

Safety data sheet

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PT BASF Indonesia Safety data sheet

Date / Revised: 23.07.2015

Product: **ELASTAN KC 6565/3 C-B**

Version: 1.0

(30647040/SDS_GEN_ID/EN)

Date of print 24.07.2015

1. Substance/preparation and manufacturer/supplier identification

ELASTAN KC 6565/3 C-B

Manufacturer/supplier:

PT BASF Indonesia

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Jakarta 12940, INDONESIA

Telephone: +62 21 2988 6000

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+62 21 5437 1979

International emergency number:

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2. Hazard identification

Classification of the substance and mixture:

Acute toxicity: Cat. 4 (Inhalation - vapour)

Serious eye damage/eye irritation: Cat. 2A

Skin corrosion/irritation: Cat. 2

Specific target organ toxicity — single exposure: Cat. 3 (irritating to respiratory system)

Skin sensitization: Cat. 1

Respiratory sensitization: Cat. 1

Carcinogenicity: Cat. 2

Specific target organ toxicity — repeated exposure: Cat. 2 (Inhalation - vapour)

Label elements and precautionary statement:

Pictogram:



Signal Word:
Danger

Hazard Statement:

Causes skin irritation. May cause an allergic skin reaction. Causes serious eye irritation. Harmful if inhaled. May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause respiratory irritation. Suspected of causing cancer. May cause damage to organs through prolonged or repeated inhalation exposure.

Precautionary Statements (Prevention):

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not breathe spray. Avoid breathing spray. Wash with polyethylene glycol, followed by plenty of water thoroughly after handling. Use only outdoors or in a well-ventilated area. Contaminated work clothing should not be allowed out of the workplace. Wear protective gloves/protective clothing/eye protection/face protection. Use personal protective equipment as required. In case of inadequate ventilation wear respiratory protection.

Precautionary Statements (Response):

IF ON SKIN: Wash with plenty of soap and water. IF INHALED: Remove person to fresh air and keep comfortable for breathing. IF INHALED: If breathing is difficult, remove to fresh air and keep at rest in a position comfortable for breathing. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. IF exposed or concerned: Get medical advice/attention. Call a POISON CENTER or doctor/physician if you feel unwell. Get medical advice/attention if you feel unwell. Specific treatment (see on this label). If skin irritation occurs: Get medical advice/attention. If skin irritation or rash occurs: Get medical advice/attention. If eye irritation persists: Get medical advice/attention. If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician. Take off contaminated clothing and wash before reuse. Wash contaminated clothing before reuse.

Precautionary Statements (Storage):

Store in a well-ventilated place. Keep container tightly closed. Store locked up.

Precautionary Statements (Disposal):

Dispose of contents/container to hazardous or special waste collection point.

Other hazards which do not result in classification:

No specific dangers known, if the regulations/notes for storage and handling are considered.

Contains isocyanates. May produce an allergic reaction.

3. Composition/information on ingredients

Chemical nature

Preparation based on: Isocyanic acid, polymethylenepolyphenylene ester (P-MDI)

Hazardous ingredients

Isocyanic acid, polymethylenepolyphenylene ester (P-MDI)

Content (W/W): >= 10 % - <= 99 %	Acute Tox.: Cat. 4 (Inhalation - vapour)
CAS Number: 9016-87-9	Eye Dam./Irrit.: Cat. 2A
	Skin Corr./Irrit.: Cat. 2
	STOT SE: Cat. 3 (irr. to respiratory syst.)
	Skin Sens.: Cat. 1
	Resp. Sens.: Cat. 1
	Carc.: Cat. 2
	STOT RE: Cat. 2 (Inhalation - vapour)

4. First-Aid Measures

General advice:

Immediately remove contaminated clothing.

If inhaled:

Keep patient calm, remove to fresh air, seek medical attention.

On skin contact:

After contact with skin, wash immediately with plenty of water. Consult a doctor if skin irritation persists.

On contact with eyes:

Immediately wash affected eyes for at least 15 minutes under running water with eyelids held open, consult an eye specialist.

On ingestion:

Immediately rinse mouth and then drink plenty of water, do not induce vomiting, seek medical attention.

Note to physician:

Symptoms: tightness in the chest, coughing, difficulty breathing

Hazards: Symptoms can appear later.

Information on: Diphenylmethane-4,4'-diisocyanate (MDI)

Hazards: Respiratory sensitization may result in allergic (asthma-like) signs in the lower respiratory tract including wheezing, shortness of breath and difficulty breathing, the onset of which may be delayed. Repeated inhalation of high concentrations may cause lung damage, including reduced lung function, which may be permanent. Substances eliciting lower respiratory tract irritation may worsen the asthma-like reactions that may be produced by product exposures.

Treatment: Treat according to symptoms (decontamination, vital functions), no known specific antidote, administer corticosteroid dose aerosol to prevent pulmonary edema.

