

**TIP TOP REMACOAT PR 100**

Revision date: 03.09.2015

Revision No: 1,1

Product code: 00359-1106



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

**1.1. Product identifier**

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**Art.-No.**

590 2835, 590 2842, 590 2859, 590 3290, 590 3320

**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**

Company name: TIP TOP Oberflächenschutz 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

**1.4. Emergency telephone number:**

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

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 according to 1272/2008/EC**

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. 2

Respiratory or skin sensitisation: Resp. Sens. 1

Respiratory or skin sensitisation: Skin Sens. 1

Carcinogenicity: Carc. 2

Specific target organ toxicity - single exposure: STOT SE 3

Specific target organ toxicity - repeated exposure: STOT RE 2

Aspiration hazard: Asp. Tox. 1

Hazardous to the aquatic environment: Aquatic Chronic 3

Hazard Statements:

Flammable liquid and vapour.

May be fatal if swallowed and enters airways.

Harmful if inhaled.

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

May cause respiratory irritation.

Causes serious eye irritation.

Causes skin irritation.

May cause an allergic skin reaction.

Suspected of causing cancer.

May cause damage to organs through prolonged or repeated exposure.

Harmful to aquatic life with long lasting effects.

**2.2. Label elements**

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

Xylene (mixed isomers)

Diphenylmethanediisocyanate, isomers and homologues

Solvent naphta (petroleum)

Ethyl benzene

Signal word: Danger

Pictograms:



#### Hazard statements

H226	Flammable liquid and vapour.
H304	May be fatal if swallowed and enters airways.
H332	Harmful if inhaled.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335	May cause respiratory irritation.
H319	Causes serious eye irritation.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H351	Suspected of causing cancer.
H373	May cause damage to organs through prolonged or repeated exposure.
H412	Harmful to aquatic life with long lasting effects.

#### Precautionary statements

P202	Do not handle until all safety precautions have been read and understood.
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P260	Do not breathe vapour.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P301+P310	IF SWALLOWED: Immediately call a POISON CENTER/doctor.
P331	Do NOT induce vomiting.
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
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.
P308+P313	IF exposed or concerned: Get medical advice/attention.

#### Special labelling of certain mixtures

EUH204	Contains isocyanates. May produce an allergic reaction.
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#### 2.3. Other hazards

Vapours may form explosive mixture with air.

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### SECTION 3: Composition/information on ingredients

#### 3.2. Mixtures

##### Chemical characterization

Preparation with isocyanates

**Hazardous components**

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification according to Regulation (EC) No. 1272/2008 [CLP]			
1330-20-7	Xylene (mixed isomers)			25 - 50 %
	215-535-7	601-022-00-9	01-2119488216-32	
	Flam. Liq. 3, Acute Tox. 4, Acute Tox. 4, Skin Irrit. 2, Eye Irrit. 2, STOT SE 3, STOT RE 2, Asp. Tox. 1; H226 H312 H332 H315 H319 H335 H373 H304			
9016-87-9	Diphenylmethanediisocyanate, isomers and homologues			25 - 50 %
	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			
64742-95-6	Solvent naphta (petroleum)			10 - 25 %
	918-668-5	649-356-00-4	01-2119455851-35	
	Flam. Liq. 3, STOT SE 3, STOT SE 3, Asp. Tox. 1, Aquatic Chronic 2; H226 H335 H336 H304 H411 EUH066			
25322-69-4	Polypropylene glycol			< 25 %
	500-039-8			
	Acute Tox. 4; H302			
100-41-4	Ethyl benzene			2,5 - 10 %
	202-849-4	601-023-00-4	01-2119489370-35	
	Flam. Liq. 2, Acute Tox. 4, STOT RE 2, Asp. Tox. 1; H225 H332 H373 H304			

Full text of H and EUH statements: see section 16.

**Further Information**

According to note P to the regulation (EC) no. 1272/2008, "Solvent naphta (petroleum)" is not to be classified as "carcinogenic" or "mutagen" ingredient because a benzene content (EINECS No. 200-753-7) is below 0.1 % by weight.

**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.  
Keep under medical supervision for at least 48 hours.

**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**

Remove immediately adhering matter.  
Wash off immediately with soap and plenty of water.  
Treat subsequently with skin cream.  
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**

Summon a doctor immediately.  
Do not induce vomiting.  
Rinse out mouth thoroughly with water.  
Induce vomiting only upon the advice of a physician.  
Attention. Beware, danger of aspiration.



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

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

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

Treat symptoms.

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### **SECTION 5: Firefighting measures**

#### **5.1. Extinguishing media**

##### **Suitable extinguishing media**

Alcohol-resistant foam, dry chemical, carbon dioxide (CO<sub>2</sub>), water-spray.

##### **Unsuitable extinguishing media**

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)

#### **5.3. Advice for firefighters**

Wear self-contained breathing apparatus and protective suit.

##### **Additional information**

Cool containers at risk with water spray jet.  
Do not release chemically contaminated water into drains, soil or surface waters. Sufficient measures must be taken to retain water used for extinguishing.  
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.  
Keep away sources of ignition.

#### **6.2. Environmental precautions**

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

Vapours are heavier than air and spread along ground.

Vapours can form an explosive mixture with air.

Take precautionary measures against static discharges.

**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 15°C and 25°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)**

Coating system for protection against wear and corrosion

**SECTION 8: Exposure controls/personal protection**

**8.1. Control parameters**

**Exposure limits (EH40)**

CAS No	Substance	ppm	mg/m <sup>3</sup>	fibres/ml	Category	Origin
100-41-4	Ethylbenzene	100	441		TWA (8 h)	WEL
		125	552		STEL (15 min)	WEL
1330-20-7	Xylene: mixed isomers	50	220		TWA (8 h)	WEL
		100	441		STEL (15 min)	WEL

**Biological Monitoring Guidance Values (EH40)**

CAS No	Substance	Parameter	Value	Test material	Sampling time
1330-20-7	Xylene, o-, m-, p- or mixed isomers	methyl hippuric acid	650 mmol/mol	urine	Post shift

**8.2. Exposure controls**

**Appropriate engineering 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.

**Eye/face protection**

Tightly fitting goggles (EN 166).

