



# Safety Data Sheet

according to Regulation (EC) No 1907/2006

## TIP TOP REMACOAT PR 100

Revision date: 04.11.2020

Product code: 00359-1106

Page 1 of 11

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

#### 1.1. Product identifier

TIP TOP REMACOAT PR 100

##### Art.-No.

590 2835, 590 2842, 590 2859, 590 3290

#### 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)  
In England and Wales: NHS 111 In Scotland: NHS 24 - dial 111

### SECTION 2: Hazards identification

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

##### Regulation (EC) No. 1272/2008

Hazard categories:

Flammable liquid: Flam. Liq. 3

Aspiration hazard: Asp. Tox. 1

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

Hazardous to the aquatic environment: Aquatic Chronic 3

Hazard Statements:

Flammable liquid and vapour.

May be fatal if swallowed and enters airways.

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.

Harmful to aquatic life with long lasting effects.

#### 2.2. Label elements

##### Regulation (EC) No. 1272/2008

##### Hazard components for labelling

Xylene (mixed isomers)

Diphenylmethanediisocyanate, isomers and homologues

Tosyl isocyanate

**Signal word:** Danger

# Safety Data Sheet

according to Regulation (EC) No 1907/2006

## TIP TOP REMACOAT PR 100

Revision date: 04.11.2020

Product code: 00359-1106

Page 2 of 11

### Pictograms:



### Hazard statements

H226	Flammable liquid and vapour.
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.
H304	May be fatal if swallowed and enters airways.
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 or 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

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.

## SECTION 3: Composition/information on ingredients

### 3.2. Mixtures

#### Chemical characterization

Mixture containing following substances with additives

**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

**TIP TOP REMACOAT PR 100**

Revision date: 04.11.2020

Product code: 00359-1106

Page 3 of 11

**Hazardous components**

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	GHS Classification			
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, Aquatic Chronic 3; H226 H332 H312 H315 H319 H335 H373 H304 H412			
9016-87-9	Diphenylmethanediisocyanate, isomers and homologues			25 - 50 %
			01-2119457024-46	
	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			
4083-64-1	Tosyl isocyanate			< 1 %
	223-810-8	615-012-00-7	01-2119980050-47	
	Skin Irrit. 2, Eye Irrit. 2, Resp. Sens. 1, STOT SE 3; H315 H319 H334 H335 EUH014			

Full text of H and EUH statements: 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.  
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.  
Consult a physician.

**After contact with eyes**

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.  
Remove contact lenses, if present and easy to do. Continue rinsing.  
Seek medical treatment by eye specialist.

**After ingestion**

Summon a doctor immediately.  
Do not induce vomiting.  
Rinse out mouth thoroughly with water.  
Never give anything by mouth to an unconscious person.  
Induce vomiting only upon the advice of a physician.  
Attention. Beware, danger of aspiration.

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

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.



# Safety Data Sheet

according to Regulation (EC) No 1907/2006

## TIP TOP REMACOAT PR 100

Revision date: 04.11.2020

Product code: 00359-1106

Page 4 of 11

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.

## **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.

## **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.

## **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.



# Safety Data Sheet

according to Regulation (EC) No 1907/2006

## TIP TOP REMACOAT PR 100

Revision date: 04.11.2020

Product code: 00359-1106

Page 5 of 11

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 only in original container.  
Keep container tightly closed in a dry, cool and well-ventilated place.  
Protect against direct sun radiation.  
Protect from moisture.

#### Hints on joint storage

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
-	Isocyanates, all (as -NCO) Except methyl isocyanate	-	0.02		TWA (8 h)	WEL
		-	0.07		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 (creatinine)	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.



# Safety Data Sheet

according to Regulation (EC) No 1907/2006

## TIP TOP REMACOAT PR 100

Revision date: 04.11.2020

Product code: 00359-1106

Page 6 of 11

### 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 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).

## SECTION 9: Physical and chemical properties

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

Physical state:	Liquid
Colour:	Brown
Odour:	Characteristic

pH-Value:	n.d.
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#### Test method

### Changes in the physical state

Melting point:	n.d.
Initial boiling point and boiling range:	137 °C
Sublimation point:	n.a.
Softening point:	n.d.
Flash point:	30 °C

### Flammability

Solid:	n.a.
Gas:	n.a.

### Explosive properties

The product is considered non-explosive; nevertheless explosive vapour/air mixture can be generated.

Lower explosion limits:	1,1 vol. %
Upper explosion limits:	7,0 vol. %
Ignition temperature:	500 °C

### Auto-ignition temperature

Solid:	n.a.
Gas:	n.a.