5. Fire-Fighting Measures

Suitable extinguishing media:

dry powder, carbon dioxide, alcohol-resistant foam, water spray

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Specific hazards:

carbon dioxide, carbon monoxide, hydrogen cyanide, nitrogen oxides, isocyanate
The substances/groups of substances mentioned can be released in case of fire.

Special protective equipment:

Wear self-contained breathing apparatus and chemical-protective clothing.

Further information:

Keep containers cool by spraying with water if exposed to fire. Dispose of fire debris and contaminated extinguishing water in accordance with official regulations.

6. Accidental Release Measures

Personal precautions:

Use personal protective clothing. Ensure adequate ventilation. Use breathing apparatus if exposed to vapours/dust/aerosol.

Environmental precautions:

Do not empty into drains. Do not discharge into the subsoil/soil.

Methods for cleaning up or taking up:

For large amounts: Pump off product.

For residues: Pick up with suitable absorbent material. Dispose of absorbed material in accordance with regulations.

Neutralize with a solution of 5 - 10 % Sodium carbonate, 0,2 - 2 % detergents and 90 - 95 % water.

7. Handling and Storage

Handling

Provide suitable exhaust ventilation at the processing machines. Ensure thorough ventilation of stores and work areas. Avoid aerosol formation. When handling heated product, vapours of the product should be ventilated, and respiratory protection used. Wear respiratory protection when spraying. Danger of bursting when sealed gastight. Protect against moisture. Products freshly manufactured from isocyanates can contain incompletely reacted isocyanates and other dangerous substances. Clean up contamination as soon as they occur. Provide basic employee training to prevent/minimize exposures.

Storage

Keep away from water. Segregate from foods and animal feeds. Segregate from acids and bases.

Suitable materials for containers: Carbon steel (Iron), High density polyethylene (HDPE), Low density polyethylene (LDPE), tinned carbon steel (Tinplate), Stainless steel 1.4301 (V2)

Further information on storage conditions: Keep container tightly closed in a cool, well-ventilated place. Protect against moisture. Formation of CO₂ and build up of pressure possible. Danger of bursting when sealed gastight.

Storage stability:

Protect against moisture.

If moisture enters isocyanate containers, CO₂ forms and pressure builds up.

8. Exposure controls and personal protection

Components with occupational exposure limits

Diphenylmethane-4,4'-diisocyanate (MDI), 101-68-8;
TWA value 0.005 ppm (OEL (ID))
TWA value 0.005 ppm (ACGIHTLV)

Personal protective equipment

Respiratory protection:

Respiratory protection in case of vapour/aerosol release. Combination filter for gases/vapours of organic compounds and solid and liquid particles (f.e. EN 14387 Type A-P2)

Hand protection:

Chemical resistant protective gloves (EN 374)

Suitable materials also with prolonged, direct contact (Recommended: Protective index 6, corresponding > 480 minutes of permeation time according to EN 374):

butyl rubber (butyl) - 0.7 mm coating thickness

nitrile rubber (NBR) - 0.4 mm coating thickness

chloroprene rubber (CR) - 0.5 mm coating thickness

Unsuitable materials

polyvinylchloride (PVC) - 0.7 mm coating thickness

Polyethylene-Laminate (PE laminate) - ca. 0.1 mm coating thickness

Eye protection:

Safety glasses with side-shields (frame goggles) (e.g. EN 166)

Body protection:

safety shoes (e.g. according to EN 20346)

General safety and hygiene measures:

Do not breathe vapour/spray. With products freshly manufactured from isocyanates body protection and chemical resistant protective gloves is recommended. Wearing of closed work clothing is required additionally to the stated personal protection equipment. No eating, drinking, smoking or tobacco use at the place of work. Take off immediately all contaminated clothing. Hands and/or face should be washed before breaks and at the end of the shift. At the end of the shift the skin should be cleaned and skin-care agents applied.

9. Physical and Chemical Properties

Form: liquid
Colour: brown
Odour: earthy, musty
Odour threshold: not applicable

pH value:
not applicable

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solidification temperature: < 10 °C
Boiling range: > 200 °C
(1,013 mbar)

Flash point: > 200 °C
Evaporation rate: Value can be approximated from Henry's Law Constant or vapor pressure.

Flammability (solid/gas): not flammable
Lower explosion limit: For liquids not relevant for classification and labelling., The lower explosion point may be 5 - 15 °C below the flash point.
Upper explosion limit: For liquids not relevant for classification and labelling.

