

Version: 4.0

HARDENER T-18 SAFETY DATA

SHEET based on Commission Regulation (EU)

2020/878 of 18/06/2020 amending Annex II to Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH).

Date of preparation: 2005.12.20

Update date: 2022.09.14

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

1.1. Product identifier: Epoxy hardener T-18.

UFI code: F7JT-T4QU-000X-U71X.

1.2. Relevant identified uses of the substance/mixture and uses advised against: Hardener intended for water-soluble epoxy products, as the second component added directly before painting. Use advised against: no information.

1.3. Details of the supplier of the safety data sheet:

PIGMENT Sp. j. ul. Pyrzycka 23 A, 70-892 Szczecin tel.

+48 91 462 10 20, +48 91 462 11 86, e-mail: biuro@farbypigment.pl

1.4. Emergency telephone number: 998 or 112, or the nearest unit of the State Fire Service.

Section 2. HAZARDS IDENTIFICATION 2.1.

Classification of the substance or mixture:

Zgodnie z 1272/2008/WE: Acute Tox.4:H302+H332; Skin Corr.1B:H314,Skin Sens.1:H317,Eye Dam.1:H318.

Hazards to humans and the environment: Harmful if swallowed or if inhaled.

Causes severe skin burns and eye damage. May cause allergic skin reaction.

The complete wording of the phrases was entered in item 16 of the Safety Data Sheet.

2.2. Labelling elements:

Pictograms:



Signal word: **DANGER** Protect eyes and skin

from direct contact with the product. P101 If medical advice is needed, have product container or label at hand.

P102 Keep out of reach of children. P103 Read label before use. H302+H332 Harmful if swallowed or if inhaled.

H314 Causes severe skin burns and eye damage. H317 May cause an allergic skin reaction. H318 Causes serious

eye damage. P280 Wear protective gloves/protective clothing/eye protection/face protection. P303+P361+P353

IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.

P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present

and easy to do. Continue rinsing. P333+P313 If skin irritation or rash occurs: Get medical advice/attention.

P301+P312 IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.

Contains: 2-butoxyethanol, water, aliphatic polyamine adduct (Bis A epoxy adduct with 3-aminomethyl-3,5,5-trimethylcyclohexylamine, isophoronediamine (3-aminomethyl-3,5,5-trimethylcycloheksyloamina), dietylenotriamina (2,2'-iminodietyloamina), Polyoxypropylenediami-ne (Reaction products of di-, tri- and tetra-propoxylated propane-1,2-diol with ammonia).

Mandatory text: Density: 0.99 g/cm³ (20°C); volatile organic compound content (VOC): 9.8-10.8 wt. %; total organic carbon content: 5.9-6.6 wt. %; non-volatile matter content: 88.2-89.2 vol. %.

2.3. Other hazards: The individual components of the mixture are not considered PBT and vPvB substances.

Section 3. COMPOSITION/INFORMATION ON INGREDIENTS**3.1. Substances:**

Name 2-	CAS no.	Nr WE % m/m > 8 i
butoxyethanol	111-76-2	203-905-0 <15
Registration number: 01-2119475108-36-XXXX Acute		
Tox.4: H302, H312, H332, Irrt.2: H315, Eye Irrit.2: H319 aliphatic polyamine		
adduct (Bis A epoxy adduct with 3-aminomethyl- 38294-64-3 500-101-4		
	>20 i <30	
3,5,5-trimethyl-cyclohexylamine)		
Registration number: none		
Skin Corr.1B: H314, Skin Sens.1: H317		
isophoronediamine (3-aminomethyl-3,5,5-trimethylcyclohexylamine) >10 and <20	2855-13-2	220-666-8

Nr rejestracyjny: 01-2119514687-32-0000

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

dietylenotriamina (2,2'-iminodietiloamina)	111-40-0	203-865-4 >2 i <5
Nr rejestracyjny: 01-2119473793-27-0006 Acute Tox.4:		
H302+H312, Acute Tox.2: H330, Skin Corr.1B: H314, Skin Sens.1: H317, Eye Dam.: H318, STOT SE3: H335		

Polyoxypropylenediamine (reaction products of di-,tri-and 9046-10-0 618-561-0 /polymer propoxylated propane-1,2-diol with ammonia)	tetra-	>2 i <5
Registration number: 01-2119557899-12-0000		
Skin Corr.1C: H314, Eye Dam.1: H318, Aquat.Chronic 3: H412		

The full text of the phrases was introduced in heading 16 of the Safety Data Sheet.

