

# SAFETY DATA SHEET

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

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

### 1.1 Product identifier

Trade name: TECHNIPLAST 500 PU UVR-T COMPONENT B  
Chemical name: hexamethylene diisocyanate, homopolymer  
CAS number: 28182-81-2  
REACH registration number: 01-2119485796-17-XXXX

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

Relevant identified uses: product for use in flooring systems. Hardener for polyurethane resin.  
Uses advises 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

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



WARNING

#### Hazard statements

H317 May cause an allergic skin reaction.  
H332 Harmful if inhaled.  
H335 May cause respiratory irritation.

#### Precautionary statements

P102 Keep out of reach of children.  
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.  
P501 Dispose of contents/container to properly labelled waste containers according to national law.

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## 2.3 Other hazards

The substance does not meet criteria for PBT or vPvB in accordance with Annex XIII of REACH Regulation. The substance is not included in the list established in accordance with Article 59(1) for having endocrine disrupting properties, or 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.

## Section 3: Composition/information on ingredients

### 3.1 Substances

Not applicable.

Main component

hexamethylene diisocyanate, homopolymer

Concentration range: ca. 100%

CAS number: 28182-81-2

EC number: 500-060-2

INDEX number: -

Contamination

hexamethylene-di-isocyanate

Concentration range: < 0,25%

CAS number: 822-06-0

EC number: 212-485-8

INDEX number: 615-011-00-1

REACH registration number: 01-2119457571-37-XXXX

Classification: Acute Tox. 3 H331, STOT RE 2 H373, Eye Irrit. 2 H319, STOT SE 3 H335, Skin Irrit. 2 H315, Resp. Sens. 1 H334, Skin Sens. 1 H317

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. Contact a doctor if irritation occur.

Eye contact: contact a doctor if irritation occur. 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. Contact an ophthalmologist if disturbing symptoms occur.

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 if disturbing symptoms occur.

Inhalation: contact a doctor immediately. Remove the victim to fresh air. Keep warm and calm. If breathing is difficult, give oxygen.

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

Skin contact: redness, dryness, itching, swelling, rash, irritation or other skin changes.

Eye contact: possible redness, tearing, burning sensation, swelling, temporary irritation.

Ingestion: stomach ache, nausea, vomiting, diarrhoea.

Inhalation: vapours or mists in concentrations exceeding the admissible TLV values may cause irritation of the respiratory tract, sore throat, cough, breathing difficulties, dyspnoea, and asthmatic symptoms.

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## 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. Victims exposed to the product should be left under medical supervision for 48 hours (possibility of delayed onset of symptoms). Symptomatic treatment.

## Section 5: Firefighting measures

### 5.1 Extinguishing media

Suitable extinguishing media: CO<sub>2</sub>, extinguishing powder, extinguishing foam, water fog.

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

### 5.2 Special hazards arising from the substance or mixture

During combustion irritant and toxic gases and vapours may be released: carbon oxides, nitrogen oxides, hydrogen cyanide. Do not inhale combustion products – it can be dangerous for health.

### 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 allow extinguishing water to enter drains, surface water and groundwater. Cool endangered containers from safe distance with water spray. 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).

## 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.

### 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 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.

#### Decontamination

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 – 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 contact with eyes and skin.

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Do not breathe vapours. Ensure adequate ventilation general or/and local. Use personal protective equipment. People with a history of skin sensitization, asthma, allergies, or chronic or recurrent respiratory distress should not be employed in any process with this product.

## 7.2 Conditions for safe storage, including any incompatibilities

Keep only in original, properly labelled containers in a dry, cool and well-ventilated place. Keep away from food, and animal feed. Recommended storage temperature: below 50 °C. Avoid fire and direct sunlight. Protect from water and moisture. In contact with water, carbon dioxide is formed, which can lead to the bursting of containers. After opening, seal the container and store in an upright position to prevent leakage. 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 product 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.

DNEL values

worker (short-term) :

dermal – local effects: No quantitative risk assessment possible.

inhalation – local effects: 1 mg/m<sup>3</sup>

worker (long-term):

dermal – local effects: No quantitative risk assessment possible.

inhalation – local effects: 0.5 mg/m<sup>3</sup>

PNEC values

freshwater: 0.127 mg/l

marine water: 0.0127 mg/l

sediment: 266700 mg/kg

soil: 53182 mg/kg

STP: 38.28 mg/l

### 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.

#### 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). Recommended material for gloves: nitrile rubber, butyl rubber, neoprene, fluorinated rubber with a thickness > 0.4 mm. In case of a short contact, use protective gloves with effectiveness level 3 or higher. In case of a prolonged contact, use protective gloves with effectiveness level 5 or higher.

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.

