



Safety Data Sheet

according to Regulation (EC) No 1907/2006

TIP TOP TOPCOAT LSE

Revision date: 25.07.2019

Product code: 00359-0001

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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)
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. 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. 1

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.

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 drowsiness or dizziness.

May cause damage to organs through prolonged or repeated exposure.

2.2. Label elements

Regulation (EC) No. 1272/2008

Hazard components for labelling

Aromatic polyisocyanate

Diphenylmethanediisocyanate, isomers and homologues

Diphenylmethane-4,4'-diisocyanate

Diphenylmethane-2,4'-diisocyanate

Diphenylmethane-2,2'-diisocyanate

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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 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.
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

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**

Preparation with isocyanates

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Hazardous components

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	GHS Classification			
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			
9016-87-9	Diphenylmethanediisocyanate, isomers and homologues			< 25 %
			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			
101-68-8	Diphenylmethane-4,4'-diisocyanate			< 5 %
	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			
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 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.
- 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.



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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).



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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.

Hints on joint storage

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.

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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

	Test method
pH-Value:	n.d.

Changes in the physical state

Melting point:	n.d.
Initial boiling point and boiling range:	approx. 77 °C
Sublimation point:	n.a.
Softening point:	n.d.
Flash point:	- 4 °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:	2,1 vol. %
Upper explosion limits:	n.d.
Ignition temperature:	> 460 °C

Auto-ignition temperature

Solid:	n.a.
Gas:	n.a.
Decomposition temperature:	n.d.

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Oxidizing properties

Not oxidising.

Vapour pressure: n.d.

Density (at 20 °C): 1,08 g/cm³

Bulk density: n.a.

Water solubility:
(at 20 °C) Reacts with water.**Solubility in other solvents**

Acetone, dichloromethane: Miscible

Partition coefficient: n.d.

Viscosity / dynamic: n.d.

Viscosity / kinematic: n.d.

Flow time:
(at 23 °C) < 30 s 4 DIN EN ISO 2431

Vapour density: n.d.

Evaporation rate: n.d.

Solvent separation test: n.d.

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 productsCarbon 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.

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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. (Aromatic polyisocyanate; Diphenylmethanediisocyanate, isomers and homologues; Diphenylmethane-4,4'-diisocyanate; Diphenylmethane-2,4'-diisocyanate; Diphenylmethane-2,2'-diisocyanate)
May cause an allergic skin reaction. (Aromatic polyisocyanate; Diphenylmethanediisocyanate, isomers and homologues; Diphenylmethane-4,4'-diisocyanate; Diphenylmethane-2,4'-diisocyanate; Diphenylmethane-2,2'-diisocyanate)

Carcinogenic/mutagenic/toxic effects for reproduction

Suspected of causing cancer. (Diphenylmethanediisocyanate, isomers and homologues; Diphenylmethane-4,4'-diisocyanate; Diphenylmethane-2,4'-diisocyanate; Diphenylmethane-2,2'-diisocyanate)
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. (Diphenylmethanediisocyanate, isomers and homologues)
May cause drowsiness or dizziness. (Ethyl acetate)

STOT-repeated exposure

May cause damage to organs through prolonged or repeated exposure. (Aromatic polyisocyanate; Diphenylmethanediisocyanate, isomers and homologues)

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**12.1. Toxicity**

Ecological data are not available.

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

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).

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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

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 hazardous substances; 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

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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-TI/IATA-DGR)

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 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 56: Diphenylmethane-4,4'-diisocyanate; Diphenylmethane-2,4'-diisocyanate;
Diphenylmethane-2,2'-diisocyanate

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

Information according to 2012/18/EU (SEVESO III): P5c FLAMMABLE LIQUIDS

National regulatory information

Employment restrictions: Observe restrictions to employment for juvenils 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.

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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
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)

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.)