Section 4. FIRST AID MEASURES

4.1. Description of first aid measures: In case of injury or feeling unwell, seek medical advice immediately (if possible, show this safety data sheet). Respiratory arrest: immediately apply artificial respiration. Cardiac arrest: immediately perform indirect heart massage. Loss of consciousness - place the patient in the recovery position. Inhalation: Take the injured person to fresh air, remove contaminated clothing from the injured person (change). Seek medical assistance. Skin contact: Remove contaminated clothing and rinse the areas of contact thoroughly with a stream of clean (30-32°C) water. Seek medical assistance. Eye contact: Immediately rinse with a stream of water, rinse for as long as possible, minimum 20 minutes.

Ensure medical assistance and rinse also during transport of the injured person. By ingestion: **DO NOT INDUCE VOMITING!** Rinse mouth with a small amount of water. Ensure medical assistance immediately.

4.2. Most important symptoms and effects, both acute and delayed: no data available.

4.3. Indication of any immediate medical attention and special treatment needed: no data available.

Section 5. FIREFIGHTING MEASURES 5.1. Extinguishing

media:

Suitable extinguishing media: carbon dioxide, foam, dry chemical, water mist.

Unsuitable extinguishing media: full water jet.

5.2. Special hazards arising from the substance or mixture: During combustion, carbon oxides, aldehydes, acids, ammonia and unmarked mixtures of organic compounds are formed.

5.3. Advice for firefighters: Do not enter fire area without appropriate protective clothing and self-contained breathing apparatus.

Section 6. ACCIDENTAL RELEASE MEASURES 6.1. Personal precautions, protective equipment and emergency procedures: Protective clothing including eye, respiratory and hand protection (rubber gloves).

6.2. Environmental precautions: Prevent release of the product or components into the environment, sewage system, groundwater or soil.

6.3. Methods and materials for containment and cleaning up: Fence the spilled product. Capture with inert material (diatomite, sand). Place

in a tight container and neutralize by placing in a chemical waste storage facility, or dispose of in an incinerator designed for this purpose.

6.4. References to other sections: Additional notes: See sections 8, 13.

Section 7. HANDLING AND STORAGE OF SUBSTANCES AND MIXTURES

7.1. Precautions for safe handling: Avoid direct contact with skin, mucous membranes and clothing. Ventilate rooms during work and before putting into service until the odour disappears. Do not eat, drink or smoke during work. Wash hands and exposed parts of the body with soap and water after work and before eating, if necessary apply a protective cream. Store in original packaging.

7.2. Conditions for safe storage, including information on any mutual incompatibilities: Store in closed warehouses, away from sources of ignition, separated from other types of substances, in original and closed packages. The warehouse must be well ventilated (including emergency ventilation), dry at a temperature of +5 to 25°C, equipped with a first aid kit, a source of drinking water and should be protected against access by unauthorized persons.

7.3. Specific end use(s): Store away from oxidizing agents.

Section 8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

8.1. Control parameters: 2-

butoxyethan-1-ol: OEL: 98mg/m³ , OELCh: 200 mg/m³

2,2'-iminobis(etyloamina): NDS: 4 mg/m³, NDSCh: 12 mg/m³ .

2-Butoxyethanol:

DNEL – Workers:

Long-term exposure - systemic effects: inhalation: 98 mg/m³

Short-term exposure - systemic effects: inhalation: 663 mg/m³

Short-term exposure - local effects: by inhalation: 246 mg/m³

Long-term exposure - systemic effects: dermal: 75 mg/kg bw/day Short-term exposure - systemic

effects: dermal: 89 mg/kg bw/day DNEL - Consumers: Long-term exposure - systemic effects:

inhalation: 49 mg/m³

Short-term exposure - systemic effects: inhalation: 426 mg/m³

Short-term exposure - local effects: inhalation: 123 mg/m³

Long-term exposure - systemic effects: dermal: 38 mg/kg bw /day Short-term exposure - systemic

effects: dermal: 44.5 mg/kg bw /day Long-term exposure - systemic effects: ingestion: 3.2 mg/kg bw /

day Short-term exposure - systemic effects: ingestion: 13.4 mg/kg bw /day Isophoronediamine (3-

aminomethyl-3,5,5-trimethylcyclohexylamine): DNEL - Consumers: Long-term exposure - systemic effects:

ingestion: 0.526 mg/kg bw/day

2,2'-Iminobis(etyloamina):

DNEL – Employees:

Long-term exposure - systemic effects: by inhalation: 15.4 mg/m³

Short-term exposure - systemic effects: by inhalation: 92.1 mg/m³

Long-term exposure - local effects: by inhalation: 0.87 mg/m³

Short-term exposure - local effects: by inhalation: 2.6 mg/m³

Long-term exposure - systemic effects: dermal: 11.4 mg/kg bw/day

Long-term exposure - local effects: through the skin: 1.1 mg/cm²

DNEL – Consumers:

