## 1. Identification

**Product identifier**

TIP TOP REMAFIX PR 100

**Art.-No.**

525 2901

**Recommended use of the chemical and restrictions on use**

**Use of the substance/mixture**

Primer Coat

**Details of the supplier of the safety data sheet**

Company name: TIP TOP Oberflaechenschutz 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

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

## 2. Hazard(s) identification

**Classification of the chemical**

**29 CFR Part 1910.1200**

Flammable liquids: Flam. Liq. 3
Acute toxicity: Acute Tox. 4 (inhalation)
Aspiration hazard: Asp. Tox. 1
Skin corrosion/irritation: Skin Irrit. 2
Serious eye damage/eye irritation: Eye Irrit. 2A
Respiratory or skin sensitization: Resp. Sens. 1
Respiratory or skin sensitization: Skin Sens. 1
Carcinogenicity: Carc. 2
Specific target organ toxicity single exposure: STOT SE 3 (respiratory tract irritation)
Specific target organ toxicity repeated or prolonged exposure: STOT RE 2
Hazardous to the aquatic environment: Aquatic Chronic 3

**Label elements**

**29 CFR Part 1910.1200**

**Signal word:** Danger

**Pictograms:**

**Hazard statements**

Flammable liquid and vapor
Harmful if inhaled
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
May be fatal if swallowed and enters airways

Harmful to aquatic life with long lasting effects

**Precautionary statements**

Do not handle until all safety precautions have been read and understood.
Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
Do not breathe vapour.
Wear protective gloves/protective clothing/eye protection/face protection.
If swallowed: Immediately call a poison center/doctor.
Do NOT induce vomiting.
If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
If inhaled: If breathing is difficult, remove person to fresh air and keep 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.

**Hazards not otherwise classified**

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.

## 3. Composition/information on ingredients

**Mixtures**

**Chemical characterization**

Mixture containing substances listed in section 3 with additives

**Hazardous components**

| CAS No | Components | Quantity |
|---|---|---|
| 1330-20-7 | Xylene (mixed isomers) | 25 - 50 % |
| 9016-87-9 | Diphenylmethanediisocyanate, isomers and homologues | 25 - 50 % |
| 100-41-4 | Ethyl benzene | 9 % |
| 4083-64-1 | Tosyl isocyanate | < 1 % |

## 4. First-aid measures

**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 of aspiration danger.

**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.

**Indication of any immediate medical attention and special treatment needed**

Treat symptoms.

## 5. Fire-fighting measures

**Extinguishing media**

**Suitable extinguishing media**

Alcohol-resistant foam, dry chemical, carbon dioxide ($CO_2$), water-spray.

**Unsuitable extinguishing media**

Full water jet.

**Specific hazards arising from the chemical**

Fire may produce:
Carbon monoxide (CO), carbon dioxide ($CO_2$) and nitrogen oxides (NOx).
Hydrogen cyanide (HCN)

**Special protective equipment and precautions for fire-fighters**

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.

## 6. Accidental release measures

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

**General advice**

Ensure adequate ventilation.
Remove persons to safety.
Keep away sources of ignition.
Attention. Hazard of skidding.

**For non-emergency personnel**

Do not breathe vapours.
Avoid contact with skin, eyes and clothing.

**For emergency responders**

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

**Environmental precautions**

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

**Methods and material for containment and cleaning up**

**For containment**

Prevent spread over a wide area (e.g. by containment or oil barriers).

**For 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.

**Reference to other sections**

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

## 7. Handling and storage

**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.

**Advice on general occupational hygiene**

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.

**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.

## 8. Exposure controls/personal protection

**Control parameters**

**Exposure limits**

| CAS No | Substance | ppm | mg/m³ | f/cc | Category | Origin |
|---|---|---|---|---|---|---|
| 100-41-4 | Ethyl benzene | 100 | 435 | | TWA (8 h) | PEL |
| | | 100 | 435 | | TWA (8 h) | REL |
| | | 125 | 545 | | STEL (15 min) | REL |
| 100-41-4 | Ethyl benzene | 20 | | | TWA (8 h) | ACGIH-2022 |
| 1330-20-7 | Xylene: mixed isomers | 20 | | | TWA (8 h) | ACGIH-2022 |
| 1330-20-7 | Xylenes (o-,m-,p-isomers) | 100 | 435 | | TWA (8 h) | PEL |

**Biological Exposure Indices (BEI-ACGIH)**

| CAS No | Substance | Determinant | Value | Test material | Sampling time |
|---|---|---|---|---|---|
| 1330-20-7 | XYLENES (technical or commercial grade) | Methylhippuric acids (creatinine) | 1.5 g/g | urine | End of shift |
| 100-41-4 | ETHYLBENZENE | Sum of mandelic acid and phenylglyoxylic acid (creatinine) | 0.15 g/g | urine | End of shift |

**Exposure controls**

**Appropriate engineering controls**

Ensure adequate ventilation, especially in confined areas.

