

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/ MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product identifier

Product name:

2K-POLY86 HARDENER ELEMENT

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

Identified uses Consumer use:	Trade use.
Uses advised against:	None.
Product use:	Waterborne coating for interior use.

1.3. Details of the supplier of the safety data sheet

Company name:

POLYVINE LTD, VINE HOUSE, CHEDDAR BUSINESS PARK, WEDMORE ROAD, CHEDDAR
BS27 3EB, ENGLAND

TEL: 0044 1934 740305 **EMAIL:** info@polyvine.co.uk

1.4. Emergency telephone number

TEL: 0044 1934 740305 (Office hours only)

1.5. Unique Formula Identifier

Classification under UFI: This product has no classification under UFI.

Regulation (EU) 2020/878 amending the annex II of [REACH regulation](#).

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP] Mixtures/Substances: SDS EU > 2015: According to Regulation (EU) 2015/830, 2020/878 (REACH Annex II)

Acute toxicity (inhal.), Category 4

H332

Skin corrosion/irritation, Category 2

H315

Serious eye damage/eye irritation, Category 1

H318

Skin sensitisation, Category 1

H317

Specific target organ toxicity — Single exposure, Category 3, Respiratory tract irritation

H335

Full text of H-statements: see section 16

Adverse physicochemical, human health and environmental effects

No additional information available

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2.2 Label elements:

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

SAFETY DATA SHEET

Polyvine 2K-POLY86 Varnish Hardener

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Hazard pictograms (CLP)



GHS05

GHS07

Signal word (CLP) Danger Hazard statements (CLP)

H315 - Causes skin irritation.

H317 - May cause an allergic skin reaction.

H318 - Causes serious eye damage.

H332 - Harmful if inhaled.

H335 - May cause respiratory irritation.

Precautionary statements (CLP)

P260 - Do not breathe spray, mist, gas, vapours.

P280 - Wear protective gloves, protective clothing, face protection, eye protection.

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

P304+P340 - IF INHALED: Remove person to fresh air and keep 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.

P403+P233 - Store in a well-ventilated place. Keep container tightly closed.

P501 - Dispose of contents and container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

EUH-statements:

EUH204 - Contains isocyanates. May produce an allergic reaction.

Extra phrases:

As from 24 August 2023 adequate training is required before industrial or professional use.

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2.3 Other hazards

Other hazards which do not result in classification

Combustible liquid. Reacts on contact with water releasing carbon dioxide (CO₂).

This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII

This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

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SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substances

Not applicable

3.2. Mixtures

Comments

Total isocyanate content (Hexamethylene diisocyanate + Isophorone diisocyanate) : < 0,5 %

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Hexamethylene diisocyanate oligomers, isocyanurates substance with national workplace exposure limit(s) (GB); substance with a Community workplace exposure limit	(CAS-No.) 28182-81-2 (EC-No.) 931-274-8 (REACH-no) 01-2119485796-17-0002	~ 45	Acute Tox. 4 (Inhalation), H332 Skin Sens. 1, H317 STOT SE 3, H335
3-Isocyanatomethyl-3,5,5-trimethylcyclohexyl isocyanate oligomers	(CAS-No.) 53880-05-0 (EC-No.) 931-312-3 (REACH-no) 01-2119488734-24	~ 20	Skin Sens. 1, H317 STOT SE 3, H335
Polyoxyethylene tridecyl ether phosphate (Polymer)	(CAS-No.) 9046-01-9	~ 7	Skin Irrit. 2, H315 Eye Dam. 1, H318 Aquatic Chronic 3, H412
cyclohexyldimethylamine	(CAS-No.) 98-94-2 (EC-No.) 202-715-5 (REACH-no) 01-2119533030-60	< 2	Flam. Liq. 3, H226 Acute Tox. 3 (Oral), H301 Acute Tox. 3 (Dermal), H311 Acute Tox. 3 (Inhalation), H331 Skin Corr. 1B, H314 Aquatic Chronic 2, H411 Acute Tox. 1
3-isocyanatomethyl-3,5,5-trimethylcyclohexyl isocyanate, isophorone di-isocyanate (Hazardous impurities) substance with national workplace exposure limit(s) (GB)	(CAS-No.) 4098-71-9 (EC-No.) 223-861-6 (EC Index-No.) 615-008-00-5 (REACH-no) 01-2119490408-31-0001	< 0.5	(Inhalation:vapour), H330 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Resp. Sens. 1, H334 Skin Sens. 1, H317 STOT SE 3, H335 Aquatic Chronic 2, H411
hexamethylene-di-isocyanate (Hazardous impurities) substance with national workplace exposure limit(s) (GB)	(CAS-No.) 822-06-0 (EC-No.) 212-485-8 (EC Index-No.) 615-011-00-1 (REACH-no) 01-2119457571-37-0001	< 0.5	Acute Tox. 4 (Oral), H302 Acute Tox. 1 (Inhalation:vapour), H330 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Resp. Sens. 1, H334 Skin Sens. 1, H317 STOT SE 3, H335

