

Safety Data Sheet

[Prepared in accordance with Regulation EC 1907/2006 (REACH), as amended]

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

1.1. Product identifier

Trade name: **TECHNIPLAST 1000 (component B)**

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

Relevant identified uses: chemical product for construction and industry.

Uses advised against: any type of use not listed above.

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, PL

Telephone/fax: +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 (general emergency telephone number)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Skin Sens. 1 H317, Acute Tox. 4 H332, STOT SE 3 H335

May cause an allergic skin reaction. Harmful if inhaled. May cause respiratory irritation.

2.2. Label elements

Hazard pictograms and signal words



Hazardous components placed on the label

Contains: hexamethylene diisocyanate, oligomers; blocked polyisocyanate based on hexamethylene diisocyanate (HDI); hexamethylene-di-isocyanate.

Hazard statements

H317 May cause an allergic skin reaction.

H332 Harmful if inhaled.

H335 May cause respiratory irritation.

Precautionary statements

P260 Do not breathe vapours.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P302+P352 IF ON SKIN: Wash with plenty of water and soap.

P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P333+P313 If skin irritation or rash occurs: Get medical advice/attention.

Additional information

None.

2.3. Other hazards

Product does not contain components, which meet criteria for PBT or vPvB in accordance with Annex XIII of REACH Regulation.

The components of the mixture are not identified as having endocrine disrupting properties.

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SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable.

3.2. Mixtures

CAS number: 28182-81-2 EC number: 500-060-2 Index number: — Registration number: 01-2119488934-20-XXXX	hexamethylene diisocyanate, oligomers Acute Tox. 4 H332, STOT SE 3 H335	C < 90%
CAS number: 666723-27-9 EC number: — Index number: — Registration number: —	blocked polyisocyanate based on hexamethylene diisocyanate (HDI) Skin Sens. 1 H317, Acute Tox. 4 H332, STOT SE 3 H335, Aquatic Chronic 3 H412	C < 20%
CAS number: 822-06-0 EC number: 212-485-8 Index number: 615-011-00-1 Registration number: 01-2119457571-37-XXXX	hexamethylene-di-isocyanate Skin Irrit. 2 H315, Skin Sens. 1 H317, Eye Irrit. 2 H319, Acute Tox. 3 H331, Resp. Sens. 1 H334, STOT SE 3 H335 <u>Specific concentration limits:</u> Skin Sens. 1 H317: C ≥ 0,5% Resp. Sens. 1 H334: C ≥ 0,5%	C < 0,25%

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

SECTION 4: First aid measures

4.1. Description of first aid measures

Contact with skin

Take off contaminated clothing. Wash the exposed parts of the skin thoroughly with water and soap. Consult a doctor if disturbing symptoms appear.

Contact with eyes

Protect non-irritated eye, remove contact lenses. Rinse contaminated eyes thoroughly with water for 10 - 15 minutes. Avoid powerful water stream – risk of cornea damage. Consult a ophthalmologist if disturbing symptoms appear.

Ingestion

Do not induce vomiting. Rinse mouth with water. Never give anything by mouth to an unconscious person. Consult a doctor if disturbing symptoms appear.

After inhalation

Remove the victim to fresh air, keep warm and at rest. Consult a doctor if disturbing symptoms appear.

4.2. Most important symptoms and effects, both acute and delayed

Contact with skin

The product may cause redness, allergic reaction, skin dryness.

Contact with eyes

The product may cause burning sensation, tearing, blurred vision.

Ingestion

May cause vomiting, gastrointestinal problems, abdominal pains, diarrhea.

After inhalation

High concentration of vapours and mists may cause asthmatic problems, cough, breathing difficulties.

Effects of exposure

Not known.

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4.3. Indication of any immediate medical attention and special treatment needed

Exposed persons should be under medical observation for 48 hours (possibility of delayed symptoms). 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: carbon dioxide, water mist, extinguishing powder.

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

5.2. Special hazards arising from the substance or mixture

During the fire may produce harmful gases containing e.g. carbon monoxides, nitrogen oxides, other hazardous unidentified products of thermal decomposition, hydrogen cyanide. Do not inhale combustion products, they can be dangerous for human health.

5.3. Advice for firefighters

Do not stay in the fire zone without self-contained breathing apparatus and protective clothing resistant to chemicals. Personal protection typical in case of fire. Closed containers may explode when exposed to high temperatures or if the contents become contaminated with water (release of carbon dioxide - pressure increase in the container). Cool down the containers that are endangered by fire with a water spray from a safe distance. Collect used extinguishing media.