**Individual protection measures, such as personal protective equipment**

**Eye/face protection**

Tightly fitting goggles.
Eye wash bottle with pure water.

**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 GISBAU protective gloves database under:
http://www.wingisonline.de/handschuhe/frmMain.aspx

**Skin protection**

Light protective clothing

**Respiratory protection**

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

## 9. Physical and chemical properties

**Information on basic physical and chemical properties**

| | |
|---|---|
| Physical state: | Liquid |
| Color: | Brown |
| Odor: | Characteristic |

**Changes in the physical state**

| | |
|---|---|
| Melting point/freezing point: | n.d. |
| Boiling point or initial boiling point and boiling range: | 137 °C |

| | |
|---|---|
| Sublimation point: | n.a. |
| Softening point: | n.d. |
| Flash point: | 30 °C |

**Flammability**

| | |
|---|---|
| Solid/liquid: | 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. % |
| Auto-ignition temperature: | 500 °C |

**Self-ignition temperature**

| | |
|---|---|
| Solid: | n.a. |
| Gas: | n.a. |
| Decomposition temperature: | n.d. |
| pH-Value: | n.d. |
| Viscosity / dynamic: | 100 mPa·s |
| Viscosity / kinematic: (at 40 °C) | < 20,5 mm²/s |
| Flow time: | n.d. |
| Water solubility: | Reacts with water |

**Solubility in other solvents**

n.d.

| | |
|---|---|
| Partition coefficient n-octanol/water: | n.d. |
| Vapor pressure: (at 20 °C) | 6,7 hPa |
| Density (at 20 °C): | 0,98 g/cm³ |
| Bulk density: | n.a. |
| Relative vapour density: | n.d. |

**Other information**

**Information with regard to physical hazard classes**

| | |
|---|---|
| Sustaining combustion: | Sustaining combustion |

Oxidizing properties

Not oxidising.

**Other safety characteristics**

| | |
|---|---|
| Solvent separation test: | n.d. |
| Solvent content: | 50 % |
| Solid content: | 49,9 % |
| Evaporation rate: | n.d. |

## 10. Stability and reactivity

**Reactivity**

No decomposition if stored and applied as directed.

**Chemical stability**

| | |
|---|---|
| Stability: | Stable |

Stable under normal conditions.

**Possibility of hazardous reactions**

Hazardous reactions: Will not occur

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

**Conditions to avoid**

Vapours may form explosive mixture with air.

**Incompatible materials**

Acids and bases
Water, amines, alcohols

**Hazardous decomposition products**

No hazardous decomposition products known.
Fire may produce:
Hydrogen cyanide gas.
Carbon monoxide (CO), carbon dioxide (CO2) and nitrogen oxides (NOx)

## 11. Toxicological information

**Route(s) of Entry**

Skin and eye contact, inhalation and ingestion.

**Information on toxicological effects**

**Acute toxicity**

Harmful if inhaled
No toxicological data available.

**ATEmix calculated**

ATE (inhalation vapour) 16,64 mg/l; ATE (inhalation dust/mist) 2,269 mg/l

**Irritation and corrosivity**

Causes skin irritation
Causes serious eye irritation

**Sensitizing effects**

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)

**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.

**Specific target organ toxicity (STOT) - single exposure**

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

**Specific target organ toxicity (STOT) - repeated exposure**

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

| | |
|---|---|
| Carcinogenicity (OSHA): | No ingredient of this mixture is listed. |
| Carcinogenicity (IARC): | Xylenes (CAS 1330-20-7) is listed in group 3. Polymethylene polyphenyl isocyanate (CAS 9016-87-9) is listed in group 3. Ethylbenzene (CAS 100-41-4) is listed in group 2B. |
| Carcinogenicity (NTP): | No ingredient of this mixture is listed. |

**Aspiration hazard**

May be fatal if swallowed and enters airways

**Additional information on tests**

This product is classified in accordance with the GHS regulations.

