coefficient n-octanol/water (log value)	not determined
Vapour pressure	not determined

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Density and/or relative density	1.05 g/cm ³ (25 °C)
Relative vapour density	not determined
Particle characteristics	not applicable

9.2 Other information

Dynamic viscosity:	0.4-0.6 mPa·s
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Section 10: Stability and reactivity

10.1 Reactivity

Product is reactive. Undergoes dangerous polymerization. See also subsections 10.3 and 10.5

10.2 Chemical stability

The product is stable under normal conditions of handling and storage.

10.3 Possibility of hazardous reactions

The product may polymerize exothermically in reaction with some substances.

10.4 Conditions to avoid

Avoid sources of heat and direct sunlight. Protect from moisture.

10.5 Incompatible materials

Avoid contact with strong oxidizers, acids, bases, amines, water.

10.6 Hazardous decomposition products

There are no hazardous decomposition products when product is properly used and stored.

Section 11: Toxicological information

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

Toxicity of components

trimethylolpropane poly(oxypropylene)triamine

LD ₅₀ (oral, rat)	2885 mg/kg
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LD ₅₀ (skin, rabbit)	2980 mg/kg
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3-aminomethyl-3,5,5-trimethylcyclohexylamine

LD ₅₀ (oral, rat)	1030 mg/kg
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Toxicity of mixture

Information regarding acute and/or delayed results of the exposure was defined on the basis of the information on product's classification and/or toxicological studies.

Acute toxicity

Acute toxicity of the mixture (ATE_{mix}) was calculated on the basis of the appropriate conversion factor included in Table 3.1.2. of Annex I to the CLP Regulation.

ATE _{mix} (oral)	666 mg/kg
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ATE _{mix} (skin)	3666 mg/kg
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Product is harmful if swallowed.

Skin corrosion/irritation

Product causes skin burns.

Serious eye damage/irritation

Product causes serious eye damage.

Respiratory or skin sensitization

May cause an allergic skin reaction.

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Germ cell mutagenicity

Based on available data, the classification criteria are not met.

Carcinogenicity

Based on available data, the classification criteria are not met.

Reproductive toxicity

Based on available data, the classification criteria are not met.

STOT-single exposure

Based on available data, the classification criteria are not met.

STOT-repeated exposure

Based on available data, the classification criteria are not met.

Aspiration hazard

Based on available data, the classification criteria are not met.

Information on likely routes of exposure

Routes of exposure: eye contact, skin contact, ingestion, inhalation. For more information – see subsection 4.2.

Symptoms related to the physical, chemical and toxicological characteristics

No data.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

No data.

11.2. Information on other hazards

Endocrine disrupting properties

The product does not contain substances included in the list established in accordance with Article 59(1) for having endocrine disrupting properties, or substances identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 (3) or Commission Regulation (EU) 2018/605 at a concentration equal to or greater than 0,1% by weight.

Other information

No data.

Section 12: Ecological information

12.1 Toxicity

Toxicity of components

trimethylolpropane poly(oxypropylene)triamine

Toxicity for fish LC₅₀ > 15 mg/l/96h (Oncorhynchus mykiss)

Toxicity for daphnia EC₅₀ 80 mg/l/48h (Daphnia magna)

3-aminomethyl-3,5,5-trimethylcyclohexylamine

Toxicity for fish LC₅₀ 110 mg/l (96h, Brachydanio rerio)

Toxicity for daphnia EC₅₀ 23 mg/l (48h, Daphnia magna)

Toxicity for algae EC₅₀ 37 mg/l (72h, Scenedesmus subspicatus)

Toxicity of mixture

Product is harmful to aquatic life with long lasting effects.

12.2 Persistence and degradability

Product is not readily biodegradable.

12.3 Bioaccumulative potential

No data available.

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12.4 Mobility in soil

Low mobility in soil and aquatic environment.

12.5 Results of PBT and vPvB assessment

Substances contained in the product are not assessed as PBT or vPvB according to annex XIII of REACH regulation.

12.6. Endocrine disrupting properties

The product does not contain substances included in the list established in accordance with Article 59(1) for having endocrine disrupting properties, or substances identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 (3) or Commission Regulation (EU) 2018/605 at a concentration equal to or greater than 0,1% by weight.

12.7. Other adverse effects

Product has no influence on global warming and destruction of the ozone layer.

Section 13: Disposal considerations

13.1 Waste treatment methods

Disposal methods for the mixture: waste product should be recovered or liquidated in authorised incineration plants or waste treatment plants, according to legislation in force. Do not let product to enter sewage system. Store residues in original containers. Waste should be classified as dangerous.

