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

1.1. Product identifier

TIP TOP SOLVENT LIQUID BUFFER SPRAY

Art.-No.

505 9692, 505 9693, 559 9050

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

Use of the substance/mixture

Cleaning agent

1.3. Details of the supplier of the safety data sheet

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

1.4. Emergency telephone number:

INTERNATIONAL: +49 - (0) 6132 - 84463, GBK GmbH (24h - 7d/w - 365d/a)
Public Poisons Information Line: +353 (0) 1 809 2166 (8am-10pm 7 days a week)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Regulation (EC) No 1272/2008

Aerosol 1; H222-H229
Skin Irrit. 2; H315
Eye Irrit. 2; H319
STOT SE 3; H336
Aquatic Chronic 2; H411

Full text of hazard statements: see SECTION 16.

2.2. Label elements

Regulation (EC) No 1272/2008

Hazard components for labelling

Ethyl acetate
Hydrocarbons, C7, n-alkanes, isoalkanes, cycloalkanes

Signal word: Danger

Pictograms:

Hazard statements

H222	Extremely flammable aerosol.
H229	Pressurised container: May burst if heated.
H319	Causes serious eye irritation.
H315	Causes skin irritation.
H336	May cause drowsiness or dizziness.
H411	Toxic to aquatic life with long lasting effects.

Precautionary statements

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P211	Do not spray on an open flame or other ignition source.
P251	Do not pierce or burn, even after use.
P261	Avoid breathing spray.
P403	Store in a well-ventilated place.
P410+P412	Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.

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.
The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605
In use, may form flammable/explosive vapour-air mixture.
Heating will cause pressure rise with risk of bursting.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Chemical characterization

Preparation with aliphatic hydrocarbons (free of aromatic hydrocarbons)

Hazardous components

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification (Regulation (EC) No 1272/2008)			
64742-49-0	Hydrocarbons, C7, n-alkanes, isoalkanes, cycloalkanes			25 - 50 %
	927-510-4		01-2119475515-33	
	Flam. Liq. 2, Skin Irrit. 2, STOT SE 3, Asp. Tox. 1, Aquatic Chronic 2; H225 H315 H336 H304 H411			
141-78-6	Ethyl acetate			25 - 50 %
	205-500-4	607-022-00-5	01-2119475103-46	
	Flam. Liq. 2, Eye Irrit. 2, STOT SE 3; H225 H319 H336 EUH066			
106-97-8	Butane			10 - 25 %
	203-448-7	601-004-00-0	01-2119474691-32	
	Flam. Gas 1, Press. Gas (Comp.); H220 H280			
74-98-6	Propane			10 - 25 %
	200-827-9	601-003-00-5	01-2119486944-21	
	Flam. Gas 1, Press. Gas (Comp.); H220 H280			
75-28-5	Isobutane			2,5 - 10 %
	200-857-2	601-004-00-0	01-2119485395-27	
	Flam. Gas 1, Press. Gas (Comp.); H220 H280			
110-82-7	Cyclohexane			< 1 %
	203-806-2	601-017-00-1	01-2119463273-41	
	Flam. Liq. 2, Skin Irrit. 2, STOT SE 3, Asp. Tox. 1, Aquatic Acute 1, Aquatic Chronic 1; H225 H315 H336 H304 H400 H410			

Full text of H and EUH statements: see section 16.

Further Information

According to note P to the directive 67/548/EEC, "Naphta (petroleum)" is not to be classified as "carcinogenic" ingredient because a benzene content (EINECS No. 200-753-7) is below 0.1 % by weight.

SECTION 4: First aid measures

4.1. Description of first aid measures

General information

Remove contaminated soaked clothing immediately.
Take away from danger area and lay down affected person.

After inhalation

Move to fresh air in case of accidental inhalation of vapours.
In the event of symptoms refer for medical treatment.

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.
Seek medical treatment by eye specialist.

After ingestion

Do not induce vomiting.
Rinse mouth.
Never give anything by mouth to an unconscious person.
Summon a doctor immediately.
Induce vomiting only upon the advice of a physician.

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

Causes serious eye irritation.
Causes skin irritation.
May cause drowsiness or dizziness.
Repeated exposure may cause skin dryness or cracking.
Attention. Beware, danger of aspiration.

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_2), water-spray.

Unsuitable extinguishing media

Full water jet.

5.2. Special hazards arising from the substance or mixture

Fire may produce:
carbon monoxide and carbon dioxide

5.3. Advice for firefighters

Use breathing apparatus with independent air supply.
Protective suit.

Additional information

Heating will cause pressure rise with risk of bursting.
Cool containers at risk with water spray jet.
Vapours can form an explosive mixture with air.
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

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.

6.2. Environmental precautions

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

6.3. 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.

6.4. Reference to other sections

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

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling

Avoid contact with the skin and the eyes.
Use only in thoroughly ventilated areas.