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SECTION 4: FIRST AID MEASURES

4.1. Description of first aid measures

First-aid measures after inhalation

Move the affected person away from the contaminated area and into the fresh air. Get immediate medical advice/attention. If possible show him this sheet. Failing this, show him the packaging or label.

First-aid measures after skin contact

Use appropriate protective equipment when treating a contaminated person. Take off immediately all contaminated clothing. Wash with soapy water. Wash off immediately and plentifully with water for at least 20 minutes. If case of redness or irritation, call a doctor. If possible show him this sheet. Failing this, show him the packaging or label.

First-aid measures after eye contact

Rinse immediately and thoroughly, pulling the eyelids well away from the eye (15 minutes minimum). If eye irritation persists: Get medical advice/attention, If possible show him this sheet. Failing this, show him the packaging or label.

First-aid measures after ingestion

Never attempt to induce vomiting. Rinse mouth out with water. Get medical advice/attention. If possible show him this sheet. Failing this, show him the packaging or label.

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

No additional information available

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

No additional information available

SECTION 5: FIRE-FIGHTING MEASURES

5.1. Extinguishing media

Suitable extinguishing media:

Foam. Powders. Carbon dioxide.

Unsuitable extinguishing media. Water.

5.2. Special hazards arising from the substance or mixture

Fire hazard:

Combustible.

Reactivity in case of fire

During combustion : Toxic vapours are released.

5.3. Advice for firefighters

Protection during firefighting

Self-contained breathing apparatus. Complete protective clothing.

Other information:

Keep upwind. Evacuate the personnel away from the fumes. In case of significant fire close by : Cool down the containers/equipment exposed to heat with a water spray. Ensure that there is no direct contact between the water and the product. Do not breathe fumes. Do not attempt to take action without suitable protective equipment.

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SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

General measures

Avoid contact with skin and eyes. Do not breathe gas. Keep upwind. Do not attempt to take action without suitable protective equipment.

6.1.1. For non-emergency personnel

No additional information available

6.1.2. For emergency responders

Protective equipment

Self-contained breathing apparatus. Impermeable protective equipment.

Emergency procedures

Mark out the contaminated area with signs and prevent access to unauthorized personnel. Keep people at a distance and stay on the windward side.

6.2. Environmental precautions

Contain the spilled material by bunding. Do not discharge into drains or the environment. 6.3.

Methods and material for containment and cleaning up

Methods for cleaning up

Pump up the product into a suitably labelled spare container. Recover the product with absorbent material. Wash contaminated area with large amounts of water. Recover the cleaning water for later disposal.

Other information

Concerning disposal elimination after cleaning, see section 13. 6.4. Reference to other sections

Refer to protective measures listed in Sections 7 and 8. Concerning disposal elimination after cleaning, see section 13.

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SECTION 7: HANDLING AND STORAGE

7.1. Precautions for safe handling

Precautions for safe handling

Ensure good ventilation of the work station. Prevent moisture contact. Avoid any direct contact with the product. Any measure to eliminate exposure should be considered. Comply with instructions for use (refer to technical sheet).