## 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, slight
Melting point/freezing point	ca. -37 °C
Boiling point or initial boiling point and boiling range	not applicable, decontamination
Flammability	not applicable, incombustible
Lower and upper explosion limit	not determined
Flash point	ca. 158 °C (DIN 53213)
Auto-ignition temperature	ca. 445 °C
Decomposition temperature	not determined
pH	not applicable
Kinematic viscosity	not determined
Solubility	insoluble in water

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Partition coefficient n-octanol/water (log value)	not determined
Vapour pressure	< 0.0001 hPa
Density and/or relative density	1.17 g/cm <sup>3</sup>
Relative vapour density	not determined
Particle characteristics	not applicable

## 9.2 Other information

Dynamic viscosity:	1.2 mPa·s (23 °C)
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## Section 10: Stability and reactivity

### 10.1 Reactivity

Product is reactive. It can polymerize with increasing temperature.

### 10.2 Chemical stability

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

### 10.3 Possibility of hazardous reactions

In contact with hot 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 sources of heat and direct sunlight. Protect from moisture.

### 10.5 Incompatible materials

Water, amines, strong bases, alcohols, copper alloys.

### 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

#### Acute toxicity

LC<sub>50</sub> (inhalation, rat) 0.390 mg/m<sup>3</sup>/4h (method: OECD 403, dust/fog)

LD<sub>50</sub> (dermal, rabbit) > 2500 mg/kg (method: OECD 423)

LD<sub>50</sub> (oral, rabbit) 5000 mg/kg

Harmful if inhaled.

#### Skin corrosion/irritation

It has a slight irritating effect. (method: OECD 404). Based on available data, the classification criteria are not met.

#### Serious eye damage/irritation

It has a slight irritating effect. (method: OECD 405). Based on available data, the classification criteria are not met.

#### Respiratory or skin sensitization

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.

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## Reproductive toxicity

Animal experiments with structurally similar compounds showed no indications specific to reproductive toxicity.

## 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

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

Overexposure without the necessary precautions entails concentration-related hazards: irritation to eyes, nose, throat and respiratory tract. The symptoms and the development of hypersensitivity (difficulty in breathing, coughing, asthma) may be delayed. In hypersensitive people, reactions may be caused by very low concentrations of isocyanate, also below the TLV.

## 11.2. Information on other hazards

### Endocrine disrupting properties

The substance is not included in the list established in accordance with Article 59(1) for having endocrine disrupting properties, or 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.

### Other information

No data.

## Section 12: Ecological information

### 12.1 Toxicity

Acute toxicity for algae EC<sub>50</sub> > 1 000 mg/l/3h

Acute toxicity for daphnia EC<sub>0</sub> > 100 mg/l/48h

Acute toxicity for fish LC<sub>0</sub> > 100 mg/l/96h

The substance is not classified as hazardous to the aquatic environment.

### 12.2 Persistence and degradability

Biodegradation: 1%, 28 d, not readily degradable.

Stability in water: half-life: 7.7 h at 23 ° C. The substance rapidly hydrolyzes in water.

Photodegradation: Upon evaporation or exposure to air, the product will rapidly degrade by photochemical processes.

### 12.3 Bioaccumulative potential

Bioconcentration factor (BCF): 3.2. Accumulation in aquatic organisms is not expected.

### 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

The substance does not meet criteria for PBT or vPvB in accordance with Annex XIII of REACH Regulation.

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## 12.6 Endocrine disrupting properties

The substance is not included in the list established in accordance with Article 59(1) for having endocrine disrupting properties, or 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.

## 12.7 Other adverse effects

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

Disposal methods for the mixture: waste product should be recovered or eliminated 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.

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

Not applicable, the product is not hazardous when transported by land, sea or air.

### 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.

## 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.



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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

Chemical safety assessment for the substance was carried out.

## Section 16: Other information

### Full text of indicated 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.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335	May cause respiratory irritation.
H351	Suspected of causing cancer.
H373	May cause damage to organs through prolonged or repeated exposure.

### Abbreviations and acronyms

PBT	Persistent, Bioaccumulative and Toxic substance
vPvB	very Persistent, very Bioaccumulative substance
Acute Tox. 3	Acute toxicity, category 3
Carc. 2	Carcinogenicity, category 2
Eye Irrit. 2	Serious eye damage/eye irritation, category 2
Resp. Sens. 1	Respiratory sensitization category 1
Skin Irrit. 2	Skin corrosion/irritation, category 2
Skin. Sens. 1	Skin sensitization category 1
STOT RE 2	Specific target organ toxicity — repeated exposure, category 2
STOT SE 3	Specific target organ toxicity — single exposure, category 3

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## 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 (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.

## 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.