



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

1.1. Product identifier

TIP TOP TOPCOAT LSE

Art.-No.

590 3490, 590 3500

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

Use of the substance/mixture

Anti-stick coating

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. 2

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. 1A

Respiratory or skin sensitisation: Skin Sens. 1

Carcinogenicity: Carc. 2

Specific target organ toxicity - single exposure: STOT SE 3

Specific target organ toxicity - single exposure: STOT SE 3

Specific target organ toxicity - repeated exposure: STOT RE 2

Hazard Statements:

Highly flammable liquid and vapour.

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.

May cause drowsiness or dizziness.

Suspected of causing cancer.

May cause damage to organs through prolonged or repeated exposure.

2.2. Label elements

Hazardous components which must be listed on the label

Aromatic polyisocyanate

Diphenylmethane-4,4'-diisocyanate

4,4'-Methylenediphenyl diisocyanate, oligomers

Diphenylmethane-2,4'-diisocyanate

Diphenylmethane-2,2'-diisocyanate

Signal word:

Danger

Pictograms:



Hazard statements

H225	Highly flammable liquid and vapour.
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.

Precautionary statements

P201	Obtain special instructions before use.
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P260	Do not breathe vapour.
P271	Use only outdoors or in a well-ventilated area.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
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.
P405	Store locked up.

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.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Chemical characterization

Preparation with isocyanates

TIP TOP TOPCOAT LSE

Revision date: 16.06.2015

Revision No: 1,2

Product code: 00359-0001

Hazardous components

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification according to Regulation (EC) No. 1272/2008 [CLP]			
67815-87-6	Aromatic polyisocyanate			< 40 %
	Acute Tox. 4, Skin Irrit. 2, Eye Irrit. 2, Resp. Sens. 1, Skin Sens. 1, STOT RE 2; H332 H315 H319 H334 H317 H373			
141-78-6	Ethyl acetate			< 35 %
	205-500-4	607-022-00-5	01-2119475103-46	
	Flam. Liq. 2, Eye Irrit. 2, STOT SE 3; H225 H319 H336 EUH066			
101-68-8	Diphenylmethane-4,4'-diisocyanate			< 20 %
	202-966-0	615-005-00-9	01-2119457014-47	
	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			
32055-14-4	4,4'-Methylenediphenyl diisocyanate, oligomers			< 10 %
	500-079-6		01-2119457024-46	
	Carc. 2, Acute Tox. 4, Skin Irrit. 2, Eye Irrit. 2, Resp. Sens. 1A, Skin Sens. 1, STOT SE 3, STOT RE 2; H351 H332 H315 H319 H334 H317 H335 H373			
5873-54-1	Diphenylmethane-2,4'-diisocyanate			< 5 %
	227-534-9	615-005-00-9	01-2119480143-45	
	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			
2536-05-2	Diphenylmethane-2,2'-diisocyanate			< 1 %
	219-799-4	615-005-00-9	01-2119927323-43	
	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			

Full text of H and EUH 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.
 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

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



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.

Harmful if inhaled.

Suspected of causing cancer.

May cause respiratory irritation.

May cause damage to organs through prolonged or repeated exposure.

May cause drowsiness or dizziness.

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

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.

Unsuitable extinguishing media

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

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.
 Local exhaust.
 Use only in well-ventilated areas.

Advice on protection against fire and explosion

Keep away from heat and sources of ignition.
 Take precautionary measures against static discharges.
 Vapours can form an explosive mixture with air.

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.
 Pay attention to anti-explosion rules.

Advice on storage compatibility

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

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)

Anti-stick coating

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Exposure limits (EH40)

CAS No	Substance	ppm	mg/m ³	fibres/ml	Category	Origin
141-78-6	Ethyl acetate	200	-		TWA (8 h)	WEL
		400	-		STEL (15 min)	WEL
-	Isocyanates, all (as -NCO) Except methyl isocyanate	-	0.02		TWA (8 h)	WEL
		-	0.07		STEL (15 min)	WEL

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.
 Remove and wash contaminated clothes before re-use.

Eye/face protection

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

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/>



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:	Greenish
Odour:	Fruity

Changes in the physical state

Initial boiling point and boiling range:	approx. 77 °C	
Flash point:	- 4 °C	
Lower explosion limits:	2,1 vol. %	
Upper explosion limits:		
Ignition temperature:	> 460 °C	
Density (at 20 °C):	1,08 g/cm ³	
Water solubility: (at 20 °C)	Reacts with water.	
Solubility in other solvents	Acetone, dichloromethane: Miscible	
Flow time: (at 23 °C)	< 30 s	4 DIN EN ISO 2431
Solvent content:	< 70 %	

9.2. Other information

No data available.

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

Reacts with:

Water, amines, alcohols

Acids and bases.

10.4. Conditions to avoid

Vapours may form explosive mixture with air.

