

Safety Data Sheet

according to 29 CFR 1910.1200(g)

TIP TOP SOLUTION HL-TNL4

Revision date: 03/25/2025

Product code: 00156-0444

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1. Identification**Product identifier**

TIP TOP SOLUTION HL-TNL4

Art.-No.

538 1135, 538 1143, 538 1157, 538 1162

Recommended use of the chemical and restrictions on use**Use of the substance/mixture**

Adhesive

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

Company name: REMA TIP TOP AG
Street: Gruber Strasse 65
Place: D-85586 Poing
Telephone: +49 (0) 8121 / 707 - 100
Responsible Department: Responsible for the safety data sheet: sds@gbk-ingelheim.de

Supplier

Company name: REMA TIP TOP / North America Inc.
Street: 1500 Industrial Blvd
Place: Madison, GA 30650, USA
Telephone: +1 800 225 7362,
Internet: www.rematiptop.com

Emergency phone number:

INTERNATIONAL: +49 - (0) 6132 - 84463, GBK GmbH (24h - 7d/w - 365d/a)
(USA domestic) 1 800 535 5053 or international (001) 352 323 3500
Infotrac/GBK GmbH-ID: 93591

2. Hazard(s) identification**Classification of the chemical****29 CFR Part 1910.1200**

Flammable liquids: Flam. Liq. 2
Reproductive toxicity: Repr. 1B
Skin corrosion/irritation: Skin Irrit. 2
Respiratory or skin sensitization: Skin Sens. 1
Specific target organ toxicity single exposure: STOT SE 3 (narcotic effects)
Hazardous to the aquatic environment: Aquatic Chronic 2

Label elements**29 CFR Part 1910.1200****Signal word:** Danger**Pictograms:****Hazard statements**

Highly flammable liquid and vapor
Causes skin irritation
May cause an allergic skin reaction
May damage fertility or the unborn child
May cause drowsiness or dizziness

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Toxic to aquatic life with long lasting effects

Precautionary statements

Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

Do not breathe vapour.

Do not get in eyes, on skin, or on clothing.

Wear protective gloves/protective clothing/eye protection/face protection.

If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

If inhaled: Remove person to fresh air and keep comfortable for breathing.

Call a poison center/doctor if you feel unwell.

Avoid release to the environment.

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**

Preparation solved in petroleum spirit

Hazardous components

CAS No	Components	Quantity
64742-49-0	Naphtha (petroleum) [Hydrocarbons, C6-C7, n-alkanes, iso-alkanes, cyclic compounds, < 3% n-hexane]	< 60 %
64742-49-0	Naphtha (petroleum) [Hydrocarbons, C6, isoalkanes, < 3% n-hexane]	< 20 %
8050-09-7	Colophonium	< 1 %
108-46-3	1,3-Dihydroxybenzene	< 1 %
100-97-0	Methenamine	< 1 %
793-24-8	N-(1,3-Dimethylbutyl)-N'-phenyl-p-phenylenediamine	< 0,3 %
90-30-2	N-phenyl-1-naphthylamine	< 1 %

Further Information

According to note P to the regulation (EC) no. 1272/2008, "Naphtha (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.

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.

After inhalation

Move to fresh air in case of accidental inhalation of vapours.

Seek medical treatment immediately.

After contact with skin

Wash off with soap and plenty of water.

Consult a doctor if skin irritation persists.

After contact with eyes

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.

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Summon a doctor immediately.

After ingestion

Do not induce vomiting.

Rinse out mouth and give plenty of water to drink.

Never give anything by mouth to an unconscious person.

Summon a doctor immediately.

The decision whether to induce vomiting or not is to be taken by a physician.

Most important symptoms and effects, both acute and delayed

May cause drowsiness or dizziness.

Causes skin irritation.

May cause an allergic skin reaction.

May damage fertility. May damage the unborn child.

Attention. Beware of aspiration danger.

Indication of any immediate medical attention and special treatment needed

Treat symptoms.

5. Fire-fighting measures**Extinguishing media****Suitable extinguishing media**

Foam, carbon dioxide (CO₂), dry chemical, water-spray.

Unsuitable extinguishing media

Full water jet.

Specific hazards arising from the chemical

Fire may produce:

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

Special protective equipment and precautions for fire-fighters

Use breathing apparatus with independent air supply.

Protective suit.

Additional information

Cool containers at risk with water spray jet.

The vapour/air mixture is explosive, even in empty, uncleaned receptacles.

Vapours are heavier than air and spread along ground.

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.

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

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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.

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.

Use only in thoroughly ventilated areas.

Vapours are heavier than air and spread along ground.

Advice on protection against fire and explosion

Keep away from heat and sources of ignition.

Do not smoke.

Take precautionary measures against static discharges.

Pay attention to anti-explosion protection rules: In case of an explosive atmosphere use only explosion-proof equipment.

Advice on general occupational hygiene

Wash hands before breaks and immediately after handling the product.

When using do not eat, drink or smoke.

Treat subsequently with skin cream.

Remove and wash contaminated clothing before re-use.