Ignition temperature: > 530 °C

Thermal decomposition: > 230 °C
Explosion hazard: not explosive

Vapour pressure: < 0.01 Pa
(25 °C)

Density: 1.1 g/cm³
(20 °C)
Relative density: 1.1
(20 °C)
Relative vapour density (air): not applicable

Solubility in water: Hydrolyzes to form water-insoluble compounds.
Miscibility with water: Reacts with water.
Partitioning coefficient n-octanol/water (log Pow): not applicable

Viscosity, dynamic: not determined

Other Information:

If necessary, information on other physical and chemical parameters is indicated in this section.

10. Stability and Reactivity

Conditions to avoid:

Avoid moisture.

Temperature: < 15 °C

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Thermal decomposition: > 230 °C

Substances to avoid:
acids, alcohols, amines, water, Alkalines

Corrosion to metals: No corrosive effect on metal.

Hazardous reactions:
Reacts with water, with formation of carbon dioxide. Risk of bursting. Reacts with substances which contain active hydrogen.

No hazardous decomposition products if stored and handled as prescribed/indicated.

11. Toxicological Information

Acute toxicity

Assessment of acute toxicity:
Of moderate toxicity after short-term inhalation. Virtually nontoxic after a single skin contact. Virtually nontoxic after a single ingestion.

Information on: Isocyanic acid, polymethylenepolyphenylene ester (P-MDI)
Assessment of acute toxicity:
Virtually nontoxic after a single ingestion. Virtually nontoxic after a single skin contact. Of moderate toxicity after short-term inhalation.

Information on: Isocyanic acid, polymethylenepolyphenylene ester (P-MDI)
Experimental/calculated data:
LD50 rat (oral): > 10,000 mg/kg

Information on: Isocyanic acid, polymethylenepolyphenylene ester (P-MDI)
Experimental/calculated data:
LD50 rabbit (dermal): > 10,000 mg/kg

Irritation

Assessment of irritating effects:
Eye contact causes irritation. Skin contact causes irritation.

Information on: Isocyanic acid, polymethylenepolyphenylene ester (P-MDI)
Assessment of irritating effects:
Eye contact causes irritation. Skin contact causes irritation.

Information on: Isocyanic acid, polymethylenepolyphenylene ester (P-MDI)
Experimental/calculated data:
Skin corrosion/irritation: Irritant.

Information on: Isocyanic acid, polymethylenepolyphenylene ester (P-MDI)
Experimental/calculated data:
Serious eye damage/irritation: Irritant.

Respiratory/Skin sensitization

Assessment of sensitization:
Sensitization after skin contact possible. The substance may cause sensitization of the respiratory tract.

Information on: Isocyanic acid, polymethylenepolyphenylene ester (P-MDI)
Assessment of sensitization:
The substance may cause sensitization of the respiratory tract. Sensitization after skin contact possible.

Germ cell mutagenicity

Assessment of mutagenicity:
The chemical structure does not suggest a specific alert for such an effect.

Information on: Isocyanic acid, polymethylenepolyphenylene ester (P-MDI)
Assessment of mutagenicity:
The substance was mutagenic in various test systems with microorganisms and cell cultures; however, these results could not be confirmed in tests with mammals.

Carcinogenicity

Assessment of carcinogenicity:
A carcinogenic effect cannot safely be ruled out.

Information on: Isocyanic acid, polymethylenepolyphenylene ester (P-MDI)
Assessment of carcinogenicity:
Indication of possible carcinogenic effect in animal tests. However, the relevance of this result for humans is unclear. The substance was tested in form of respirable aerosols.

Reproductive toxicity

Assessment of reproduction toxicity:
The chemical structure does not suggest a specific alert for such an effect.

Information on: Isocyanic acid, polymethylenepolyphenylene ester (P-MDI)
Assessment of reproduction toxicity:
Repeated inhalative uptake of the substance did not cause damage to the reproductive organs.

Developmental toxicity

Assessment of teratogenicity:
The chemical structure does not suggest a specific alert for such an effect.

Information on: Isocyanic acid, polymethylenepolyphenylene ester (P-MDI)
Assessment of teratogenicity:
Animal studies gave no indication of a developmental toxic effect at doses that were not toxic to the parental animals.

Experiences in humans

Information on: Isocyanic acid, polymethylenepolyphenylene ester (P-MDI)
Experimental/calculated data:
coughing, dyspnea, tightness in the chest, temporary influenzal symptoms:
Can severely irritate the eyes and respiratory tract depending upon the concentration.

Specific target organ toxicity (single exposure):

Assessment of STOT single:
Causes temporary irritation of the respiratory tract.

Repeated dose toxicity and Specific target organ toxicity (repeated exposure)

Assessment of repeated dose toxicity:
Repeated inhalation exposure may affect certain organs. Repeated exposure to the substance by dermal administration leads to effects similar to those found after single exposure. Repeated exposure to the substance by oral administration leads to effects similar to those found after single exposure.

Information on: Isocyanic acid, polymethylenepolyphenylene ester (P-MDI)
Assessment of repeated dose toxicity:
The substance may cause damage to the lung even after repeated inhalation of low doses, as shown in animal studies.