Decomposition temperature:	n.d.
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### Oxidizing properties

Not oxidising.

Vapour pressure: (at 20 °C)	6,7 hPa
Density (at 20 °C):	0,98 g/cm <sup>3</sup>
Bulk density:	n.a.



# Safety Data Sheet

according to Regulation (EC) No 1907/2006

## TIP TOP REMACOAT PR 100

Revision date: 04.11.2020

Product code: 00359-1106

Page 7 of 11

Water solubility:	Reacts with water.
<b>Solubility in other solvents</b> n.d.	
Partition coefficient:	n.d.
Viscosity / dynamic:	100 mPa·s
Viscosity / kinematic: (at 40 °C)	< 20,5 mm <sup>2</sup> /s
Flow time:	n.d.
Vapour density:	n.d.
Evaporation rate:	n.d.
Solvent separation test:	n.d.
Solvent content:	50 %

### 9.2. Other information

Solid content:	49,9 %
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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

No hazardous decomposition products known.  
Fire may produce:  
Hydrogen cyanide gas  
Carbon monoxide (CO), carbon dioxide (CO<sub>2</sub>) and nitrogen oxides (NO<sub>x</sub>)

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

#### Acute toxicity

Based on available data, the classification criteria are not met.  
No toxicological data available.

#### Irritation and corrosivity

Causes skin irritation.  
Causes serious eye irritation.

#### Sensitising effects

Contains isocyanates. May produce an allergic reaction. May cause allergy or asthma symptoms or breathing difficulties if inhaled. (Diphenylmethanediisocyanate, isomers and homologues; Tosyl isocyanate)  
May cause an allergic skin reaction. (Diphenylmethanediisocyanate, isomers and homologues)



## Safety Data Sheet

according to Regulation (EC) No 1907/2006

### TIP TOP REMACOAT PR 100

Revision date: 04.11.2020

Product code: 00359-1106

Page 8 of 11

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

Suspected of causing cancer. (Diphenylmethanediisocyanate, isomers and homologues)  
Germ cell mutagenicity: Based on available data, the classification criteria are not met.  
Reproductive toxicity: Based on available data, the classification criteria are not met.

#### **STOT-single exposure**

May cause respiratory irritation. (Xylene (mixed isomers); Diphenylmethanediisocyanate, isomers and homologues)

#### **STOT-repeated exposure**

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

## 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.

## SECTION 13: Disposal considerations

### **13.1. Waste treatment methods**

#### **Disposal recommendations**

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

#### **List of Wastes Code - 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; hazardous waste



## Safety Data Sheet

according to Regulation (EC) No 1907/2006

### TIP TOP REMACOAT PR 100

Revision date: 04.11.2020

Product code: 00359-1106

Page 9 of 11

#### 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)

<b>14.1. UN number:</b>	UN 1993
<b>14.2. UN proper shipping name:</b>	FLAMMABLE LIQUID, N.O.S. (Xylene (mixed isomers))
<b>14.3. Transport hazard class(es):</b>	3
<b>14.4. Packing group:</b>	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)

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



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

#### Marine transport (IMDG)

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



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

## Safety Data Sheet

according to Regulation (EC) No 1907/2006

### TIP TOP REMACOAT PR 100

Revision date: 04.11.2020

Product code: 00359-1106

Page 10 of 11

#### Air transport (ICAO-TI/IATA-DGR)

<b>14.1. UN number:</b>	UN 1993
<b>14.2. UN proper shipping name:</b>	FLAMMABLE LIQUID, N.O.S. (Xylene)
<b>14.3. Transport hazard class(es):</b>	3
<b>14.4. Packing group:</b>	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 Marpol and the IBC Code

The transport takes place only in approved and appropriate packaging.

### SECTION 15: Regulatory information

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

##### EU regulatory information

Restrictions on use (REACH, annex XVII):

Entry 3

2004/42/EC (VOC):	50 %
Information according to 2012/18/EU (SEVESO III):	P5c FLAMMABLE LIQUIDS

##### National regulatory information

Employment restrictions: Observe restrictions to employment for juveniles according to the 'juvenile work protection guideline' (94/33/EC). Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers.

##### Additional information

Consider Chemical prohibition regulation.

#### 15.2. Chemical safety assessment

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

### SECTION 16: Other information



# Safety Data Sheet

according to Regulation (EC) No 1907/2006

## TIP TOP REMACOAT PR 100

Revision date: 04.11.2020

Product code: 00359-1106

Page 11 of 11

### 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 int er  
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

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

H226	Flammable liquid and vapour.
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.
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.
EUH014	Reacts violently with water.
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.)*