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 protection rules.

Hints on joint storage

Incompatible with oxidizing agents.

Further information on storage conditions

Keep away from food, drink and animal feeding stuffs.

8. Exposure controls/personal protection**Control parameters**

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Exposure limits

CAS No	Substance	ppm	mg/m ³	f/cc	Category	Origin
8050-09-7	(OLD) Rosin core solder thermal decomposition products (colophony)	-	-		as low as possible	ACGIH-2024
1333-86-4	Carbon black (in presence of polycyclic aromatic hydrocarbons (PAHs)) (as PAHs)	-	0.1		TWA (8 h)	REL
1333-86-4	Carbon black (inhalable fraction)		3		TWA (8 h)	ACGIH-2024
1333-86-4	Carbon black	-	3.5		TWA (8 h)	REL
100-97-0	Hexamethylenetetramine (inhalable fraction and vapor)	0.17	1		TWA (8 h)	ACGIH-2024
9006-04-6	Natural rubber latex as inhalable allergenic protein	-	0.0001		TWA (8 h)	ACGIH-2024
108-46-3	Resorcinol	10	45		TWA (8 h)	REL
		20	90		STEL (15 min)	REL
108-46-3	Resorcinol	10	45		TWA (8 h)	ACGIH-2024
		20	90		STEL (15 min)	ACGIH-2024
7631-86-9	Silica, amorphous	-	6		TWA (8 h)	REL
1314-13-2	Zinc oxide (Dust)	-	5		TWA (8 h)	REL
		-	C 15		Ceiling	REL
1314-13-2	Zinc oxide (respirable fraction)		2		TWA (8 h)	ACGIH-2024
			10		STEL (15 min)	ACGIH-2024
1314-13-2	Zinc oxide Respirable fraction	-	5		TWA (8 h)	REL

Exposure controls

Appropriate engineering controls

- Pay attention to anti-explosion protection rules.
- Ensure adequate ventilation, especially in confined areas.

Individual protection measures, such as personal protective equipment

Eye/face protection

- Tightly fitting goggles.

Hand protection

- Protective gloves resistant to chemicals made of nitrile, Minimum coat thickness 0.4 mm, Permeation resistance (wear duration) approx. 480 minutes, i.e. protective glove <Camatril Velours 730> 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.

Skin protection

- Solvent-resistant apron

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:	Black
Odor:	Hydrocarbon-like

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Test method

Changes in the physical state

Melting point/freezing point:	< - 50 °C
Boiling point or initial boiling point and boiling range:	60 - 95 °C *)
Sublimation point:	n.a.
Softening point:	n.d.
Flash point:	- 25 °C *)

Flammability

Solid/liquid:	n.a.
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Explosive properties

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

Lower explosion limits:	0,6 vol. % *)
Upper explosion limits:	8,3 vol. % *)
Auto-ignition temperature:	n.d.

Self-ignition temperature

Solid:	n.a.
Gas:	n.a.
Decomposition temperature:	n.d.
pH-Value:	n.d.
Viscosity / dynamic:	< 1200 mPa·s
Viscosity / kinematic: (at 40 °C)	> 20,5 mm²/s
Flow time:	n.d.
Water solubility: (at 20 °C)	Immiscible

Solubility in other solvents

n.d.	
Partition coefficient n-octanol/water:	n.d.
Vapor pressure: (at 20 °C)	100 - 200 hPa *)
Density:	< 1 g/cm³
Bulk density:	n.a.
Relative vapour density:	n.d.

Other information

Information with regard to physical hazard classes

Sustained combustibility:	Sustained combustibility
Oxidizing properties	
Not oxidising.	

Other safety characteristics

Solvent separation test:	n.d.
Solvent content:	< 80 %
Evaporation rate:	n.d.

Further Information

*) Naphtha (petroleum)

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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

Reactions with oxidizing agents.

Conditions to avoid

To avoid thermal decomposition, do not overheat.

Heating can release vapours which can be ignited.

Vapour/air-mixtures are explosive at intense warming.

Incompatible materials

Oxidizing agents

Hazardous decomposition products

No hazardous decomposition products known.

Fire may produce:

Carbon monoxide (CO), carbon dioxide (CO₂) and nitrogen oxides (NO_x)**11. Toxicological information****Information on toxicological effects****Acute toxicity**

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

No toxicological data available.

Naphtha (petroleum)

LD50/oral/rat: > 2000 mg/kg

LD50/dermal/rabbit: > 2000 mg/kg

LC50/inhalation: > 20 mg/l/4h

ATEmix calculated

ATE (oral) > 2000 mg/kg; ATE (dermal) > 2000 mg/kg; ATE (inhalation vapour) > 20 mg/l; ATE (inhalation dust/mist) > 5 mg/l

Irritation and corrosivity

Skin corrosion/irritation: Causes skin irritation

Serious eye damage/eye irritation: Based on available data, the classification criteria are not met.