Aspiration hazard

No aspiration hazard expected.

Other relevant toxicity information

The product has not been tested. The statement has been derived from the properties of the individual components.

12. Ecological Information

Ecotoxicity

Assessment of aquatic toxicity:
There is a high probability that the product is not acutely harmful to aquatic organisms.

Information on: Isocyanic acid, polymethylenepolyphenylene ester (P-MDI)

Assessment of aquatic toxicity:

There is a high probability that the product is not acutely harmful to aquatic organisms. No toxic effects occur within the range of solubility.

Information on: Isocyanic acid, polymethylenepolyphenylene ester (P-MDI)

Toxicity to fish:

LC0 (96 h) > 1,000 mg/l, Fish (other)

Information on: Diphenylmethane-4,4'-diisocyanate (MDI)

Toxicity to fish:

LC0 (96 h) > 1,000 mg/l, Brachydanio rerio (OECD Guideline 203, static)

Information on: Isocyanic acid, polymethylenepolyphenylene ester (P-MDI)

Aquatic invertebrates:

EC0 (24 h) > 500 mg/l, daphnia (other)

Information on: Isocyanic acid, polymethylenepolyphenylene ester (P-MDI)

Aquatic plants:

EC0 (72 h) 1,640 mg/l, Scenedesmus subspicatus (OECD Guideline 201)

Mobility

Assessment transport between environmental compartments:

Adsorption to solid soil phase is not expected.

Persistence and degradability

Assessment biodegradation and elimination (H₂O):

Hydrolyzes to form water-insoluble compounds. Experience shows this product to be inert and non-degradable.

Information on: Isocyanic acid, polymethylenepolyphenylene ester (P-MDI)

Information on: Isocyanic acid, polymethylenepolyphenylene ester (P-MDI)

Elimination information:

< 10 % BOD of the ThOD (28 d) (OECD Guideline 302 C) (aerobic, activated sludge) Under test conditions no biodegradation observed.

Bioaccumulation potential

Assessment bioaccumulation potential:

Does not significantly accumulate in organisms.

Information on: Isocyanic acid, polymethylenepolyphenylene ester (P-MDI)

Bioaccumulation potential:

Accumulation in organisms is not to be expected.

Other adverse effects

Adsorbable organically-bound halogen (AOX):
This product contains no organically-bound halogen.

Additional information

Other ecotoxicological advice:
Do not release untreated into natural waters. Do not allow to enter soil, waterways or waste water channels. The product has not been tested. The statement has been derived from the properties of the individual components.

13. Disposal Considerations

Incinerate in suitable incineration plant, observing local authority regulations.
Dispose of isocyanate waste in dry containers and never mix together with other wastes (reaction, dangerous pressure build up).

Contaminated packaging:
Contaminated packaging should be emptied as far as possible; then it can be passed on for recycling after being thoroughly cleaned.

14. Transport Information

Domestic transport:

Not classified as a dangerous good under transport regulations

Sea transport IMDG

Not classified as a dangerous good under transport regulations

Air transport IATA/ICAO

Not classified as a dangerous good under transport regulations

15. Regulatory Information

Regulations of the European union (Labelling)

Directive 1999/45/EC ('Preparation Directive'):

Hazard symbol(s)
Xn Harmful.

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R-phrase(s)	
R20	Harmful by inhalation.
R36/37/38	Irritating to eyes, respiratory system and skin.
R40	Limited evidence of a carcinogenic effect.
R42/43	May cause sensitization by inhalation and skin contact.
R48/20	Harmful: Danger of serious damage to health by prolonged exposure through inhalation.

S-phrase(s)	
S23.3	Do not breathe vapour/spray.
S36/37	Wear suitable protective clothing and gloves.
S45	In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

Hazard determining component(s) for labelling: DIPHENYLMETHANDIISOCYANATE, ISOMERES UND HOMOLOGUES

Other regulations

If it is intended to use materials for the manufacture of consumer goods (e. g. products which will come into contact with foodstuffs or with the skin, toys) or medical products, national and international regulations have to be observed. Where no regulations exist, consumer goods or medical products must at least comply with European legislation. We recommend contacting our Sales and our Product Safety departments.

If other regulatory information applies that is not already provided elsewhere in this safety data sheet, then it is described in this subsection.

16. Other Information

Recommended use: polyurethane component, industrial chemicals

Vertical lines in the left hand margin indicate an amendment from the previous version.

The data contained in this safety data sheet are based on our current knowledge and experience and describe the product only with regard to safety requirements. The data do not describe the product's properties (product specification). Neither should any agreed property nor the suitability of the product for any specific purpose be deduced from the data contained in the safety data sheet. It is the responsibility of the recipient of the product to ensure any proprietary rights and existing laws and legislation are observed.