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions:

The floor of the depot should be impermeable and designed to form a water-tight basin. Store container in a well ventilated position. Store tightly closed in a dry and cool place. Keep only in original container.

Storage area:

Keep only in the original container. Metallic drums. Storage tank with a dry nitrogen blanket.

Packaging materials:

Steel. Aluminium. Unsuitable material for receptacle copper, Tin.

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SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

8.1.1 National occupational exposure and biological limit values Hexamethylene diisocyanate oligomers, isocyanurates (28182-81-2)

EU - Indicative Occupational Exposure Limit (IOEL)

IOEL STEL 1 mg/m³

United Kingdom - Occupational Exposure Limits

WEL STEL (OEL STEL) 1 mg/m³

cyclohexyldimethylamine (98-94-2)

EU - Indicative Occupational Exposure Limit (IOEL)

There exist no exposure limits for this material

3-isocyanatomethyl-3,5,5-trimethylcyclohexyl isocyanate, isophorone di-isocyanate (4098-71-9)

United Kingdom - Occupational Exposure Limits

WEL TWA (OEL TWA) [1] 0.02 mg/m³

WEL STEL (OEL STEL) 0.07 mg/m³

hexamethylene-di-isocyanate (822-06-0)

United Kingdom - Occupational Exposure Limits

WEL TWA (OEL TWA) [1] 0.02 mg/m³

WEL STEL (OEL STEL) 0.07 mg/m³

8.1.2. Recommended monitoring procedures

No additional information available

8.1.3. Air contaminants formed

No additional information available

8.1.4. DNEL and PNEC Hexamethylene diisocyanate oligomers, isocyanurates (28182-81-2)

DNEL/DMEL (Workers)

Acute - local effects, inhalation 1 mg/m³

Long-term - local effects, inhalation 0.5 mg/m³

PNEC (Water)

PNEC aqua (freshwater) 127 µg/l (Daphnia magna)

PNEC aqua (marine water) 12.7 µg/L (Daphnia magna)

PNEC aqua (intermittent, freshwater) 1270 µg/L (Daphnia magna)

PNEC (Sediment)

PNEC sediment (freshwater) 266.7 g/kg (equilibrium partitioning)

PNEC (Soil)

PNEC soil 53.2 g/kg (equilibrium partitioning)

PNEC (STP)

PNEC sewage treatment plant 38.28 mg/l (OECD 209)

3-Isocyanatomethyl-3,5,5-trimethylcyclohexyl isocyanate oligomers (53880-05-0)

DNEL/DMEL (Workers)