Advice on protection against fire and explosion

Do not smoke - volatile.
Keep away from open flames, hot surfaces and sources of ignition.
Pay attention to anti-explosion rules.
Do not spray on a naked flame or any other incandescent material.

Advice on general occupational hygiene

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.
Do not breath vapours or spray mist.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Protect against direct sun radiation.
Keep container tightly closed.
Use only in well-ventilated areas.
Avoid temperatures above 50°C.

Hints on joint storage

Incompatible with oxidizing agents.

Further information on storage conditions

Keep away from food, drink and animal feeding stuffs.

7.3. Specific end use(s)

Cleaning agent

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits

CAS No	Substance	ppm	mg/m³	fib/cm³	Category	Origin
74-98-6	Aliphatic hydrocarbon gases, Alkanes (C1-C3), Propane	-	-		Asphyxiant	
75-28-5	Butane, all isomers - Isobutane	1000	-		STEL (15 min)	
106-97-8	Butane, all isomers - n-butane	1000	-		STEL (15 min)	
110-82-7	Cyclohexane	200	700		TWA (8 h)	
141-78-6	Ethyl acetate	200	734		TWA (8 h)	
		400	1468		STEL (15 min)	

8.2. Exposure controls

Individual protection measures, such as personal protective equipment

Eye/face protection

Safety goggles with side protection (EN 166).
Eye wash bottle with pure water (EN 15154).

Hand protection

Protective gloves resistant to chemicals made off 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

Long sleeved clothing (DIN EN ISO 6530)

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:	Aerosol
Colour:	Colourless
Odour:	Fruity

Changes in the physical state

Melting point/freezing point:	n. d.
Boiling point or initial boiling point and boiling range:	n. d.
Sublimation point:	n. d.
Softening point:	n. d.
Pour point:	n. d.
Flash point:	< 0 °C

Flammability

Solid/liquid:	n.a.

Explosive properties

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

Lower explosion limits:	n. d.
Upper explosion limits:	n. d.
Auto-ignition temperature:	n. d.

Self-ignition temperature

Solid:	n.a.
Gas:	n. d.
Decomposition temperature:	n. d.
pH-Value:	n. d.
Viscosity / dynamic:	n. d.
Viscosity / kinematic:	n. d.
Flow time:	n. d.
Water solubility: (at 20 °C)	Immiscible

Solubility in other solvents

n. d.

Partition coefficient n-octanol/water:	n. d.
Vapour pressure: (at 20 °C)	3000 hPa
Vapour pressure: (at 50 °C)	< 10000 hPa
Density (at 20 °C):	0,665 g/cm³
Bulk density:	n.a.
Relative vapour density:	n. d.

9.2. 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:	n. d.
Evaporation rate:	n. d.

Further 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

Reactions with oxidising agents.

10.4. Conditions to avoid

Vapours may form explosive mixture with air.
Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50 °C. Do not pierce or burn, even after use.
Heating will cause pressure rise with risk of bursting.

10.5. Incompatible materials

Oxidizing agents

10.6. Hazardous decomposition products

No hazardous decomposition products known.
Fire may produce:
Carbon monoxide and carbon dioxide

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity

Based on available data, the classification criteria are not met.
No toxical dates available.
Hydrocarbons, C7, n-alkanes, isoalkanes, cycloalkanes
LD50/oral/rat: > 5840 mg/kg (OECD 401)
LD50/dermal/rat: > 2920 mg/kg (OECD 402)
LC50/inhalativ/rat: > 23,3 mg/l/4 h

Hydrocarbons, C6, isoalkanes, < 3% n-hexane
LD50/oral/rat: 16570 mg/kg (OECD 401)
LD50/dermal/rat: 3350 mg/kg (OECD 402)
LC50/inhalativ/rat: 259354 mg/m³/4 h

Ethyl acetate
LD50/oral/rat: 4935 mg/kg
LD50/dermal/rat: > 5000 mg/kg
LC50/inhalativ/rat: 30 mg/l/4 h

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; ATE (inhalation gas) > 20000 ppm

Irritation and corrosivity

Skin corrosion/irritation: Causes skin irritation.
Serious eye damage/eye irritation: Causes serious eye irritation.

Sensitising effects

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

Carcinogenic/mutagenic/toxic effects for reproduction

Germ cell mutagenicity: Based on available data, the classification criteria are not met.
Carcinogenicity: 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 drowsiness or dizziness. (Hydrocarbons, C7, n-alkanes, isoalkanes, cycloalkanes; Ethyl acetate)

STOT-repeated exposure

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

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.

11.2. Information on other hazards

Endocrine disrupting properties

No data available

Other information

High concentration of vapours may cause irritation to eyes and respiratory system and produce narcotic effects.

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

SECTION 12: Ecological information

12.1. Toxicity

Ecological dates are not available.

Toxic to aquatic life with long lasting effects.