**Information on other hazards**

**Endocrine disrupting properties**

No data available

**Other information**

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

## 12. Ecological information

**Ecotoxicity**

Ecological data are not available.
Harmful to aquatic life with long lasting effects.

**Persistence and degradability**

No data available

**Bioaccumulative potential**

No data available

**Mobility in soil**

No data available

**Endocrine disrupting properties**

This product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms as no components meets the criteria.

**Other adverse effects**

Hazardous water pollutant.

**Further information**

Do not flush into surface water or sanitary sewer system.
In aqueous systems, formation of unsoluble and chemically inert (inactive) polyureas.

## 13. Disposal considerations

**Waste treatment methods**

**Disposal recommendations**

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

**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.

## 14. Transport information

**U.S. DOT 49 CFR 172.101**

| | |
|---|---|
| **UN number or ID number:** | UN 1993 |
| **Proper shipping name:** | flammable liquids, n.o.s. (Xylene (mixed isomers)) |
| **Transport hazard class(es):** | 3 |
| **Packing group:** | III |
| Hazard label: | 3 |

**Marine transport (IMDG)**

| | |
|---|---|
| **UN number or ID number:** | UN 1993 |
| **UN proper shipping name:** | FLAMMABLE LIQUID, N.O.S. (Xylene, ethyl benzene) |
| **Transport hazard class(es):** | 3 |
| **Packing group:** | III |
| Hazard label: | 3 |

| | |
|---|---|
| Marine pollutant: | No |
| Limited quantity: | 5 L / 30 kg |
| Excepted quantity: | E1 |
| EmS: | F-E, S-E |

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

| | |
|---|---|
| **UN number or ID number:** | UN 1993 |
| **UN proper shipping name:** | FLAMMABLE LIQUID, N.O.S. (Xylene, ethyl benzene) |
| **Transport hazard class(es):** | 3 |
| **Packing group:** | III |
| Hazard label: | 3 |

| | |
|---|---|
| Special Provisions: | A3 |
| 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 |

**Environmental hazards**

ENVIRONMENTALLY HAZARDOUS: No

**Special precautions for user**

Handle in accordance with good industrial hygiene and safety practice.

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code**

The transport takes place only in approved and appropriate packaging.

## 15. Regulatory information

**U.S. Regulations**

**National regulatory information**

SARA Section 304 CERCLA:

Xylene (mixed isomers) (1330-20-7): Reportable quantity = 100 (45.4) lbs. (kg)

Ethylbenzene (100-41-4): Reportable quantity = 1,000 (454) lbs. (kg)

SARA Section 311/312 Hazards:

Xylene (mixed isomers) (1330-20-7): Fire hazard, Immediate (acute) health hazard, Delayed (chronic) health hazard

Polymeric diphenylmethane diisocyanate (9016-87-9): Delayed (chronic) health hazard, Immediate (acute)

health hazard
Ethylbenzene (100-41-4): Fire hazard, Immediate (acute) health hazard, Delayed (chronic) health hazard
Tosyl isocyanate (4083-64-1): Immediate (acute) health hazard

SARA Section 313 Toxic release inventory:
Xylene (mixed isomers) (1330-20-7): De minimis limit = 1.0 %, Reportable threshold = Standard
Polymeric diphenylmethane diisocyanate (9016-87-9): De minimis limit = 1.0 %, Reportable threshold = Standard
Ethylbenzene (100-41-4): De minimis limit = 0.1 %, Reportable threshold = Standard

Clean Air Act Section 112(b):
Xylene (mixed isomers) (1330-20-7), Ethylbenzene (100-41-4)

**State Regulations**

**Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65, State of California)**

WARNING: This product can expose you to chemicals including Ethylbenzene (cancer), which are known to the State of California to cause cancer, birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

## 16. Other information

**Hazardous Materials Information Label (HMIS)**

| | |
|---|---|
| Health: | *2 |
| Flammability: | 2 |
| Physical Hazard: | 0 |

**NFPA Hazard Ratings**

| | |
|---|---|
| Health: | 2 |
| Flammability: | 2 |
| Reactivity: | 0 |
| Unique Hazard: | |

**Changes**

| | |
|---|---|
| Revision date: | 10.01.2023 |
| Revision No: | 1,6 |

This data sheet contains changes from the previous version in section(s): 2,4,9,11,14.

**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

**Other data**

The information in this document is based on the present state of knowledge and is applicable to the product with regard to appropriate safety precautions.
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.)*