Safety Data Sheet

according to UK REACH Regulation

TIP TOP SOLUTION T2-B4

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

1.1. Product identifier

TIP TOP SOLUTION T2-B4

Art.-No.

517 9015

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

Use of the substance/mixture

adhesive

1.3. 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 AUTOMOTIVE UK LTD
Street:	Westland Square, LEEDS
Place:	West Yorkshire, LS11 5XS
Telephone:	+44 (0)113 2770044
e-mail:	info@tip-top.co.uk
Internet:	www.rema-tiptop.co.uk

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

GB CLP Regulation

Hazard categories:
Flammable liquid: Flam. Liq. 2
Serious eye damage/eye irritation: Eye Irrit. 2
Specific target organ toxicity - single exposure: STOT SE 3
Hazardous to the aquatic environment: Aquatic Chronic 2
Hazard Statements:
Highly flammable liquid and vapour.
Causes serious eye irritation.
May cause drowsiness or dizziness.
Toxic to aquatic life with long lasting effects.

2.2. Label elements

GB CLP Regulation

Hazard components for labelling

Ethyl acetate
Hydrocarbons, C6-C7, n-alkanes, iso-alkanes, cyclic compounds, < 3% n-hexane

Signal word: Danger

Pictograms:

Hazard statements

H225	Highly flammable liquid and vapour.
H319	Causes serious eye 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.
P260	Do not breathe vapour.
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.
P312	Call a POISON CENTER/doctor if you feel unwell.
P273	Avoid release to the environment.

Special labelling of certain mixtures

EUH066	Repeated exposure may cause skin dryness or cracking.
EUH208	Contains Zinc bis(dibutyldithiocarbamate). May produce an allergic reaction.

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
Vapours may form explosive mixture with air.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Chemical characterization

Preparation with ethyl acetate

Hazardous components

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	GHS Classification			
141-78-6	Ethyl acetate			< 55 %
	205-500-4	607-022-00-5	01-2119475103-46	
	Flam. Liq. 2, Eye Irrit. 2, STOT SE 3; H225 H319 H336 EUH066			
92062-15-2	Hydrocarbons, C6-C7, n-alkanes, iso-alkanes, cyclic compounds, < 3% n-hexane [Solvent naphta (petroleum)]			< 30 %
	926-605-8		01-2119486291-36	
	Flam. Liq. 2, STOT SE 3, Asp. Tox. 1, Aquatic Chronic 2; H225 H336 H304 H411 EUH066			
1314-13-2	Zinc oxide			< 2,5 %
	215-222-5	030-013-00-7	01-2119463881-32	
	Aquatic Acute 1, Aquatic Chronic 1; H400 H410			
14634-93-6	Zinc-bis (N-ethyl-N-phenyldithiocarbamate)			< 1 %
	238-677-1			
	Eye Irrit. 2, Aquatic Chronic 4; H319 H413			
5459-93-8	N-Cyclohexyl-N-ethylamine			< 1 %
	226-733-8		01-2119949285-29	
	Flam. Liq. 3, Acute Tox. 3, Acute Tox. 4, Acute Tox. 4, Skin Corr. 1B, Eye Dam. 1, Aquatic Chronic 3; H226 H311 H332 H302 H314 H318 H412			
136-23-2	Zinc bis(dibutyldithiocarbamate)			< 0,5 %
	205-232-8	006-081-00-9	01-2119535161-51	
	Skin Irrit. 2, Eye Irrit. 2, Skin Sens. 1, STOT SE 3, Aquatic Acute 1, Aquatic Chronic 1; H315 H319 H317 H335 H400 H410			

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

Specific Conc. Limits, M-factors and ATE

CAS No	EC No	Chemical name	Quantity
	Specific Conc. Limits, M-factors and ATE		
141-78-6	205-500-4	Ethyl acetate	< 55 %
	dermal: LD50 = > 18000 mg/kg; oral: LD50 = 5620 mg/kg		
1314-13-2	215-222-5	Zinc oxide	< 2,5 %
	oral: LD50 = > 5000 mg/kg		
5459-93-8	226-733-8	N-Cyclohexyl-N-ethylamine	< 1 %
	inhalation: ATE = 11 mg/l (vapours); inhalation: ATE = 1,5 mg/l (dusts or mists); dermal: LD50 = 750 mg/kg; oral: LD50 = 590 mg/kg		

Further Information

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

SECTION 4: First aid measures

4.1. Description of first aid measures

General information

Remove contaminated soaked clothing immediately.
If you feel unwell, seek medical advice.
Take away from danger area and lay down affected person.

