

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

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Art.-No.

590 2710, 590 2720

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

Use of the substance/mixture

Coating system for protection against wear and corrosion

1.3. Details of the supplier of the safety data sheet

TIP TOP Oberflächenschutz Elbe GmbH

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D-06886 Wittenberg

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Emergency telephone :+49 (0) 6132 / 84463 (GBK Gefahrgut Buero GmbH, Ingelheim)

Responsible for the safety data sheet: sds@gbk-ingelheim.de

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Indications of danger : Harmful, Irritant

R-phrases:

Harmful by inhalation.

Irritating to eyes, respiratory system and skin.

Limited evidence of a carcinogenic effect.

May cause sensitization by inhalation and skin contact.

Harmful: danger of serious damage to health by prolonged exposure through inhalation.

GHS classification

Hazard categories:

Skin corrosion/irritation: Skin Irrit. 2

Serious eye damage/eye irritation: Eye Irrit. 2

Respiratory/skin sensitization: Resp. Sens. 1

Respiratory/skin sensitization: Skin Sens. 1

Carcinogenicity: Carc. 2

Specific target organ toxicity - single exposure: STOT SE 3

Specific target organ toxicity - repeated exposure: STOT RE 2

Hazard Statements:

Causes skin irritation.

Causes serious eye irritation.

May cause allergy or asthma symptoms or breathing difficulties if inhaled.

May cause an allergic skin reaction.

Suspected of causing cancer.

May cause respiratory irritation.

May cause damage to organs through prolonged or repeated exposure.

2.2. Label elements

Pictograms:

GHS07-GHS08



Signal word:

Danger

Hazardous components which must be listed on the label

Diphenylmethanediisocyanate (prepolymer)

Diphenylmethane-4,4'-diisocyanate

Diphenylmethane-2,4'-diisocyanate

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Hazard statements

- H315 Causes skin irritation.
H319 Causes serious eye irritation.
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H317 May cause an allergic skin reaction.
H351 Suspected of causing cancer.
H335 May cause respiratory irritation.
H373 May cause damage to organs through prolonged or repeated exposure.

Precautionary statements

- P260 Do not breathe dust/fume/gas/mist/vapours/spray.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P302+P352 IF ON SKIN: Wash with plenty of soap and water.
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.
P308+P313 IF exposed or concerned: Get medical advice/attention.

Special labelling of certain mixtures

- EUH204 Contains isocyanates. May produce an allergic reaction.

2.3. Other hazards

Not known.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Chemical characterization

Preparation with isocyanates

Hazardous components

EC No	Chemical name	Quantity
CAS No	Classification	
Index No	GHS classification	
REACH No		
	Diphenylmethanediisocyanate (prepolymer)	
39420-98-9	R42/43	> 75 %
	Resp. Sens. 1, Skin Sens. 1; H334 H317	
202-966-0	Diphenylmethane-4,4'-diisocyanate	10 - 25 %
101-68-8	Carc. Cat. 3, Xn, Xi R40-20-48/20-36/37/38-42/43	
615-005-00-9	Carc. 2, Acute Tox. 4, Skin Irrit. 2, Eye Irrit. 2, Resp. Sens. 1, Skin Sens. 1, STOT SE 3, STOT RE 2; H351 H332 H315 H319 H334 H317 H335 H373	
01-2119457014-47		
227-534-9	Diphenylmethane-2,4'-diisocyanate	5 - 10 %
5873-54-1	Carc. Cat. 3, Xn, Xi R40-20-48/20-36/37/38-42/43	
615-005-00-9	Carc. 2, Acute Tox. 4, Skin Irrit. 2, Eye Irrit. 2, Resp. Sens. 1, Skin Sens. 1, STOT SE 3, STOT RE 2; H351 H332 H315 H319 H334 H317 H335 H373	
01-2119480143-45		

Full text of R- and H-phrases: see section 16.

SECTION 4: First aid measures

4.1. Description of first aid measures

General information

Remove contaminated soaked clothing immediately.
In the event of persistent symptoms receive medical treatment.