Acute - local effects, inhalation 0.58 mg/m³

Long-term - local effects, inhalation 0.29 mg/m³

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PNEC (Water)
PNEC aqua (freshwater) 1.5 µg/l
PNEC aqua (marine water) 0.15 µg/L
PNEC aqua (intermittent, freshwater) 15 µg/L
PNEC (STP)
PNEC sewage treatment plant 100 mg/l
cyclohexyldimethylamine (98-94-2)
DNEL/DMEL (Workers)
Acute - local effects, inhalation 35 mg/m³
Long-term - local effects, inhalation 35 mg/m³
PNEC (Water)
PNEC aqua (freshwater) 2 µg/l
PNEC aqua (marine water) 0.2 µg/L
PNEC (Sediment)
PNEC sediment (freshwater) 21.1 µg/kg dw
PNEC sediment (marine water) 2.11 µg/kg dw
PNEC (Soil) PNEC soil
3.05 µg/kg dw PNEC (STP)
PNEC sewage treatment plant 20.6 mg/l
3-isocyanatomethyl-3,5,5-trimethylcyclohexyl isocyanate, isophorone di-isocyanate (4098-71-9)
DNEL/DMEL (Workers)
Acute - local effects, inhalation 0.0453 mg/m³
Long-term - local effects, inhalation 0.0453 mg/m³
PNEC (Water)
PNEC aqua (freshwater) 60 µg/l (Daphnia magna)
PNEC aqua (marine water) 6 µg/L (Daphnia magna)
PNEC aqua (intermittent, freshwater) 40 µg/L (Chaetogammarus marinus)
PNEC (Sediment)
PNEC sediment (freshwater) 218.9 mg/kg dwt equilibrium partitioning
PNEC sediment (marine water)
21.89 mg/kg dwt (equilibrium partitioning) PNEC (Soil)
PNEC soil 44.01 mg/kg dwt (equilibrium partitioning)
PNEC (STP)
PNEC sewage treatment plant 10.6 mg/l (OECD 209)
hexamethylene-di-isocyanate (822-06-0)
DNEL/DMEL (Workers)
Acute - local effects, inhalation 0.07 mg/m³
Long-term - local effects, inhalation 0.035 mg/m³
PNEC (Water)
PNEC aqua (freshwater) > 77.4 µg/l (Scenedesmus subspicatus)
PNEC aqua (marine water) > 7.74 µg/L (Scenedesmus subspicatus)
PNEC aqua (intermittent, freshwater) > 774 µg/L (Scenedesmus subspicatus) PNEC (Sediment)
PNEC sediment (freshwater) > 0.01334 mg/kg dwt (equilibrium partitioning)
PNEC sediment (marine water) > 0.001334 mg/kg dwt (equilibrium partitioning)
PNEC (Soil)
PNEC soil > 0.0026 mg/kg dwt equilibrium partitioning
PNEC (STP)
PNEC sewage treatment plant 8.42 mg/l (OECD 209)

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8.1.5. Control banding

No additional information available 8.2. Exposure controls

8.2.1. Appropriate engineering controls

Appropriate engineering controls:

Ensure good ventilation of the work station. Safety shower. Eye fountain. Always take a shower after work. Do not drink, eat or smoke in the workplace. Separate working clothes from town clothes. Immediately remove contaminated or damp clothing. Use clean and correctly maintained personal protective equipment. Keep personal protective equipment in a clean place, away from the work area.

8.2.2. Personal protection equipment

Personal protective equipment symbol(s):

8.2.2.1. Eye and face protection

Eye protection:

Tightly sealed goggles

8.2.2.2. Skin protection

Skin and body protection:

Protective clothing (with elasticated cuffs and closed neck)

Hand protection:

Protective gloves made of rubber. Chemical resistant gloves (according to European standard NF EN 374 or equivalent). Protective gloves must be chosen according to the function of the work station: other chemicals which may be handled, physical protection necessary (resistance to cutting, puncture, heat), dexterity required. The selection of gloves must take into account the extent and duration of use at the workstation.

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SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Physical state

Liquid

Appearance:

clear.

Colour:

colourless to slightly yellow.

Odour:

characteristic.

Odour threshold: No data available

pH: No data available

Relative evaporation rate (butylacetate=1):

No data available

Melting point:

No data available

Freezing point:

No data available

Boiling point:

No data available

Flash point:

76 °C

Auto-ignition temperature:

No data available

Decomposition temperature:

No data available

Flammability (solid, gas):

No data available

Vapour pressure:

No data available

Relative vapour density at 20 °C:

No data available

Relative density:

No data available

Density:

1.08 g/cm³ (25°C)

Solubility:

Reacts with water. Soluble in aromatic hydrocarbons. Completely soluble in cetonic solvents or esters.

Partition coefficient n-octanol/water (Log Pow):

No data available

Viscosity, kinematic:

No data available

Viscosity, dynamic: ≈ 200 mPa·s (25°C)

Explosive properties:

No data available

Oxidising properties:

Non oxidizing material according to EC criteria.

Explosive limits: No data available

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9.2 Other information

No additional information

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity

No additional information available

10.2. Chemical stability

Stable at room temperature.

10.3. Possibility of hazardous reactions

Reacts with : alcohols. Amines. Bases. Water. Aqueous solution. protic solvents. with a great release of CO₂, and hence a risk of a pressure build-up in confined areas, and forms an insoluble solid precipitate.