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 only the trained personnel removes the effects of the accident. In case of large spills, isolate the exposed area. Use personal protective equipment. Caution: risk of slipping on the released product.

6.2. Environmental precautions

Do not allow the product to get into the sewage system, surface waters and soil. In case of release of large amounts of the product, it is necessary to take appropriate steps to prevent it from spreading into the environment. Notify relevant emergency services.

6.3. Methods and material for containment and cleaning up

Collect the product in liquid form using liquid-absorbing materials (eg sand, earth, universal binders, silica, etc.). Do not absorb with sawdust or other combustible materials. Allow to react for at least 30 minutes and collect the waste in containers in order to neutralize them (decontamination). Do not seal the containers tightly for at least 72 hours (release of carbon dioxide). Clean the contaminated area.

If necessary, use a decontamination fluid that contains: 5-10% sodium carbonate, 5-10% of a liquid detergent, make up to 100% with water. Disinfectant 1: 75% water, 20% non-ionic surfactants and 5% n-propanol. Disinfectant 2: 80% water, 20% non-ionic surfactants. Disinfectant 3: 90% water, 3 - 8% concentrated ammonia solution, 2% liquid detergent.

6.4. Reference to other sections

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

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Handle in accordance with good occupational hygiene and safety practices. Provide general and / or local ventilation in the workplace in order to maintain the concentration of the harmful agent in the air below the established limit values. Use personal protective equipment. Avoid vapor formation. Before break and after work wash hands carefully. Keep the unused containers tightly closed. Do not eat, drink and smoke during the work. Avoid eyes and skin contamination.

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7.2. Conditions for safe storage, including any incompatibilities

Store in properly labeled, sealed packages in a dry, cool and well-ventilated place. Protect against water and moisture. In contact with water, carbon dioxide is formed, which can lead to the bursting of containers. Avoid sources of heat and direct sunlight. Recommended storage temperature: < 50 °C. Container that is opened should be properly resealed and kept upright to prevent leakage. Keep away from incompatible materials (see subsection 10.5). Keep away from, foodstuffs and animal feed .

7.3. Specific end use(s)

No information about other uses than those mentioned in subsection 1.2.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational Exposure Limit Values

Legal Basis: EH40/2005 Workplace exposure limits. Fourth Edition 2020.

EH40/2005 Workplace exposure limits. Fourth Edition 2020.

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

Specification	WEL 8 hour	WEL 15 min	Comments
hexamethylene diisocyanate, oligomers	0,02 mg/m ³	0,07 mg/m ³	—
hexamethylene-di-isocyanate	0,02 mg/m ³	0,07 mg/m ³	—

Recommended control procedures

Procedures for monitoring concentrations of hazardous components in the air and procedures for monitoring air purity in the workplace should be applied - if available and justified at a given position - in accordance with the relevant national or European Standards, taking into account the conditions at the site of exposure and the appropriate measurement methods adapted to the working conditions. The mode, type and frequency of tests and measurements should meet the requirements of the appropriate laws.

DNEL and PNEC

hexamethylene-di-isocyanate [CAS 822-06-0]			
Exposure route	Exposure scheme	DNEL	
		worker	consumer
inhalation	long-term local	—	0,035 mg/m ³
inhalation	short-term local	—	0,07 mg/m ³

hexamethylene-di-isocyanate [CAS 822-06-0]	
PNEC	Value
marine water	0,005 mg/l
freshwater	0,049 mg/l
soil	0,523 mg/kg dry weight
freshwater sediment	0,674 mg/kg dry weight
marine water sediment	0,067 mg/kg dry weight
sewage treatment plant	8,42 mg/l

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8.2. Exposure controls

Industrial hygiene

Use the product in accordance with good occupational hygiene and safety practices. Do not eat, drink and smoke during the work. Before break and after work wash hands carefully. Ensure adequate general and/or local ventilation at the workplace. Do not allow vapours to concentrate in the air and to create concentrations within the limits of explosive properties or exceeding the OEL values.

Individual protection measures

The necessity to use and the 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.

Hand protection

Use protective gloves resistant to chemicals according to EN 374. Recommended material for gloves: nitrile rubber, neoprene, butyl rubber. In case of a short exposure, use protective gloves with 2nd or higher level of effectiveness (breakthrough time > 30 min). In case of a long exposure, use protective gloves with 6th level of effectiveness (breakthrough time > 480 min).