After inhalation

Move to fresh air in case of accidental inhalation of fumes from overheating or combustion.
Keep warm and calm injured person.
Refer for medical treatment.

After contact with skin

Remove immediately adhering matter.

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Wash contaminated skin with plenty of water and soap or with liquid polyethylene glycol.
Consult a physician.

After contact with eyes

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.
Induce vomiting only upon the advice of a physician.
Summon a doctor immediately.
Rinse out mouth thoroughly with water.

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

Causes skin irritation.
May cause an allergic skin reaction.
Causes serious eye irritation.
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 exposure.

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

Treat symptoms.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

Foam, carbon dioxide (CO₂), dry chemical, water-spray.

Extinguishing media which must not be used for safety reasons

Full water jet.

5.2. Special hazards arising from the substance or mixture

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

5.3. Advice for firefighters

Wear self-contained breathing apparatus and protective suit.

Additional information

Do not release chemically contaminated water into drains, soil or surface waters. Sufficient measures must be taken to retain water used for extinguishing.
Cool containers at risk with water spray jet.
Fire residues and contaminated firefighting water must be disposed of in accordance with the local regulations.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

In case of vapour formation use respirator.
Ensure adequate ventilation.
Use personal protective clothing.

6.2. Environmental precautions

Do not discharge into the drains/surface waters/groundwater.
Do not discharge into the subsoil/soil.

6.3. 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 should not be gas-tight closed.
Container can be pressurized by carbon dioxide due to reaction with humid air and/or water.

6.4. Reference to other sections

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

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling

Keep container tightly closed.
Avoid contact with the skin and the eyes.
Provide sufficient air exchange and/or exhaust in work rooms.
Do not breathe vapours.
When working with spray, exhaustion of air becomes indispensable.
Use only in thoroughly ventilated areas.

Advice on protection against fire and explosion

No special protective measures against fire required.

7.2. 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.
Keep at temperatures between 5°C and 50°C.
Container can be pressurized by carbon dioxide due to reaction with humid air and/or water.

Advice on storage compatibility

Exothermic reaction with:
Acids and bases.
Water, amines, alcohols

Further information on storage conditions

Keep away from food, drink and animal feeding stuffs.

7.3. Specific end use(s)

Coating system for protection against wear and corrosion

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.2. Exposure controls

Occupational exposure controls

Ensure adequate ventilation, especially in confined areas.

Protective and hygiene measures

Do not inhale vapours.
Avoid contact with eyes and skin.
Wash hands before breaks and immediately after handling the product.
When using, do not eat, drink or smoke.
Take off immediately all contaminated clothing.

Respiratory protection

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

Hand protection

Chemical protective gloves made of nitrile, nitrile/cotton, butyl or neoprene, with a minimum thickness of 0.7 mm, permeation time of approx. 480 minutes.
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.
Pls. find examples in the protective gloves database under: <http://bestglove.com/site/chemrest/>

Eye protection

Tightly fitting goggles.
Eye wash bottle with pure water.

Skin protection

Light protective clothing

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state:	Liquid
Colour:	Colourless - yellowish
Odour:	Mild aromatic

Test method

Changes in the physical state

Boiling point:	115 °C
Stock pint:	- 13 °C DIN ISO 3016
Flash point:	> 200 °C DIN EN ISO 2719
Lower explosion limits:	n.d.
Upper explosion limits:	n.d.
Ignition temperature:	> 400 °C DIN 51794
Vapour pressure: (at 20 °C)	0,0005 hPa .
Density (at 20 °C):	1,09 g/cm³ DIN 51757
Water solubility:	Reacts with water
Viscosity / dynamic: (at 23 °C)	3250 mPa·s DIN 53019

9.2. Other information

Decomposition starting from 200°C (Polymerization)

SECTION 10: Stability and reactivity

10.1. Reactivity

No decomposition if stored and applied as directed.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

Reactions with strong acids and alkalies.

