1. Identification

Product identifier

ESKANOL PU 25 COMP. B

Art.-No.

10641

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

Use of the substance/mixture

Hardener

Details of the supplier of the safety data sheet

Company name: TIP TOP Oberflaechenschutz Elbe GmbH
Street: Heuweg 4
Place: D-06886 Wittenberg
Telephone: +49(0)3491/635-50 Telefax: +49(0)3491/635-552
Responsible Department: Responsible for the safety data sheet: sds@gbk-ingelheim.de

Emergency telephone number: INTERNATIONAL: +49 - (0) 6132 - 84463, GBK GmbH (24h - 7d/w - 365d/a)

2. Hazard identification

Classification of the substance or mixture

WHMIS 2015

Hazard categories:
Flammable liquid: Flam. Liq. 3
Acute toxicity: Acute Tox. 4
Skin corrosion/irritation: Skin Irrit. 2
Serious eye damage/eye irritation: Eye Irrit. 2A
Respiratory or skin sensitization: Skin Sens. 1
Specific target organ toxicity - single exposure: STOT SE 3
Specific target organ toxicity - repeated exposure: STOT RE 2
Hazard Statements:
Flammable liquid and vapour.
Harmful if inhaled.
Causes skin irritation.
Causes serious eye irritation.
May cause an allergic skin reaction.
May cause respiratory irritation.
May cause damage to organs through prolonged or repeated exposure.

Label elements

WHMIS 2015

Signal word: Warning

Pictograms:

Hazard statements

Flammable liquid and vapour.
Causes skin irritation.
May cause an allergic skin reaction.
Causes serious eye irritation.

Harmful if inhaled.
May cause respiratory irritation.
May cause damage to organs through prolonged or repeated exposure.

Precautionary statements

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
Do not breathe vapour.
Wear protective gloves/protective clothing/eye protection/face protection.
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Get medical advice/attention if you feel unwell.

Other hazards

According to Regulation (EC) No 1907/2006 (REACH) none of the substances, contained in this product are a PBT / vPvB substance.
Vapours may form explosive mixture with air.

3. Composition/information on ingredients

Mixtures

Chemical characterization

Aliphatic polyisocyanate

Hazardous components

CAS No	Chemical name	Quantity
28182-81-2	Hexamethylene-1,6-diisocyanate, homopolymer	< 75 %
1330-20-7	Xylene (mixed isomers)	< 15 %
100-41-4	Ethyl benzene	< 5 %
822-06-0	Hexamethylene diisocyanate	< 0,38 %

4. First-aid measures

Description of first aid measures

General information

Remove contaminated soaked clothing immediately.
If you feel unwell, seek medical advice.
Take away from danger area and lay down affected person.
In case of the person being unconscious put him/her in a stable side position.

After inhalation

Move to fresh air in case of accidental inhalation of vapours or decomposition products.
Refer for medical treatment.
If patient is not breathing, apply artificial respiration.

After contact with skin

Wash off with soap and plenty of water.
Consult a doctor if skin irritation persists.
Do not use solvents or thinners.

After contact with eyes

Remove contact lens.
Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.
Seek medical treatment by eye specialist.

After ingestion

Do not induce vomiting.
Rinse out mouth and give plenty of water to drink.
Never give anything by mouth to an unconscious person.
Summon a doctor immediately.
Induce vomiting only upon the advice of a physician.

Indication of immediate medical attention and special treatment needed

Treat symptoms.

5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media

Alcohol-resistant foam, dry chemical, carbon dioxide (CO2), water-spray.

Unsuitable extinguishing media

Full water jet.

Specific hazards arising from the hazardous product

Fire may produce:
Carbon monoxide (CO), carbon dioxide (CO2) and nitrogen oxides (NOx).
Hydrogen cyanide (HCN)
Isocyanates (NCO).

Special protective equipment and precautions for fire-fighters

Wear self-contained breathing apparatus and protective suit.

Additional information

Cool containers at risk with water spray jet.
The vapour/air mixture is explosive, even in empty, uncleaned receptacles.
Vapours are heavier than air and spread along ground.
Fire residues and contaminated firefighting water must be disposed of in accordance with the local regulations.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

In case of vapour formation use respirator.
Use only explosion-proof equipment.
Ensure adequate ventilation.
Use personal protective clothing.
Keep away sources of ignition.

Environmental precautions

Do not discharge into the drains/surface waters/groundwater.
Do not discharge into the subsoil/soil.
Inform competent authority about release into the sewerage, ground or into waters.