When using protective gloves during work with chemical products, it should be noted that the efficacy levels and corresponding breakthrough times do not indicate actual times of protection at a particular workplace, because the protection can be affected by many factors, e.g. temperature, other substances etc. If there are any signs of degradation, damage or change in appearance (colour, flexibility, shape), it is recommended to replace the gloves with a new pair. Please follow the manufacturer's instructions, not only in terms of gloves' usage, but also in terms of their cleaning, maintenance and storage. It is also important to know how to take off the gloves in order to avoid hands contamination.

Body protection

Use protective clothing that complies with the EN ISO 13688 standard.

Eye protection

If there is a risk of eye contamination, use safety glasses in accordance with the EN 166 standard.

Respiratory protection

In case of the formation of vapours and aerosols, use absorbing equipment or absorbing and filtering equipment with a suitable protection class (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, isolating equipment should be used.

Thermal hazards

Not applicable.

Environmental exposure controls

Prevent direct release to drains/ surface waters. Do not contaminate surface waters and drainage ditches with chemicals or used containers. Released product or uncontrolled spills to surface waters should be reported to appropriate authorities in accordance with local and national legislations. Dispose as chemical waste, in accordance with 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, faint
Melting point/freezing point:	-45°C
Boiling point or initial boiling point and boiling range:	not determined

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Flammability:	not applicable
Lower and upper explosion limit:	not determined
Flash point:	ok. 185°C
Auto-ignition temperature:	not determined
Decomposition temperature:	not determined
pH:	not determined
Kinematic viscosity:	not determined
Solubility:	not determined
Partition coefficient n-octanol/water (log value):	not applicable
Vapour pressure:	not determined
Density and/or relative density:	1,05 g/cm ³
Relative vapour density:	not determined
Particle characteristics:	not applicable

9.2. Other information

Other safety characteristics

Dynamic viscosity:	570-730 mPa·s
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SECTION 10: Stability and reactivity

10.1. Reactivity

Product is reactive. Increased temperature can cause polymerization. See also subsection 10.3-10.5.

10.2. Chemical stability

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

10.3. Possibility of hazardous reactions

In contact with water, it reacts with the release of carbon dioxide. Strong reaction with all groups of compounds containing active hydrogen, such as alcohols, amines, acids, bases, while releasing large amounts of heat.

10.4. Conditions to avoid

Avoid contact with moisture. Avoid temperatures: > 50°C. Avoid sources of heat and direct sunlight.

10.5. Incompatible materials

Not known. Avoid contact with following materials: strong acids, strong bases, water.

10.6. Hazardous decomposition products

Not known.

SECTION 11: Toxicological information

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

Acute toxicity

hexamethylene diisocyanate, oligomers [CAS 28182-81-2]	
LC ₅₀ (inhalation, rat)	18500 mg/m ³ /1h
hexamethylene-di-isocyanate [CAS 822-06-0]	
LC ₅₀ (inhalation, rat)	124 mg/m ³ /4h
LD ₅₀ (oral, rat)	959 mg/kg
LD ₅₀ (skin, rat)	> 7000 mg/kg

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Mixture	
ATE _{mix} (inhalation, vapours)	> 10 mg/l
ATE _{mix} (inhalation, mists)	1.35 mg/l

Harmful if inhaled.

Skin corrosion/irritation

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

Serious eye damage/irritation

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

Respiratory or skin sensitisation

May cause an allergic skin reaction.

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

May cause respiratory irritation.

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

Exposure route: eye exposure, skin exposure, inhalation, ingestion. For more information on the impact of each possible route of exposure, see subsection 4.2.

Symptoms related to the physical, chemical and toxicological characteristics

See subsection 4.2 of the SDS.

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

See subsection 4.2 of the SDS.

11.2. Information on other hazards

Endocrine disrupting properties

The components of the mixture are not identified as having endocrine disrupting properties.

Other information

No data on other hazards.

SECTION 12: Ecological information

12.1. Toxicity

Mixture
The product is not classified as hazardous to the aquatic environment.