Reacts with: Water, amines, alcohols

10.4. Conditions to avoid

To avoid thermal decomposition, do not overheat.

Container can be pressurized by carbon dioxide due to reaction with humid air and/or water.

10.5. Incompatible materials

Acids and bases.

Water, amines, alcohols

10.6. Hazardous decomposition products

Hydrogen cyanide gas.

Carbon monoxide (CO), carbon dioxide (CO₂) and nitrogen oxides (NO_x).

Isocyanates

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity

No toxicological data available.

Irritation and corrosivity

Eye irritation: Irritant

Skin irritation: Irritant

Sensitising effects

May cause an allergic skin reaction.

May cause allergy or asthma symptoms or breathing difficulties if inhaled.

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Severe effects after repeated or prolonged exposure

STOT - Single exposure: Category 3 [May cause respiratory irritation.]

STOT - Repeated exposure: Category 3 [May cause damage to organs through prolonged or repeated exposure.]

Aspiration hazard: Not classified.

Carcinogenic/mutagenic/toxic effects for reproduction

Carcinogenicity: Category 2 [Limited evidence of a carcinogenic effect.]

Mutagenicity: Not classified.

Teratogenicity: Not classified.

Additional information on tests

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

Empirical data on effects on humans

Irritating to eyes, respiratory system and skin.

May cause sensitization by inhalation and skin contact.

With hypersensitive people, reactions as cough or difficulty of breathing may appear even with tiny concentrations of isocyanates; therefore keep room aerated and ventilated.

SECTION 12: Ecological information

12.1. Toxicity

Ecological data are not available.

12.2. Persistence and degradability

Not readily biodegradable.

12.3. Bioaccumulative potential

There is no indication of bioaccumulation potential. [Conclusion by analogy]

12.4. Mobility in soil

No data available.

12.5. Results of PBT and vPvB assessment

According to Regulation (EC) no. 1907/2006 (REACH) none of the substances, contained in this product are a PBT / vPvB substance.

12.6. Other adverse effects

Low hazard to waters.

Further information

In aqueous systems, formation of unsoluble and chemically inert (inactive) polyureas.

Do not flush into surface water or sanitary sewer system.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Advice on disposal

Where possible recycling is preferred to disposal.

Can be incinerated, when in compliance with local regulations.

Waste disposal number of waste from residues/unused products

080409

WASTES FROM THE MANUFACTURE, FORMULATION, SUPPLY AND USE (MFSU) OF COATINGS (PAINTS, VARNISHES AND VITREOUS ENAMELS), ADHESIVES, SEALANTS AND PRINTING INKS; wastes from MFSU of adhesives and sealants (including waterproofing products); waste adhesives and sealants containing organic solvents or other dangerous substances
Classified as hazardous waste.

Contaminated packaging

Contaminated packagings are to be treated like the product itself.

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.

SECTION 14: Transport information

Other applicable information

No hazardous material as defined by the transport regulations.

SECTION 15: Regulatory information

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15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

EU regulatory information

1999/13/EC (VOC): 0 %

National regulatory information

Employment restrictions: Observe employment restrictions for young people. Observe employment restrictions for child bearing mothers and nursing.

Water contaminating class (D): 1 - slightly water contaminating

15.2. Chemical Safety Assessment

For this substance a chemical safety assessment has not been carried out.

SECTION 16: Other information

Full text of R-phrases referred to under sections 2 and 3

20 Harmful by inhalation.
36/37/38 Irritating to eyes, respiratory system and skin.
40 Limited evidence of a carcinogenic effect.
42/43 May cause sensitization by inhalation and skin contact.
48/20 Harmful: danger of serious damage to health by prolonged exposure through inhalation.

Full text of H-Statements referred to under sections 2 and 3

H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H332 Harmful 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.

Further Information

Data of items 4 to 8, as well as 10 to 12, do partly not refer to the use and the regular employing of the product (in this sense consult information on use and on product), but to liberation 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.)