10.4. Conditions to avoid Conditions to avoid:

Conditions to avoid: Not applicable. For ideal storage conditions see section 7.

10.5. Incompatible materials

Materials to avoid: Oxidising agents. Strong acids.

10.6. Hazardous decomposition products

Haz. decomp. products: In a fire, hazardous decomposition products such as smoke and carbon monoxide may be produced.

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SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity (oral):

Not classified

Acute toxicity (dermal):

Not classified

Acute toxicity (inhalation):

Harmful if inhaled.

Hexamethylene diisocyanate oligomers, isocyanurates (28182-81-2)

LD50 oral rat > 2500 mg/kg (OECD 423 (female))

LD50 dermal rat > 2000 mg/kg (OECD 402)

LD50 dermal rabbit > 2000 mg/kg

LC50 Inhalation - Rat 0.39 mg/l/4h (OECD 403 (female))

3-Isocyanatomethyl-3,5,5-trimethylcyclohexyl isocyanate oligomers (53880-05-0)

LD50 oral rat > 14000 mg/kg (ASCF, FDA)

LC50 Inhalation - Rat > 5.01 mg/l/4h

cyclohexyldimethylamine (98-94-2)

LD50 oral rat 272 mg/kg

LD50 dermal rat 380 mg/kg (OECD 402)

LC50 Inhalation - Rat 1.7 - 5.8 mg/l (6h / OECD 403)

3-isocyanatomethyl-3,5,5-trimethylcyclohexyl isocyanate, isophorone di-isocyanate (4098-71-9)

LD50 oral rat 4814 mg/kg (OECD 401)

LD50 dermal rat > 7000 mg/kg (OECD 402)

LC50 Inhalation - Rat 31 mg/m³ (OECD 403)

hexamethylene-di-isocyanate (822-06-0)

LD50 oral rat 959 mg/kg bodyweight (OECD 401)

LD50 dermal rat > 7000 mg/kg bodyweight (OECD 402)

LC50 Inhalation - Rat 0.124 mg/l/4h (OECD 403)

Skin corrosion/irritation:

Causes skin irritation.

Serious eye damage/irritation:

Causes serious eye damage.

Respiratory or skin sensitisation:

May cause an allergic skin reaction.

Additional information: No pulmonary sensitisation was observed in guinea pigs after either intradermal injection or inhalation induction with HDI polyisocyanates

Germ cell mutagenicity: Not classified

Carcinogenicity: Not classified

hexamethylene-di-isocyanate (822-06-0)

NOAEC, Chronic, Inhalation, rat 0.164 ppm ((OECD 453 method))

Reproductive toxicity:

Not classified

STOT-single exposure:

May cause respiratory irritation.

Hexamethylene diisocyanate oligomers, isocyanurates (28182-81-2)

NOAEC (inhalation, rat, vapour)

3 mg/m³ (6h / OECD TG 403)

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STOT-single exposure

May cause respiratory irritation.

3-Isocyanatomethyl-3,5,5-trimethylcyclohexyl isocyanate oligomers (53880-05-0)

STOT-single exposure

May cause respiratory irritation.

3-isocyanatomethyl-3,5,5-trimethylcyclohexyl isocyanate, isophorone di-isocyanate (4098-71-9)

STOT-single exposure

May cause respiratory irritation.

hexamethylene-di-isocyanate (822-06-0)

STOT-single exposure

May cause respiratory irritation.

STOT-repeated exposure:

Not classified

Hexamethylene diisocyanate oligomers, isocyanurates (28182-81-2)

NOAEC (inhalation, rat, vapour, 90 days) 3.3 mg/l/6h/day (OECD 413)

cyclohexyldimethylamine (98-94-2)

NOAEL (subacute, oral, animal/male, 28 days) 91 – 104 mg/kg bodyweight (OECD 422)

NOAEL (subacute, oral, animal/female, 28 days) 85 – 147 mg/kg bodyweight (OECD 422)

3-isocyanatomethyl-3,5,5-trimethylcyclohexyl isocyanate, isophorone di-isocyanate (4098-71-9)