Hydrocarbons, C7, n-alkanes, isoalkanes, cycloalkanes

LC50/Oncorhynchus mykiss/96 h = 13,4 mg/kg

NOEC/Oncorhynchus mykiss/28 d = 1,534 mg/l

EC50/Daphnia magna/48 h = 3,0 mg/l

NOEC/Daphnia magna/21 h = 0,17 mg/l

ErC50/Pseudokirchneriela subcapitata/48 h = 20 mg/l

Hydrocarbons, C6, isoalkanes, < 3% n-hexane

LC50/Oncorhynchus mykiss/96 h = 18,27 mg/l

NOEC/Oncorhynchus mykiss/28 d = 4,089 mg/l

EC50/Daphnia magna/48 h = 31,9 mg/l

NOEC/Daphnia magna/21 h = 7,138 mg/l

ErC50/Pseudokirchneriela subcapitata/48 h = 3,034 mg/l

Ethyl acetate

LC50/EC50/EC50 : > 100 mg/l

Cyclohexane

EC50/Daphnia magna/48 h = 0,9 mg/l

IC50/Selenastrum capricornutum/72 h > 4 mg/l

n-Hexane

LC50/Fish/96 h = 1 - 10 mg/kg

EC50/Daphnia magna/48 h = 1 - 10 mg/kg

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

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

12.6. 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.

12.7. Other adverse effects

Hazard to waters.

Further information

Do not flush into surface water or sanitary sewer system.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Disposal recommendations

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

List of Wastes Code - residues/unused products

150111 WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED; packaging (including separately collected municipal packaging waste); metallic packaging containing a hazardous solid porous matrix (for example asbestos), including empty pressure containers; hazardous waste

Contaminated packaging

Offer empty spray cans to an established disposal company.

SECTION 14: Transport information

Land transport (ADR/RID)

14.1. UN number or ID number:	UN 1950
14.2. UN proper shipping name:	AEROSOLS
14.3. Transport hazard class(es):	2
14.4. Packing group:	-
Hazard label:	2.1

Classification code:	5F
Special Provisions:	190 327 344 625
Limited quantity:	1 L / 30 kg
Excepted quantity:	E0
Transport category:	2
Tunnel restriction code:	D

Inland waterways transport (ADN)

14.1. UN number or ID number:	UN 1950
14.2. UN proper shipping name:	AEROSOLS
14.3. Transport hazard class(es):	2
14.4. Packing group:	-
Hazard label:	2.1

Classification code:	5F
Special Provisions:	190 327 344 625
Limited quantity:	1 L / 30 kg
Excepted quantity:	E0

Marine transport (IMDG)

14.1. UN number or ID number:	UN 1950
14.2. UN proper shipping name:	AEROSOLS (Hydrocarbons)
14.3. Transport hazard class(es):	2.1
14.4. Packing group:	-
Hazard label:	2.1

Marine pollutant:	Yes

Special Provisions:	63 190 277 327 344 381 959
Limited quantity:	1000 mL / 30 kg
Excepted quantity:	E0
EmS:	F-D, S-U

Air transport (ICAO-TI/IATA-DGR)

14.1. UN number or ID number:	UN 1950
14.2. UN proper shipping name:	AEROSOLS, FLAMMABLE
14.3. Transport hazard class(es):	2.1
14.4. Packing group:	-
Hazard label:	2.1

Special Provisions:	A145 A167 A802
Limited quantity Passenger:	30 kg G
Passenger LQ:	Y203
Excepted quantity:	E0
IATA-packing instructions - Passenger:	203
IATA-max. quantity - Passenger:	75 kg
IATA-packing instructions - Cargo:	203
IATA-max. quantity - Cargo:	150 kg

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: Yes

14.6. Special precautions for user

Handle in accordance with good industrial hygiene and safety practice.

14.7. Maritime transport in bulk according to IMO instruments

The transport takes place only in approved and appropriate packaging.

Other applicable information

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, Entry 40, Entry 57, Entry 75

Directive 2004/42/EC on VOC in paints and varnishes:	665 g/l
Information according to Directive 2012/18/EU (SEVESO III):	P3a FLAMMABLE AEROSOLS
Additional information:	E2

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.
Water hazard class (D):	2 - obviously hazardous to water

15.2. Chemical safety assessment

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

SECTION 16: Other information

Changes

This data sheet contains changes from the previous version in section(s): 2,9,14,15.

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

Classification for mixtures and used evaluation method according to Regulation (EC) No 1272/2008 [CLP]

Classification	Classification procedure
Aerosol 1; H222-H229	
Skin Irrit. 2; H315	Calculation method
Eye Irrit. 2; H319	Calculation method
STOT SE 3; H336	Calculation method
Aquatic Chronic 2; H411	Calculation method

Relevant H and EUH statements (number and full text)

H220	Extremely flammable gas.
H222	Extremely flammable aerosol.
H225	Highly flammable liquid and vapour.
H229	Pressurised container: May burst if heated.
H280	Contains gas under pressure; may explode if heated.
H304	May be fatal if swallowed and enters airways.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H336	May cause drowsiness or dizziness.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.
EUH066	Repeated exposure may cause skin dryness or cracking.

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