Methods and material for containment and cleaning up

Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder).
Shovel into suitable container for disposal.
Container can be pressurized by carbon dioxide due to reaction with humid air and/or water.
Container should not be gas-tight closed.

Reference to other sections

Observe protective instructions (see Sections 7 and 8).
Information for disposal look up chapter 13.

7. Handling and storage

Precautions for safe handling

Advice on safe handling

Keep container tightly closed.
Keep a good ventilation and air-exhaust at the place of work.
Vapours are heavier than air and spread along ground.
Avoid contact with the skin and the eyes.
When using do not eat, drink or smoke.
Do not empty container under pressure. No pressure tank!
Containers that have been opened must be carefully resealed and kept upright to prevent leakage.

Advice on protection against fire and explosion

Keep away from heat and sources of ignition.
Do not smoke.
Take precautionary measures against static discharges.
Use only explosion-proof equipment.

Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Keep container tightly closed in a dry, cool and well-ventilated place.
Pay attention to anti-explosion protection rules.
Protect from heat and direct solar radiation.

Advice on storage compatibility

Incompatible with:
Oxidizing agents
Acids and bases.
Water, amines, alcohols

Further information on storage conditions

Keep away from food, drink and animal feeding stuffs.

8. Exposure controls/Personal protection

Control parameters

Exposure limits (ACGIH)

CAS No	Chemical name	ppm	mg/m³	F/ml	Category	Origin
100-41-4	Ethyl benzene	20			TWA (8 h)	ACGIH-2016
822-06-0	Hexamethylene diisocyanate	0.005			TWA (8 h)	ACGIH-2016
1330-20-7	Xylene: mixed isomers	100			TWA (8 h)	ACGIH-2016
		150			STEL (15 min)	ACGIH-2016

Exposure controls

Appropriate engineering controls

Ensure adequate ventilation, especially in confined areas.

Protective and hygiene measures

Do not inhale vapours.
Wash hands before breaks and immediately after handling the product.
When using do not eat, drink or smoke.
Treat subsequently with skin cream.
Remove and wash contaminated clothing before re-use.

Eye/face protection

Tightly fitting goggles.

Eye wash bottle with pure water.

Hand protection

Protective gloves resistant to chemicals made of butyl, Minimum coat thickness 0,7 mm, Permeation resistance (wear duration) approx. 480 minutes, i.e. protective glove <Butoject 898> made by www.kcl.de. This recommendation refers exclusively to the chemical compatibility and the lab test conforming to EN 374 carried out under lab conditions.
Requirements can vary as a function of the use. Therefore it is necessary to adhere additionally to the recommendations given by the manufacturer of protective gloves.

Skin protection

Long sleeved clothing.

Respiratory protection

In case of insufficient ventilation wear suitable respiratory equipment (gas filter type A).

9. Physical and chemical properties

Information on basic physical and chemical properties

Physical state:	Liquid
Colour:	Colourless - yellowish
Odour:	Characteristic

		Test method
Changes in the physical state		
Initial boiling point and boiling range:	approx. 145 °C	
Pourpoint:	approx. - 48 °C	
Flash point:	approx. 38 °C	DIN 53213
Lower explosive limits:	1,5 vol. %	*)
Upper explosive limits:	10,8 vol. %	*)
Ignition temperature:	approx. 460 °C	DIN 51794
Vapour pressure: (at 20 °C)	approx. 10 hPa	EC A 4
Vapour pressure: (at 50 °C)	approx. 30 hPa	EC A 4
Density (at 20 °C):	approx. 1,07 g/cm³	ISO 2811
Water solubility: (at 15 °C)	Immiscible	
Viscosity / dynamic: (at 23 °C)	approx. 250 mPa·s	DIN 51377
Viscosity / kinematic: (at 40 °C)	> 20,5 mm²/s	
Solvent content:	< 30 %	

Other information

*) 2-Methoxy-1-methylethyl acetate

10. Stability and reactivity

Conditions to avoid

To avoid thermal decomposition, do not overheat.
Heating can release vapours which can be ignited.
Vapour/air-mixtures are explosive at intense warming.

Incompatible materials

Strong oxidizing agents
Strong acids and strong bases
Water, amines, alcohols

Hazardous decomposition products

Carbon monoxide (CO), carbon dioxide (CO2) and nitrogen oxides (NOx)
Hydrogen cyanide gas., Isocyanates

11. Toxicological information

Information on toxicological effects

Acute toxicity

Harmful if inhaled.
No toxicological data available.