LOAEC (inhalation, rat, vapour, 90 days) 1.1 mg/m³ (OECD 413)

NOAEC (inhalation, rat, vapour, 90 days) 0.27 mg/m³ air (OECD 413)

hexamethylene-di-isocyanate (822-06-0) LOAEC (inhalation, rat, vapour, 90 days)

0.01 ppm (OECD 413) NOAEC, Chronic, Inhalation, rat 0.005 ppm (2 years, (OECD 453 method))

Aspiration hazard:

Not classified

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SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity

Ecology - general:

According to the data on the components: Not classified as Dangerous for the Environment.

Hazardous to the aquatic environment, short-term (acute):

Not classified

Hazardous to the aquatic environment, long-term (chronic): Not classified

Hexamethylene diisocyanate oligomers, isocyanurates (28182-81-2)

LC50 - Fish [1] 8.9 mg/l (Brachydanio rerio)

EC50 - Crustacea [1] 127 mg/l (48 h static / EU C.2)

EC50 - Other aquatic organisms [1] > 1000 mg/l (72h / Scenedesmus subspicatus / DIN 38412)

ErC50 algae > 1000 mg/l (0-72 h static / Desmodesmus subspicatus / EU C.3)

EC50, ACTIVATED SLUDGE 3828 mg/l (3 Hours, (OECD 209 method))

3-Isocyanatomethyl-3,5,5-trimethylcyclohexyl isocyanate oligomers (53880-05-0)

LC50 - Fish [1] > 1.51 mg/l (96h - static)

EC50 - Crustacea [2] > 3.36 mg/l (48 h/ OECD 202 EU methode C.2)

EC50 - Other aquatic organisms [1] > 3.1 mg/l (72h/ Desmodesmus subspicatus / OECD 201 EU method C.3)

EC50 - Other aquatic organisms [2] > 10000 mg/l (3h -bactérie / OECD 209 EU method C.11)

NOEC (acute) 3.1 mg/l (72 H /Desmodesmus subspicatus/ OECD method C.3)

Polyoxyethylene tridecyl ether phosphate (9046-01-9)

LC50 - Fish [1] 10 mg/l (96h /Danio rerio)

cyclohexyldimethylamine (98-94-2)

LC50 - Fish [1] 28 mg/l (96h / Oncorhynchus mykiss /OECD 203)

EC50 - Crustacea [1] 75 mg/l (48h /OECD 202)

EC50 - Other aquatic organisms [1] > 2 mg/l (72h / Desmodesmus subspicatus / DIN 38412)

NOEC (acute)

21.5 mg/l (96h / Leuciscus idus / DIN 38 412) 3-isocyanatomethyl-3,5,5-trimethylcyclohexyl isocyanate, isophorone di-isocyanate (4098-71-9)

LC50 - Fish [1] 72 mg/l (96 h static/ Brachydanio rerio/ EU C.1)

LC50 - Fish [2] > 208 mg/l (96h static / Cyprinus carpio / EU C.1)

LC50 - Other aquatic organisms [1]

4 mg/l (96 h static / Chaetogrammarus marinus)

EC50 - Crustacea [1] 27 mg/l (48 h static / EU C.2 aqua)

EC50 - Other aquatic organisms [1] > 70 mg/l (72h static / Desmodesmus subspicatus / EU C.3)

EC50 - Other aquatic organisms [2] 263 mg/l (3h static / Bacterie / OECD 209)

ErC50 algae > 70 mg/l (72 h static / Desmodesmus subspicatus / EU C.3 aqua)

LOEC (chronic) 10 mg/l (21d / Daphnia magna/ OECD 202)

NOEC (chronic) 3 mg/l (21d / Daphnia magna / OECD 202)

NOEC chronic algae 4.4 mg/l (72 h static / Desmodesmus subspicatus EU C.3 aqua)

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MATERIAL SAFETY DATA SHEET

Additional information

Low toxicity to aquatic organisms.

hexamethylene-di-isocyanate (822-06-0)