After inhalation

Move to fresh air in case of accidental inhalation of vapours or decomposition products.
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 out mouth and give plenty of water to drink.
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.
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

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, carbon dioxide, sulphur oxides and nitrogen oxides (NOx).

5.3. Advice for firefighters

Use breathing apparatus with independent air supply.
Protective suit.

Additional information

Vapours are heavier than air and spread along ground.
The vapour/air mixture is explosive, even in empty, uncleaned receptacles.
Cool containers at risk with water spray jet.
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.
Keep away sources of ignition.
Keep away noninvolved persons.

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.
Use only explosion-proof equipment.

6.2. Environmental precautions

Do not discharge into the drains/surface waters/ground water.

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).
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.
Keep a good ventilation and air-exhaust at the place of work.
Avoid contact with skin, eyes and clothing.

Advice on protection against fire and explosion

Keep away from heat and sources of ignition.
Do not smoke.
Take precautionary measures against static discharges.
Use only explosion-proof equipment.

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

Incompatible with:
Oxidizing agents
Nitrous acid and other nitrosating agents.

Further information on storage conditions

Keep away from food, drink and animal feeding stuffs.

7.3. Specific end use(s)

adhesive

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Exposure limits (EH40)

CAS No	Substance	ppm	mg/m³	fibres/ml	Category	Origin
141-78-6	Ethyl acetate	200	734		TWA (8 h)	WEL
		400	1468		STEL (15 min)	WEL

8.2. Exposure controls

Appropriate engineering controls

Ensure adequate ventilation, especially in confined areas.

Protective and hygiene measures

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 clothes before re-use.

Eye/face protection

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

Hand protection

Splash protection:
Protective gloves resistant to chemicals made off butyl, minimum coat thickness 0.7 mm, permeation resistance (wear duration) approx. 120 minutes, i.e. protective glove <Butoject 898> made by www.kcl.de.
Protective gloves resistant to chemicals made off nitrile, minimum coat thickness 0.4 mm, permeation resistance (wear duration) approx. 30 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:	Liquid
Colour:	Black
Odour:	Ester-like

		Test method
pH-Value:	n.d.	
Changes in the physical state		
Melting point/freezing point:	< - 20 °C	
Boiling point or initial boiling point and boiling range:	> 76 °C	
Sublimation point:	n.a.	
Softening point:	n.d.	
Flash point:	- 18 °C	
Sustaining combustion:	Sustaining combustion	
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:	2,1 vol. %

Upper explosion limits:	11,5 vol. %	
Auto-ignition temperature:	460 °C	
Self-ignition temperature		
Solid:	n.a.	
Gas:	n.a.	
Decomposition temperature:	n.d.	
Oxidizing properties		
Not oxidising.		
Vapour pressure:	n.d.	
Density (at 20 °C):	0,9 g/cm³	
Water solubility: (at 20 °C)	Immiscible	
Solubility in other solvents		
n.d.		
Partition coefficient n-octanol/water:	n.d.	
Viscosity / dynamic:	n.d.	
Viscosity / kinematic: (at 40 °C)	> 20,5 mm²/s	
Flow time: (at 23 °C)	> 30 s	3 DIN/ISO 2431
Relative vapour density:	n.d.	
Evaporation rate:	n.d.	
Solvent separation test:	0 %	
Solvent content:	< 80 %	

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

Reactions with oxidizing agents.

10.4. Conditions to avoid

To avoid thermal decomposition, do not overheat.
Vapour/air mixtures are explosive at intensive warming.
Heating can release vapours which can be ignited.

10.5. Incompatible materials

Nitrous acid and other nitrosating agents.
oxidizing agents

10.6. Hazardous decomposition products

Fire may produce:
Carbon monoxide, carbon dioxide, sulphur oxides, and nitrogen oxides (NOx).
An inappropriate handling, for instance major amounts of product combined with strong heat and nitrosating agents, renders possible a cleavage of nitrosamines in traces.