Eye wash bottle with pure water (EN 15154).

**Hand protection**

Protective gloves resistant to chemicals made off viton, minimum coat thickness 0,7 mm, permeation resistance (wear duration) approx. 480 minutes, i.e. protective glove <Vitoject 890> made by www.kcl.de.

This recommendation refers exclusively to the chemical compatibility and the lab test conforming to EN

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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/>

**Skin protection**

Light protective clothing

**Respiratory protection**

In case of insufficient ventilation wear suitable respiratory equipment (gas filter type A) (EN 14387).

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**SECTION 9: Physical and chemical properties**

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

Physical state:	Liquid
Colour:	Brown
Odour:	Of aromatic carbon hydroxides

**Changes in the physical state**

Initial boiling point and boiling range:	137 °C	
Flash point:	30 °C	
Explosive properties	The product is considered non-explosive; nevertheless explosive vapour/air mix	
Lower explosion limits:	0,7 vol. %	
Upper explosion limits:	7,5 vol. %	
Ignition temperature:	355 °C	
Density (at 20 °C):	1 g/cm <sup>3</sup>	
Water solubility:	Reacts with water.	
Viscosity / kinematic: (at 40 °C)	< 20,5 mm <sup>2</sup> /s	ISO 3104

**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**

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

Reactions with strong acids and alkalies.

**10.4. Conditions to avoid**

Vapours may form explosive mixture with air.

**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>).

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**SECTION 11: Toxicological information**

**11.1. Information on toxicological effects**

**Acute toxicity**

Harmful if inhaled.

No toxicological data available.

**Irritation and corrosivity**



Causes serious eye irritation.

Causes skin irritation.

**Sensitising effects**

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

(Diphenylmethanediisocyanate, isomers and homologues)

May cause an allergic skin reaction. (Diphenylmethanediisocyanate, isomers and homologues)

**STOT-single exposure**

May cause respiratory irritation. (Xylene (mixed isomers)), (Diphenylmethanediisocyanate, isomers and homologues), (Solvent naphta (petroleum))

**Severe effects after repeated or prolonged exposure**

May cause damage to organs through prolonged or repeated exposure. (Xylene (mixed isomers)), (Diphenylmethanediisocyanate, isomers and homologues), (Ethyl benzene)

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

Suspected of causing cancer. (Diphenylmethanediisocyanate, isomers and homologues)

**Aspiration hazard**

May be fatal if swallowed and enters airways.

**Additional information on tests**

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

**Practical experience**

**Other observations**

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.

Harmful to aquatic life with long lasting effects.

**12.2. Persistence and degradability**

No data available.

**12.3. Bioaccumulative potential**

No data available.

**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**

Hazardous water pollutant.

**Further information**

Do not flush into surface water or sanitary sewer system.

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

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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 hazardous 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.

**SECTION 14: Transport information**

**Land transport (ADR/RID)**

**14.1. UN number:** UN 1993  
**14.2. UN proper shipping name:** FLAMMABLE LIQUID, N.O.S. (Xylene (mixed isomers), Ethyl benzene)  
**14.3. Transport hazard class(es):** 3  
**14.4. Packing group:** III  
 Hazard label: 3



Classification code: F1  
 Limited quantity: 5 L / 30 kg  
 Excepted quantity: E1  
 Transport category: 3  
 Hazard No: 30  
 Tunnel restriction code: D/E

**Inland waterways transport (ADN)**

**14.1. UN number:** UN 1993  
**14.2. UN proper shipping name:** FLAMMABLE LIQUID, N.O.S. (Xylene (mixed isomers), Ethyl benzene)  
**14.3. Transport hazard class(es):** 3  
**14.4. Packing group:** III  
 Hazard label: 3



Classification code: F1  
 Limited quantity: 5 L / 30 kg  
 Excepted quantity: E1

**Marine transport (IMDG)**

**14.1. UN number:** UN 1993  
**14.2. UN proper shipping name:** FLAMMABLE LIQUID, N.O.S. (Xylene, Ethyl benzene)  
**14.3. Transport hazard class(es):** 3  
**14.4. Packing group:** III  
 Hazard label: 3



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

**Air transport (ICAO)**

**14.1. UN number:** UN 1993  
**14.2. UN proper shipping name:** FLAMMABLE LIQUID, N.O.S. (Xylene, Ethyl benzene, mixture)  
**14.3. Transport hazard class(es):** 3





**14.4. 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

**14.5. Environmental hazards**

ENVIRONMENTALLY HAZARDOUS:

no

**14.6. Special precautions for user**

Handle in accordance with good industrial hygiene and safety practice.

**14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**

The transport takes place only in approved and appropriate packaging.

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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**

2004/42/EC (VOC):

< 70 %

**National regulatory information**

Employment restrictions:

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

Water contaminating class (D):

2 - water contaminating

**Additional information**

Consider Chemical prohibition regulation.

**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**

**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

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**Relevant H and EUH statements (number and full text)**

H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H312	Harmful in contact with skin.
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.
H336	May cause drowsiness or dizziness.
H351	Suspected of causing cancer.
H373	May cause damage to organs through prolonged or repeated exposure.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.
EUH066	Repeated exposure may cause skin dryness or cracking.
EUH204	Contains isocyanates. May produce an allergic reaction.

**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.)*