Sensitizing effects

May cause an allergic skin reaction (Colophonium; 1,3-Dihydroxybenzene; Methenamine; N-(1,3-Dimethylbutyl)-N'-phenyl-p-phenylenediamine; N-phenyl-1-naphthylamine)

Carcinogenic/mutagenic/toxic effects for reproduction

May damage fertility or the unborn child (N-(1,3-Dimethylbutyl)-N'-phenyl-p-phenylenediamine)

Germ cell mutagenicity: Based on available data, the classification criteria are not met.

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

Specific target organ toxicity (STOT) - single exposure

May cause drowsiness or dizziness (Naphtha (petroleum) [Hydrocarbons, C6-C7, n-alkanes, iso-alkanes, cyclic compounds, < 3% n-hexane])

Specific target organ toxicity (STOT) - repeated exposure

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

Carcinogenicity (OSHA): No ingredient of this mixture is listed.

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Carcinogenicity (IARC): Carbon black (CAS 1333-86-4) is listed in group 2B. Silica, amorphous (CAS 7631-86-9) is listed in group 3. Resorcinol (CAS 108-46-3) is listed in group 3.

Carcinogenicity (NTP): No ingredient of this mixture is listed.

Aspiration hazard

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

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

Contact with eyes may cause irritation.

Inhalation of high vapour concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting.

A longer or repeated contact may lead to irritation of eyes and mucous membranes.

Repeated or prolonged exposure may cause skin irritation and dermatitis, due to degreasing properties of the product.

Lead has cumulative properties, wherefore lead compounds can be health-damaging in the event of long-term or frequent exposure. Following symptoms are resulting from chronic lead uptake: fatigue, headaches, constipation and colic.

May cause sensitization in susceptible persons by skin contact.

12. Ecological information

Ecotoxicity

Ecological data are not available.

Naphtha (petroleum)

LC50/fish: 1 - 10 mg/l

EC50/Daphnia: 1 - 10 mg/l

EC50/Algae: 10 - 100 mg/l

NOEC/Fish: 1 - 10 mg/l

NOEC/Daphnia: 1 - 10 mg/l

Toxic to aquatic life with long lasting effects.

Persistence and degradability

Naphtha (petroleum)

Liable to easy biological disintegration.

Bioaccumulative potential

Naphtha (petroleum)

A bioaccumulation potential is to be expected.

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 meet the criteria.

Other adverse effects

Slightly water hazardous.

Further information

Do not flush into surface water or sanitary sewer system.

13. Disposal considerations

Waste treatment methods

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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 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.

14. Transport information

U.S. DOT 49 CFR 172.101

UN number or ID number: UN 1133
Proper shipping name: ADHESIVES
Transport hazard class(es): 3
Packing group: II
Hazard label: 3



Marine transport (IMDG)

UN number or ID number: UN 1133
UN proper shipping name: ADHESIVES (Naphtha (petroleum))
Transport hazard class(es): 3
Packing group: II
Hazard label: 3



Marine pollutant: Yes
Special Provisions: -
Limited quantity: 5 L / 30 kg
Excepted quantity: E2
EmS: F-E, S-D

Air transport (ICAO-TI/IATA-DGR)

UN number or ID number: UN 1133
UN proper shipping name: ADHESIVES
Transport hazard class(es): 3
Packing group: II
Hazard label: 3



Special Provisions: A3
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

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Environmental hazards

ENVIRONMENTALLY HAZARDOUS: Yes



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 Inventory TSCA

All of the components are on the TSCA Inventory.

National regulatory information

SARA Section 304 CERCLA:

Resorcinol (108-46-3): Reportable quantity = 5,000 (2270) lbs. (kg)

SARA Section 311/312 Hazards:

Naphtha (petroleum) [Hydrocarbons, C6-C7, n-alkanes, iso-alkanes, cyclic compounds, < 3% n-hexane]

(64742-49-0): Fire hazard, Immediate (acute) health hazard

Naphtha (petroleum) [Hydrocarbons, C6, isoalkanes, < 3% n-hexane] (64742-49-0): Fire hazard, Immediate (acute) health hazard

Colophonium (8050-09-7): Immediate (acute) health hazard

Resorcinol (108-46-3): Immediate (acute) health hazard

Methenamine (100-97-0): Fire hazard, Immediate (acute) health hazard

N-(1,3-Dimethylbutyl)-N'-phenyl-p-phenylenediamine (793-24-8): Immediate (acute) health hazard

N-phenyl-1-naphthylamine (90-30-2): Immediate (acute) health hazard

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 Carbon black (airborne, unbound particles of respirable size) (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.

Additional information

This product contains max VOC: < 80 %

16. Other information

Hazardous Materials Identification System (HMIS)

Health: *2

Flammability: 3

Physical Hazard: 0

NFPA Hazard Ratings

Health: 2

Flammability: 3

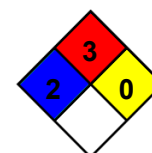
Reactivity: 0

Unique Hazard:

Changes

Revision date: 25.03.2025

Revision No: 1,7



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This data sheet contains changes from the previous version in section(s): 7,9,12.

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 relevant ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)