LC50 - Fish [1] 22 mg/l (96 h-static/ Brachydanio rerio)

EC50 - Other aquatic organisms [1] 842 mg/l (3h-static / Bacterie / OECD 209)

ErC50 algae > 77.4 mg/l Desmodesmus subspicatus

LOEC (chronic) 12.6 mg/l (72h / Desmodesmus subspicatus/ EU method C.3)

NOEC (chronic) 11.7 mg/l (72 h /Desmodesmus subspicatus/ EU method C.3) EC0, daphnia ≥ 89.1 mg/l (48 Hours, EU C.2)

LC0, Fish ≥ 82.8 mg/l (96 Hours, EU C.1, (Danio rerio))

EC50, Bacteria 842 mg/l (3 Hours, (OECD 209 method)) 12.2. Persistence and degradability

Hexamethylene diisocyanate oligomers, isocyanurates (28182-81-2)

Persistence and degradability: Not biodegradable.

Biochemical oxygen demand (BOD)

1 % (bacterie / EU C.4-E)

3-Isocyanatomethyl-3,5,5-trimethylcyclohexyl isocyanate oligomers (53880-05-0)

Biochemical oxygen demand (BOD)

0.5 % (OECD 301F)

Polyoxyethylene tridecyl ether phosphate (9046-01-9)

Persistence and degradability

Inherently biodegradable.

Biochemical oxygen demand (BOD) 45 % (OECD 301B)

Chemical oxygen demand (COD) 83 % (OECD 302B)

3-isocyanatomethyl-3,5,5-trimethylcyclohexyl isocyanate, isophorone di-isocyanate (4098-71-9)

Persistence and degradability

Not biodegradable.

Biochemical oxygen demand (BOD) 0 % (28 h/ EU C.4-D)

hexamethylene-di-isocyanate (822-06-0)

Biochemical oxygen demand (BOD)

42 % (Bacterie / EU C.4-D) 12.3. Bioaccumulative potential Easaqua™ X D 803

Bioaccumulative potential

According to the data on the components: Not potentially bioaccumulable.

Hexamethylene diisocyanate oligomers, isocyanurates (28182-81-2)

BCF - Fish [1] 3.2 (BCFWIN v. 2.17)

Bioaccumulative potential

not bioaccumulable.

hexamethylene-di-isocyanate (822-06-0)

BCF - Fish [1]

58 (BCFWIN v2.17) 12.4. Mobility in soil Hexamethylene diisocyanate oligomers, isocyanurates (28182-81-2)

Partition coefficient n-octanol/water (Log Koc)

7.8 (PCKOC v1.66)

Ecology - soil Ultimate destination of the product : soil and sediment.

3-isocyanatomethyl-3,5,5-trimethylcyclohexyl isocyanate, isophorone di-isocyanate (4098-71-9)

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MATERIAL SAFETY DATA SHEET

Ecology - soil Ultimate destination of the product : soil and sediment.

hexamethylene-di-isocyanate (822-06-0)

Partition coefficient n-octanol/water (Log K_{oc})

3.77 (PCKOC v1.66) 12.5. Results of PBT and vPvB assessment Component

3-isocyanatomethyl-3,5,5-trimethylcyclohexyl isocyanate, isophorone di-isocyanate (4098-71-9)

This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII

This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

hexamethylene-di-isocyanate (822-06-0)

This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII

This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII 12.6. Other adverse effects

No additional information available

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SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

NB: The user's attention is drawn to the possible existence of regional or national regulations regarding disposal.

13.1. Waste treatment methods

Product/Packaging disposal recommendations:

Incinerate at a licensed installation. Discharging into rivers and drains is forbidden.

Additional information:

Uncleaned packagings. Contaminated packaging materials must be disposed of in the same manner as the product. Thoroughly emptied and clean packaging may be recycled. . Disposal must be done according to official regulations. Allow it to drain thoroughly.

Ecology - waste materials: Hazardous waste.

