

**TIP TOP REMACOAT A-80 HP ISO**  
00359-1092

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

### **1.1. Product identifier**

TIP TOP REMACOAT A-80 HP ISO

#### **Art.-No.**

590 3360, 590 3370

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

#### **Use of the substance/mixture**

Hardener component for 2K coating system

### **1.3. Details of the supplier of the safety data sheet**

TIP TOP Oberflächenschutz Elbe GmbH

Heuweg 4

D-06886 Wittenberg

Telephone: +49(0)3491/635-50

Telefax: +49(0)3491/635-552

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

### **1.4. Emergency telephone**

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

**number:** England and Wales: NHS Direct - 0845 4647; Scotland: NHS 24 - 08454 24 24

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## **SECTION 2: Hazards identification**

### **2.1. Classification of the substance or mixture**

Indications of danger: Xn - Harmful

R phrases:

Irritating to eyes, respiratory system and skin.

Limited evidence of a carcinogenic effect.

May cause sensitisation by inhalation and skin contact.

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

#### **GHS classification**

Hazard categories:

Acute toxicity: Acute Tox. 4

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.

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 exposure.

### **2.2. Label elements**

**Pictograms:**

GHS07-GHS08



**Signal word:**

Danger



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**Hazardous components which must be listed on the label**

Diphenylmethane-4,4'-diisocyanate

**Hazard statements**

- 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.

**Precautionary statements**

- P260 Do not breathe vapour.
- 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		
202-966-0	Diphenylmethane-4,4'-diisocyanate	< 25 %
101-68-8	Carc. Cat. 3, Xn - Harmful, Xi - Irritant 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		
203-572-1	Propylene carbonate	< 10 %
108-32-7	Xi - Irritant R36	
607-194-00-1	Eye Irrit. 2; H319	
01-2119537232-48		

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.  
 Take away from danger area and lay down affected person.

**After inhalation**

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

**After contact with skin**

Wash off immediately with soap and plenty of water.

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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.  
Rinse out mouth thoroughly with water. Never give anything by mouth to an unconscious person.  
Summon a doctor immediately.  
Induce vomiting only upon the advice of a physician.

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

Harmful if inhaled.  
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**

Keep under medical supervision for at least 48 hours.

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**SECTION 5: Firefighting measures**

**5.1. Extinguishing media**

**Suitable extinguishing media**

Foam, carbon dioxide (CO<sub>2</sub>), 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 (CO<sub>2</sub>) and nitrogen oxides (NO<sub>x</sub>).  
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.

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**SECTION 6: Accidental release measures**

**6.1. Personal precautions, protective equipment and emergency procedures**

In case of vapour formation use respirator.  
Ensure adequate ventilation.  
Remove persons to safety.  
Use personal protective clothing.

**6.2. Environmental precautions**

Do not discharge into the drains/surface waters/ground water.

**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 see section 13.

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## **SECTION 7: Handling and storage**

### **7.1. Precautions for safe handling**

#### **Advice on safe handling**

Keep container tightly closed.  
Vapours are heavier than air and spread along ground.  
Avoid contact with the skin and the eyes.  
Do not breathe vapours.  
Local exhaust.  
Use only in thoroughly ventilated areas.

#### **Advice on protection against fire and explosion**

Keep away from heat and sources of ignition.

### **7.2. Conditions for safe storage, including any incompatibilities**

#### **Requirements for storage rooms and vessels**

Keep containers tightly closed in a cool, well-ventilated place.  
Keep at temperatures between 15°C and 35°C.

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

### **7.3. Specific end use(s)**

Hardener component for 2K coating system

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## **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) (EN 141).

#### **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**

Eye wash bottle with pure water (EN 15154).  
Tightly fitting goggles (EN 166).

#### **Skin protection**

Long sleeved clothing (EN 368).

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## **SECTION 9: Physical and chemical properties**

### **9.1. Information on basic physical and chemical properties**

Physical state:	Liquid
Colour:	Whitish - Cloudy
Odour:	Musty

#### **Test method**

#### **Changes in the physical state**

Flash point:	> 135 °C
Lower explosion limits:	n.d.
Ignition temperature:	n.d.
Vapour pressure: (at 25 °C)	n.d.
Density (at 25 °C):	1,09 - 1,13 g/cm <sup>3</sup>
Water solubility: (at 20 °C)	Reacts with water.
Viscosity / dynamic: (at 25 °C)	3200 - 3800 mPa·s

### **9.2. Other information**

No data available.

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## **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**

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 (CO<sub>2</sub>) and nitrogen oxides (NO<sub>x</sub>).

Isocyanates (NCO).

### **Further information**

No decomposition if stored and applied as directed.

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## **SECTION 11: Toxicological information**

### **11.1. Information on toxicological effects**

#### **Acute toxicity**

No toxicological data available.

Harmful if inhaled.

#### **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.

#### **Severe effects after repeated or prolonged exposure**

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

STOT - Repeated exposure: Category 2 [May cause damage to organs through prolonged or repeated exposure.]

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Aspiration hazard: Not classified.

**Carcinogenic/mutagenic/toxic effects for reproduction**

Carcinogenicity: Category 2 [Suspected of causing cancer.]

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**

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

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**SECTION 12: Ecological information**

**12.1. Toxicity**

Ecological data are not available.

**12.2. Persistence and degradability**

Not readily biodegradable.

**12.3. Bioaccumulative potential**

No data available.

**12.4. Mobility in soil**

No data available.

**12.5. Results of PBT and vPvB assessment**

No data available.

**12.6. Other adverse effects**

Low hazard to waters.

**Further information**

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

Do not flush into surface water or sanitary sewer system.

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**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**

Empty containers should be taken for local recycling, recovery or waste disposal.

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.

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**SECTION 14: Transport information**

**Other applicable information**

No hazardous material as defined by the transport regulations.

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**SECTION 15: Regulatory information**

**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.

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#### Additional information

Chemical prohibition regulation consider.

#### 15.2. Chemical safety assessment

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

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### SECTION 16: Other information

#### Changes

Changes in chapter: 1, 2, 3, 4, 6, 7, 10, 11, 12, 16

#### 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

VOC = Volatile organic compound

STOT SE = Specific target organ toxicity single exposure

STOT RE = Specific target organ toxicity repeated exposure

PBT = Persistent Bioaccumulative and Toxic

vPvB = Very Persistent and very Bio-accumulative

bw = body weight

LD = Lethal dose

LC = Lethal concentration

EC = Effect concentration

IC = Median immobilisation concentration or median inhibitory concentration

#### Full text of R phrases referred to under Sections 2 and 3

20 Harmful by inhalation.

36 Irritating to eyes.

36/37/38 Irritating to eyes, respiratory system and skin.

40 Limited evidence of a carcinogenic effect.

42/43 May cause sensitisation 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.



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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)

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