Long-term exposure - systemic effects: by inhalation: 4.6 mg/m³

Short-term exposure - systemic effects: by inhalation: 27.5 mg/m³

Long-term exposure - systemic effects: dermal: 4.88 mg/kg bw/day

Short-term exposure - systemic effects: dermal: 4.88 mg/kg bw/day

2-Butoxyethanol:**PNEC:**

Fresh water: 8.8 mg/l

Sediment - fresh water: 8.14 mg/kg

Sea water: 8.8 mg/l

Gleba: 2.8 mg/kg

Isophoronediamine (3-aminomethyl-3,5,5-trimethylcyclohexylamine):**PNEC:**

Sewage Treatment Plant (STP): 3.18 mg/l

Fresh water: 0.06 mg/l

Sediment - fresh water: 5.784 mg/kg

Sea water: 0.006 mg/l

Sediment - sea water: 0.578 mg/kg

Gleba: 1,121 mg/kg

Occasional release: 0.23 mg/l

2,2'-Iminobis(etyloamina):**PNEC:**

Sewage Treatment Plant (STP): 6 mg/l

Fresh water: 0.56 mg/l

Sediment - fresh water: 1072 mg/kg

Sea water: 0.056 mg/l

Sediment - sea water: 107.2 mg/kg

Gleba: 7.97 mg/kg

Occasional release: 0.32 mg/l

8.2. Exposure controls: 8.2.1.

Appropriate engineering controls: the use of local exhaust (ventilation) is recommended.

8.2.2. Individual protection measures, such as personal protective equipment: a) Respiratory

protection: In case of higher concentrations of vapours, use a mask with a filter for organic vapours. b) Hand protection: chemically

resistant protective gloves (tested according to EN 374). c) Eye protection: safety goggles or face shield. d) Skin protection: work overalls or apron, headgear, work shoes.

8.2.3. Environmental exposure controls: Prevent release of the product or components into the environment, sewage system,

groundwater or soil.

Section 9. PHYSICAL AND CHEMICAL PROPERTIES**9.1. General information:**

- Appearance: thick yellow-brown liquid
- Smell: amine
- Odor threshold: no data
- pH value: no data
- Melting point/freezing point: no data available
- Boiling point/range: > 200°C
- Flash point: not flammable
- Evaporation rate: no data
- Flammability: non-flammable
- Upper/lower flammability limit: no data available
- Vapor pressure: no data available
- Vapour density: no data 0.995 g/cm³
- Relative density (20°C):
- Solubility, in water: miscible
- Partition coefficient: n-octanol/water:
- Autoignition temperature: no data no data
- Decomposition temperature: data no data

- Viscosity:	950-1350 mPa.s (23°C)
- Explosive properties:	no data not
- Oxidizing properties:	applicable

9.2. Other information: no data available.

Section 10. STABILITY AND REACTIVITY

10.1. Reactivity: no data available.

10.2. Chemical stability: stable under normal conditions.

10.3. Possibility of hazardous reactions: no data available.

10.4. Conditions to avoid: static electricity.

10.5. Incompatible materials: strong oxidizing agents, strong Lewis or mineral acids.

10.6. Hazardous decomposition products: carbon oxides, aldehydes, acids, ammonia and unmarked mixtures of organic compounds.

Section 11. TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects:

Acute toxicity: based on information on components: acute toxicity cat.4 - oral, skin.

Skin corrosion/irritation: Causes severe burns.

Serious eye damage/eye irritation: Risk of serious damage to eyes.

Respiratory or skin sensitisation: May cause sensitisation by skin contact.

Mutagenic effects: the classification criteria are not met.

Carcinogenicity: classification criteria are not met.

Reproductive toxicity: the classification criteria are not met.

Specific target organ toxicity – single exposure: classification criteria are not established fulfilled.

Specific target organ toxicity – repeated exposure: classification criteria are not applicable. fulfilled.

Aspiration hazard: classification criteria are not met.

Section 12. ECOLOGICAL INFORMATION

Do not allow the product to enter sewage and groundwater. No data on the impact on the natural environment. No data on the biodegradability of the product.

12.1. Toxicity: no data available.

Other adverse effects: no data available.