European List of Waste (LoW) code

SECTION 14: TRANSPORT INFORMATION

In accordance with ADR / IMDG / IATA ADR IMDG IATA

14.1. UN number

Not applicable

14.2. UN proper shipping name

Not applicable

Not applicable

Not applicable

Not applicable

14.4. Packing group

Not applicable

Not applicable

Not applicable

14.5. Environmental hazards

Dangerous for the environment : No

Dangerous for the environment : No

Marine pollutant : No

Dangerous for the environment : No

The above regulatory prescriptions are those valid on the date of publication of this sheet, However, considering the always possible evolution of transport regulations for hazardous materials, in the case where the SDS in your possession is dating back over 12 months, it would be advisable to check their validity with your commercial agency

14.6. Special precautions for user

Overland transport: No data available

Transport by sea: No data available

Air transport: No data available

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable

SECTION 15: Regulatory information 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

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SECTION 15: REGULATORY INFORMATION

15.1.1. EU-Regulations

The following restrictions are applicable according to Annex XVII of the REACH Regulation (EC) No 1907/2006:

3-isocyanatomethyl-3,5,5-trimethylcyclohexyl isocyanate, isophorone di-isocyanate ; hexamethylene-di-isocyanate

Contains no substance on the REACH candidate list

Contains no REACH Annex XIV substances

Contains no substance subject to Regulation (EU) No 649/2012 of the European Parliament and of the Council of 4 July 2012 concerning the export and import of hazardous chemicals.

Contains no substance subject to Regulation (EU) No 2019/1021 of the European Parliament and of the Council of 20 June 2019 on persistent organic pollutants

15.1.2. National regulations: No additional information available

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: OTHER INFORMATION

The product is used mainly as a hardener in coating materials or adhesives. The handling of coating materials or adhesives containing reactive polyisocyanates and residual monomeric HDI requires appropriate protective measures referred to in this safety data sheet. These products may therefore be used only in industrial or trade applications. They are not suitable for use in homemaker (Do It Yourself) applications.

Full text of H- and EUH-statements:

Acute Tox. 1 (Inhalation:vapour)

Acute toxicity (inhalation:vapour) Category 1

Acute Tox. 3 (Dermal)

Acute toxicity (dermal), Category 3

Acute Tox. 3 (Inhalation)

Acute toxicity (inhal.), Category 3

Acute Tox. 3 (Oral)

Acute toxicity (oral), Category 3

Acute Tox. 4 (Inhalation)

Acute toxicity (inhal.), Category 4

Acute Tox. 4 (Oral)

Acute toxicity (oral), Category 4

Aquatic Chronic 2

Hazardous to the aquatic environment — Chronic Hazard, Category 2

Aquatic Chronic 3

Hazardous to the aquatic environment — Chronic Hazard, Category 3

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Eye Dam. 1
Serious eye damage/eye irritation, Category 1
Eye Irrit. 2
Serious eye damage/eye irritation, Category 2
Flam. Liq. 3
Flammable liquids, Category 3
Resp. Sens. 1
Respiratory sensitisation, Category 1
Skin Corr. 1B
Skin corrosion/irritation, Category 1, Sub-Category 1B
Skin Irrit. 2
Skin corrosion/irritation, Category 2
Skin Sens. 1
Skin sensitisation, Category 1
STOT SE 3
Specific target organ toxicity — Single exposure, Category 3, Respiratory tract irritation
H226
Flammable liquid and vapour.
H301
Toxic if swallowed.
H302
Harmful if swallowed.
H311
Toxic in contact with skin.
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.
H331
Toxic if inhaled.
H332
Harmful if inhaled.
H334
May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335

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MATERIAL SAFETY DATA SHEET

May cause respiratory irritation.

H411

Toxic to aquatic life with long lasting effects.

H412

Harmful to aquatic life with long lasting effects.

EUH204

Contains isocyanates. May produce an allergic reaction.

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:

Acute Tox. 4 (Inhalation)

H332

Expert judgment

Skin Irrit. 2

H315

Concentration limits

Eye Dam. 1

H318

Concentration limits

Skin Sens. 1

Concentration limits

STOT SE 3

H335

Concentration limits

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