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in GB CLP Regulation

Acute toxicity

Based on available data, the classification criteria are not met.
No toxicological data available.

Irritation and corrosivity

Causes serious eye irritation.
Skin corrosion/irritation: Based on available data, the classification criteria are not met.

Sensitising effects

Contains Zinc bis(dibutyldithiocarbamate). May produce an allergic reaction.

Carcinogenic/mutagenic/toxic effects for reproduction

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

STOT-single exposure

May cause drowsiness or dizziness. (Ethyl acetate; Hydrocarbons, C6-C7, n-alkanes, iso-alkanes, cyclic compounds, < 3% n-hexane [Solvent naphta (petroleum)])

STOT-repeated exposure

Repeated exposure may cause skin dryness or cracking.

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

Effects of breathing high concentrations of vapour may include:
Headache, dizziness, weakness, unconsciousness.
Repeated or prolonged exposure may cause skin irritation and dermatitis, due to degreasing properties of the product.
An inappropriate handling, for instance major amounts of product combined with strong heat and nitrosating agents, renders possible a cleavage of nitrosamines in traces.

SECTION 12: Ecological information

12.1. Toxicity

Ecological data are not available.
Toxic to aquatic life with long lasting effects.
Hydrocarbons, C6-C7, n-alkanes, iso-alkanes, cyclic compounds, < 3% n-hexane
LC50/Oncorhynchus mykiss/96 h = 12 mg/l
EC50/Daphnia magna/48 h = 3 mg/l
EC50/Pseudokirchneriela subcapitata/72 h = 55 mg/l
Zinc oxide
EC50/Ceriodaphnia dubia/48 h = 0,01 - 0,1 mg/l
EC50/Selenastrum capricornutum/72 h = 0,01 - 0,1 mg/l
N-Cyclohexyl-N-ethylamine
EC50/Daphnia magna/48 h = 10 - 100 mg/l
ErC50/Desmodesmus subspicatus/72 h = 10 - 100 mg/l
Zinc bis(dibutyldithiocarbamate)
LC50/Oncorhynchus mykiss/96 h = 520 mg/l
LC50/Lepomis macrochirus/96 h = 880 mg/l
EC50/Daphnia magna/48 h = 0,74 mg/l

Ethyl acetate
LC50/Pimephales promelas/96 h = 230 mg/l
EC50/Daphnia magna/48 h = 610 mg/l
EC50/Scenedesmus subspicatus /72 h = 5600 mg/l

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. Endocrine disrupting properties

No data available

12.7. Other adverse effects

Hazardous water pollutant.

Further information

Do not flush into surface water or sanitary sewer system.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Disposal recommendations

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

List of Wastes Code - residues/unused products

080409 WASTES FROM THE MANUFACTURE, FORMULATION, SUPPLY AND USE (MFSU) OF COATINGS (PAINTS, VARNISHES AND VITREOUS ENAMELS), ADHESIVES, SEALANTS AND PRINTING INKS; wastes from MFSU of adhesives and sealants (including waterproofing products); waste adhesives and sealants 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 1133
14.2. UN proper shipping name:	Adhesives
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 1133
14.2. UN proper shipping name:	Adhesives
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 1133
14.2. UN proper shipping name:	Adhesives (Solvent naphtha (petroleum))
14.3. Transport hazard class(es):	3
14.4. Packing group:	II
Hazard label:	3

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

Air transport (ICAO-TI/IATA-DGR)

14.1. UN number:	UN 1133
14.2. UN proper shipping name:	Adhesives
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: 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.

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 28, Entry 40

2004/42/EC (VOC):	< 80 %
Information according to 2012/18/EU (SEVESO III):	P5c FLAMMABLE LIQUIDS
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): 2,3,6,7,8,9,10,11,12,13,14,15.

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 GB CLP Regulation

Classification	Classification procedure
Flam. Liq. 2; H225	On basis of test data
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)

H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H311	Toxic in contact with skin.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H335	May cause respiratory 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.
H412	Harmful to aquatic life with long lasting effects.
H413	May cause long lasting harmful effects to aquatic life.
EUH066	Repeated exposure may cause skin dryness or cracking.
EUH208	Contains Zinc bis(dibutyldithiocarbamate). 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.)