12.2. Persistence and degradability

hexamethylene-di-isocyanate CAS 822-06-0	Biodegradable	42%/28 days	method: OECD 301 F / EU C.4-D
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12.3. Bioaccumulative potential

hexamethylene-di-isocyanate CAS 822-06-0	log Po/w = 3,2	method: —
	BCF = 59,6	method: —

12.4. Mobility in soil

Product reacts with water. As a result of the reaction, a chemically inert, non-biodegradable solid substance is created.

12.5. Results of PBT and vPvB assessment

Product does not contain components, which meet criteria for PBT or vPvB in accordance with Annex XIII of REACH Regulation.

12.6. Endocrine disrupting properties

The components of the mixture are not identified as having endocrine disrupting properties.

12.7. Other adverse effects

The product is not classified as hazardous to the ozone layer and does not contribute to global warming. In reaction with water, the resin transforms at the interface into a solid, high-melting and insoluble substance (polyurea). At the same time, carbon dioxide is produced. The reaction is strongly intensified in the presence of surfactants (e.g. liquid soaps) or water-soluble solvents. Experience has shown that polyurea is not reactive and does not decompose.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Recommendations for the product

The waste product should be recovered or disposed of in authorized incineration plants or waste disposal / neutralization plants, in accordance with applicable regulations. Do not empty into drains.

Recommendations for used packaging

Reuse / recycle / eliminate empty containers in accordance with the local legislation. Only completely empty containers can be reused.

EU legal acts: directives of the European Parliament and of the Council: 2008/98 / EC as amended and 94/62 / EC as amended.

SECTION 14: Transport information

14.1. UN number or ID number

Not applicable, the product is not dangerous during transport.

14.2. UN proper shipping name

Not applicable.

14.3. Transport hazard class(es)

Not applicable.

14.4. Packing group

Not applicable.

14.5. Environmental hazards

Not applicable.

14.6. Special precautions for user

Not applicable.

14.7. Maritime transport in bulk according to IMO instruments

Not applicable.

Additional data

Not applicable.

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SECTION 15: Regulatory information

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

ADR Agreement concerning the International Carriage of Dangerous Goods by Road.

IMDG Code International Maritime Dangerous Goods Code

IATA Dangerous Goods Regulations

1907/2006/EC REGULATION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL concerning the Registration, Evaluation, Authorisation 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).

1272/2008/EC REGULATION 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 (as amended).

2020/878/EU COMMISSION REGULATION 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..

2008/98/EC DIRECTIVE 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 Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles (Annex XVII, REACH): hexamethylene-di-isocyanate.

The components of the mixture are not included in Annex XIV of the REACH Regulation.

15.2. Chemical safety assessment

A Chemical Safety Assessment is not required for mixtures.

SECTION 16: Other information

Full text of H phrases mentioned in section 3

H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H331	Toxic if inhaled.
H332	Harmful if inhaled.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335	May cause respiratory irritation.
H412	Harmful to aquatic life with long lasting effects.

Clarification of abbreviations and acronyms

ADR	Agreement concerning the International Carriage of Dangerous Goods by Road.
DNEL	Derived No-Effect Level.
EN	European standard
IATA	The International Air Transport Association.
IMDG	International Maritime Dangerous Goods Code.
ISO	International Organization for Standardization
LC ₅₀	Concentration of a substance that is lethal to 50 percent of the organisms in a toxicity test.
LD ₅₀	Dose of a substance that is lethal to 50 percent of the organisms in a toxicity test.
OECD	Organisation for Economic Cooperation and Development
PBT	Persistent, bioaccumulative and toxic substance.
PNEC	Predicted no-effect concentration.
RID	The Regulation concerning the International Carriage of Dangerous Goods by Rail.
vPvB	Very persistent and very bioaccumulative substance.

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Acute Tox. 3	Acute toxicity - category 3
Acute Tox. 4	Acute toxicity - category 4
Aquatic Chronic 3	Hazardous to the aquatic environment - Chronic - category 3
Eye Irrit. 2	Eye irritation - category 2
Resp. Sens. 1	Respiratory sensitization - category 1
STOT SE 3	Specific target organ toxicity — single exposure - category 3
Skin Irrit. 2	Skin irritation - category 2
Skin Sens. 1	Skin sensitization - category 1

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.

Key literature references and sources of data

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

Procedures used for the mixture classification according with Regulation 1272/2008/EC as amended

Skin Sens. 1 H317	calculation method
Acute Tox. 4 H332	calculation method
STOT SE 3 H335	calculation method

Additional information

Changes: section: —
SDS issued by: THETA Consulting Sp. z o.o.

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.