12.2. Persistence and degradability: no data available.

12.3. Bioaccumulative potential: no data available.

12.4. Mobility in soil: no data available.

12.5. Results of PBT and vPvB assessment: Individual components are not classified as PBT and vPvB.

12.6. Endocrine disrupting properties: no data available.

12.7. Other adverse effects: none known.

Section 13. WASTE HANDLING

13.1. Waste disposal methods: Waste classification according to the Regulation of the Minister of Environment of 9 December 2014 on the waste catalogue (Journal of Laws of 2014, item 1923): Unhardened residues (waste category N, waste type code 08 04 13) should be placed in a tight container and disposed of by incineration in an appropriate incinerator for burning industrial waste, while hardened residues (waste category O, waste type code 08 04 10) should be placed in a tight container and disposed of by incineration in an appropriate incinerator for burning industrial waste or should be stored in appropriate landfills. Waste category N, waste type code 15 01 10. After thorough emptying, the plastic packaging is disposed of by incineration in an appropriate incinerator for the incineration of industrial waste or should be stored in appropriate landfills. The waste should be handled in accordance with Directive 2008/98/EC of the European Parliament and of the Council of 19 November 2008 on waste.

Section 14. TRANSPORT INFORMATION

14.1. UN number: 2735 14.2. UN shipping

name: POLYAMINES, LIQUID, CORROSIVE, NOS, polyamine adduct solution, POLYAMINES LIQUID, CORROSIVE, NOS (ISOPHORONEDIAMINE, POLYAMINE ADDUCT)

14.3. Transport hazard class(es): 8.

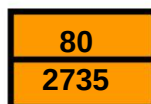
14.4. Packing group: II.

14.5. Environmental hazards: no data available.

14.6. Special precautions for user: Classification code: C7 EmS:

FA/SB Other relevant
information:

ADR/RID, IMDG, IATA Tunnel restriction codes: (E)



14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code: 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, Authorisation and Restriction of Chemicals (REACH) as amended.

-Commission Regulation (EU) 2015/830 of 28 May 2015 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH).

-Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures (CLP) of 20 January 2009, as amended.

-Regulation of the Minister of the Environment of 9 December 2014 on the waste catalogue (Journal of Laws of 2014, item 1923).

-Act of 25 February 2011 on chemical substances and their mixtures (Journal of Laws 2011 No. 63 item 322), as amended.

-Regulation of the Minister of Economy of 10 October 2013 on the application of restrictions specified in Annex XVII to Regulation No. 1907/2006 (Journal of Laws of 2013, item 1314), as amended.

-Act of 14 December 2012 on waste (Journal of Laws of 2013, item 21), as amended.

-Regulation of the Minister of Labour and Social Policy of 6 June 2014 on the maximum permissible concentrations and intensities of factors harmful to health in the work environment (Journal of Laws of 2014, item 817).

-Commission Regulation (EU) No 453/2010 of 20 May 2010 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) (OJ EU L 133, 31.05.2010).

-All other national and regional regulations relating to the transport or disposal of waste should be checked on a case-by-case basis.

15.2. Chemical safety assessment: not performed.

Section 16. OTHER INFORMATION

Wording of phrases and

abbreviations H302+H312 Harmful if swallowed or in contact with skin.

H302+H312+H332 Harmful if swallowed, in contact with skin or if inhaled.

H302+H332 Harmful if swallowed or if inhaled.

H314 Causes severe skin burns and eye damage.

H315 Causes skin irritation.

H317 May cause an allergic skin reaction.

H318 Causes serious eye damage.

H319 Causes serious eye irritation.

H330 Fatal if inhaled.

H335 May cause respiratory irritation.

H412 Harmful to aquatic life with long lasting effects.

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

P301+P312 IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.

P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.

P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

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

STOT SE 3: Specific target organ toxicity — single exposure, category 3 Aquatic Chronic 3: Hazardous to the aquatic environment, category 3 Acute Tox. 2: Acute toxicity, category 2 Skin Corr. 1B: Skin corrosion, category 1B Acute Tox. 4: Acute toxicity, category 4 Eye Dam. 1: Serious eye damage, category 1 Eye Irrit. 2: Eye irritation, category 2 Skin Irrit. 2.: Skin irritation, category 2 Skin Sens. 1: Skin sensitization, category 1

OELCh: Highest momentary allowable concentration OEL: Highest

allowable concentration PNEC: Predicted No Effect

Concentration DNEL: Derived No Effect Level PBT: Persistent, Bioaccumulative and

Toxic vPvB: Very Persistent and very Bioaccumulative bw -

Body weight VOC: Total solvents - Data sources: European Chemicals Agency (ECHA) and safety data sheet of the raw material supplier.

- Information evaluation method (according to Article 9 of Regulation (EC) No 1272/2008) used for classification: computational.

- Changes in this update: alignment with Commission Regulation (EU) 2020/878 of 18/06/2020.

- Card prepared in accordance with Commission Regulation (EU) 2020/878 of 18/06/2020 amending Annex II to Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH).

- The above data is based on our current knowledge. However, it cannot constitute a guarantee for specific product features and cannot be considered as legally binding commercial contracts.