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

Container should not be gas-tight closed. Risk of bursting.

10.5. Incompatible materials

Water, amines, alcohols

Acids and bases.

10.6. Hazardous decomposition products

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

Hydrogen cyanide gas, Isocyanates

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity

Harmful if inhaled.

No toxicological data available.



Irritation and corrosivity

Causes skin irritation.
Causes serious eye irritation.

Sensitising effects

May cause an allergic skin reaction. (Aromatic polyisocyanate), (Diphenylmethane-4,4'-diisocyanate), (4,4'-Methylenediphenyl diisocyanate, oligomers), (Diphenylmethane-2,4'-diisocyanate), (Diphenylmethane-2,2'-diisocyanate)
May cause allergy or asthma symptoms or breathing difficulties if inhaled. (Aromatic polyisocyanate), (Diphenylmethane-4,4'-diisocyanate), (4,4'-Methylenediphenyl diisocyanate, oligomers), (Diphenylmethane-2,4'-diisocyanate), (Diphenylmethane-2,2'-diisocyanate)

STOT-single exposure

May cause respiratory irritation. (Diphenylmethane-4,4'-diisocyanate), (4,4'-Methylenediphenyl diisocyanate, oligomers), (Diphenylmethane-2,4'-diisocyanate), (Diphenylmethane-2,2'-diisocyanate)
May cause drowsiness or dizziness. (Ethyl acetate)

Severe effects after repeated or prolonged exposure

May cause damage to organs through prolonged or repeated exposure. (Aromatic polyisocyanate), (Diphenylmethane-4,4'-diisocyanate), (4,4'-Methylenediphenyl diisocyanate, oligomers), (Diphenylmethane-2,4'-diisocyanate), (Diphenylmethane-2,2'-diisocyanate)

Carcinogenic/mutagenic/toxic effects for reproduction

Suspected of causing cancer. (Diphenylmethane-4,4'-diisocyanate), (4,4'-Methylenediphenyl diisocyanate, oligomers), (Diphenylmethane-2,4'-diisocyanate), (Diphenylmethane-2,2'-diisocyanate)

Aspiration hazard

Based on available data, the classification criteria are not met.

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

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

Low hazard to waters.

Further information

Do not flush into surface water or sanitary sewer system.
In aqueous systems, formation of insoluble and chemically inert (inactive) polyureas.
The transformation with water into CO₂ and polyureas is strongly stimulated by so-called liquid crushers (ammonia, soda or alcohols, combined with liquid soap).

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

TIP TOP TOPCOAT LSE

Revision date: 16.06.2015

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Product code: 00359-0001

080111 WASTES FROM THE MANUFACTURE, FORMULATION, SUPPLY AND USE (MFSU) OF COATINGS (PAINTS, VARNISHES AND VITREOUS ENAMELS), ADHESIVES, SEALANTS AND PRINTING INKS; wastes from MFSU and removal of paint and varnish; waste paint and varnish 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 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

Land transport (ADR/RID)

14.1. UN number: UN 1263

14.2. UN proper shipping name: Paint

14.3. Transport hazard class(es): 3

14.4. Packing group: II

Hazard label: 3



Classification code: F1

Limited quantity: 5 L / 30 kg

Excepted quantity: E2

Transport category: 2

Hazard No: 33

Tunnel restriction code: D/E

Inland waterways transport (ADN)

14.1. UN number: UN 1263

14.2. UN proper shipping name: Paint

14.3. Transport hazard class(es): 3

14.4. Packing group: II

Hazard label: 3



Classification code: F1

Limited quantity: 5 L / 30 kg

Excepted quantity: E2

Marine transport (IMDG)

14.1. UN number: UN 1263

14.2. UN proper shipping name: Paint

14.3. Transport hazard class(es): 3

14.4. Packing group: II

Hazard label: 3



Marine pollutant: No

Limited quantity: 5 L / 30 kg

Excepted quantity: E2

EmS: F-E, S-E



Air transport (ICAO)

14.1. UN number:	UN 1263
14.2. UN proper shipping name:	Paint
14.3. Transport hazard class(es):	3
14.4. Packing group:	II
Hazard label:	3



Limited quantity Passenger:	1 L	
Passenger LQ:	Y341	
Excepted quantity:	E2	
IATA-packing instructions - Passenger:		353
IATA-max. quantity - Passenger:		5 L
IATA-packing instructions - Cargo:		364
IATA-max. quantity - Cargo:		60 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.

SECTION 15: Regulatory information

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

EU regulatory information

2004/42/EC (VOC): < 35%

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

Additional information

Chemical prohibition regulation consider.

15.2. Chemical safety assessment

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

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

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LD = Lethal dose

LC = Lethal concentration

EC = Effect concentration

IC = Median immobilisation concentration or median inhibitory concentration

Relevant H- and EUH-phrases (Number and full text)

H225	Highly flammable liquid and vapour.
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.
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.)