Disposal methods for used packing: reuse/recycle/eliminate empty containers in accordance with the local legislation. Reusable containers can be re-used after cleaning.

Legal basis: Directive 2008/98/EC as amended, 94/62/EC as amended.

Section 14: Transport information

14.1 UN number or ID number

UN 2735

14.2 UN proper shipping name

POLYAMINES, LIQUID, CORROSIVE, N.O.S. (trimethylolpropane poly(oxypropylene)triamine)

14.3 Transport hazard class(es)

8

14.4 Packing group

III

14.5 Environmental hazards

Mixture is not hazardous for the environment in accordance with transport regulation.

14.6 Special precautions for user

Wear personal protective equipment (compliant with section 8) when handling the product. Avoid sources of ignition.

14.7 Maritime transport in bulk according to IMO instruments

Not applicable.



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Section 15: Regulatory information

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

Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC as amended.

Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006 (Text with EEA relevance) as amended.

Commission Regulation (EU) No 2020/878 of 18 June 2020 amending Annex II to Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH).

Directive 2008/98/EC of the European Parliament and of the Council of 19 November 2008 on waste and repealing certain Directives as amended.

European Parliament and Council Directive 94/62/EC of 20 December 1994 on packaging and packaging waste as amended.

Regulation (EU) 2016/425 of the European Parliament and of the Council of 9 March 2016 on personal protective equipment and repealing Council Directive 89/686/EEC (Text with EEA relevance).

Commission Directive 2000/39/EC of 8 June 2000 establishing a first list of indicative occupational exposure limit values in implementation of Council Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work.

Commission Directive 2006/15/EC of 7 February 2006 establishing a second list of indicative occupational exposure limit values in implementation of Council Directive 98/24/EC and amending Directives 91/322/EEC and 2000/39/EC.

Commission Directive 2009/161/EU of 17 December 2009 establishing a third list of indicative occupational exposure limit values in implementation of Council Directive 98/24/EC and amending Commission Directive 2000/39/EC.

Commission Directive 2017/164/EU of 31 January 2017 establishing a fourth list of indicative occupational exposure limit values pursuant to Council Directive 98/24/EC, and amending Commission Directives 91/322/EEC, 2000/39/EC and 2009/161/EU.

Commission Directive 2019/1831/EU of 24 October 2019 establishing a fifth list of indicative occupational exposure limit values pursuant to Council Directive 98/24/EC and amending Commission Directive 2000/39/EC.

15.2 Chemical safety assessment

It is not necessary to carry out a chemical safety assessment for the mixture.

Section 16: Other information

Full text of indicated H phrases mentioned in section 3

H302	Harmful if swallowed.
H312	Harmful in contact with skin.
H314	Causes severe skin burns and eye damage.
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 life with long lasting effects.

Abbreviations and acronyms

PBT	Persistent, Bioaccumulative and Toxic substance
vPvB	very Persistent, very Bioaccumulative substance
Eye Irrit. 2	Serious eye damage/eye irritation, category 2
Skin Sens. 1	Skin sensitization category 1
Skin Corr. 1B	Skin corrosion category 1B

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Aquatic Chronic 2	Toxic to aquatic environment category 2
Aquatic Chronic 3	Toxic to aquatic environment category 3
Acute Tox. 4	Acute toxicity category 4

Trainings

Before commencing working with the product, the user should learn the Health & Safety regulations, regarding handling chemicals, and in particular, undergo a proper workplace training. Persons related to the transportation of the dangerous goods in compliance with the ADR Agreement should be properly trained within the scope of performed tasks (general training, on-the-job training and training related to the safety issues).

Key literature references and sources of data

This SDS was prepared on the basis of sheets of the individual components, literature data, online databases (e.g. ECHA, TOXNET, COSING) as well as our knowledge and experience, taking into account current legislation.

Procedure used to classify the mixture

Classification was based on data on hazardous substances calculation method under the guidance of Regulation 1272/2008/EC (CLP) as amended. Acute toxicity of the mixture (ATE_{mix}) was calculated on the basis of the appropriate conversion factor included in Table 3.1.2. of Annex I to the CLP Regulation.

Additional information

Safety Data Sheet made by: **THETA Consulting Sp. z o.o.** (on the basis of producer's data)

The information above is based on a current available data concerning the product, but also on the experience and knowledge in this field of the producer. They are neither a quality description of the product nor a guarantee of particular features. They are to be treated as aid to safety in transport, storage and usage of the product. That does not free the user from the responsibility of improper usage of the information above and also of improper compliance with the law norms in the field.