Irritation and corrosivity

Causes skin irritation.
Causes serious eye irritation.

Sensitizing effects

May cause an allergic skin reaction. (Hexamethylene-1,6-diisocyanate, homopolymer; Hexamethylene diisocyanate)

Carcinogenic/mutagenic/toxic effects for reproduction

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

STOT-single exposure

May cause respiratory irritation. (Hexamethylene-1,6-diisocyanate, homopolymer)

STOT-repeated exposure

May cause damage to organs through prolonged or repeated exposure. (Xylene (mixed isomers); Ethyl benzene)

Aspiration hazard

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

Additional information on tests

Classification in compliance with the assessment procedure specified in the Regulation (EC) no 1272/2008.

Practical experience

Other observations

Inhalation of high vapour concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting.
Inhalation of high concentrations may cause injuries to liver, kidneys and central nervous system.
Repeated or prolonged exposure may cause skin irritation and dermatitis, due to degreasing properties of the product.
With hypersensitive people, reactions as cough or difficulty of breathing may appear even with tiny concentrations of isocyanates; therefore keep room aerated and ventilated.

12. Ecological information

Ecotoxicity

Ecological dates are not available.

Persistence and degradability

No data available.

Bioaccumulative potential

No data available.

Mobility in soil

No data available.

Other adverse effects

Hazardous water pollutant.

Further information

Do not flush into surface water or sanitary sewer system.
In aqueous systems, formation of unsoluble and chemically inert (inactive) polyureas.

13. Disposal considerations

Waste treatment methods

Advice on disposal

Can be incinerated, when in compliance with local regulations.
Where possible recycling is preferred to disposal.

Contaminated packaging

Empty containers should be taken for local recycling, recovery or waste disposal.
Contaminated packaging should be emptied as far as possible and after appropriate cleansing may be taken for reuse.
Packaging that cannot be cleaned should be disposed of like the product.

14. Transport information

Canadian TDG

UN/ID number:	UN 1866
Proper shipping name:	Resin solution
Hazard classes:	3
Packing group:	III
Hazard label:	3
Limited quantity:	5 L

Marine transport (IMDG)

UN number:	UN 1866
United Nations proper shipping name:	Resin solution
Transport hazard class(es):	3
Packing group:	III
Hazard label:	3

Marine pollutant:	No
Limited quantity:	5 L / 30 kg
Excepted quantity:	E1
EmS:	F-E, S-E

Air transport (ICAO-TI/IATA-DGR)

UN number:	UN 1866
United Nations proper shipping name:	Resin solution

Transport hazard class(es): 3
Packing group: III
Hazard label: 3

Limited quantity Passenger: 10 L
Passenger LQ: Y344
Excepted quantity: E1

IATA-packing instructions - Passenger: 355
IATA-max. quantity - Passenger: 60 L
IATA-packing instructions - Cargo: 366
IATA-max. quantity - Cargo: 220 L

Environmental hazards

ENVIRONMENTALLY HAZARDOUS: no

15. Regulatory information

Canadian regulations

16. Other information

Abbreviations and acronyms

ADR = Accord européen relatif au transport international des marchandises Dangereuses par Route
RID = Règlement concernant le transport international ferroviaire de marchandises dangereuses
ADN = Accord européen relatif au transport international des marchandises dangereuses par voie de navigation intérieure
IMDG = International Maritime Code for Dangerous Goods
IATA/ICAO = International Air Transport Association / International Civil Aviation Organization
MARPOL = International Convention for the Prevention of Pollution from Ships
IBC-Code = International Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
REACH = Registration, Evaluation, Authorization and Restriction of Chemicals
CAS = Chemical Abstract Service
EN = European norm
ISO = International Organization for Standardization
DIN = Deutsche Industrie Norm
PBT = Persistent Bioaccumulative and Toxic
vPvB = Very Persistent and very Bio-accumulative
LD = Lethal dose
LC = Lethal concentration
EC = Effect concentration
IC = Median immobilisation concentration or median inhibitory concentration

Further Information

Data of sections 4 to 8, as well as 10 to 12, do not necessarily refer to the use and the regular handling of the product (in this sense consult package leaflet and expert information), but to release of major amounts in case of accidents and irregularities.
The information describes exclusively the safety requirements for the product (s) and is based on the present level of our knowledge.
The delivery specifications are contained in the corresponding product sheet.
This data does not constitute a guarantee for the characteristics of the product(s) as defined by the legal

warranty regulations.
(n.a. = not applicable; n.d. = not determined)

(The data for the hazardous ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)