TIP TOP HARDENER ER-42

Safety Data Sheet

according to the Work Health and Safety (WHS) Regulations
Issue date:27/08/2015 Revision date:15/01/2026 Supersedes:20/12/2023 Version: 1.8
SDS No: 00156-0414

SECTION 1: Product identifier

1.1. GHS Product identifier

Product form	:	Mixture
Product name	:	TIP TOP HARDENER ER-42
Product code	:	525 1116, 5251118, 5251151, 525 1156

1.2. Other means of identification

No additional information available.

1.3. Recommended use of the chemical and restrictions on use

Recommended use	:	Hardener

1.4. Details of manufacturer or importer

Manufacturer
REMA TIP TOP AG
65 Gruber Strasse
Poing 85586
Germany
T +49 (0) 8121 / 707 - 100
info@tiptop.de

Importer
REMA TIP TOP Australia Pty Ltd.
3/20 Worth Street
Chullora NSW 2190
Australia
T +61 2 8755 8400
www.rema-tiptop.com.au

E-mail address of competent person responsible for the SDS: sds@gbk-ingelheim.de

1.5. Emergency phone number

Emergency number	:	+61-280735031, Infotrac/GBK GmbH-ID: 93591

SECTION 2: Hazard identification

2.1. Classification of the hazardous chemical

Classification according to the model Work Health and Safety Regulations (WHS Regulations)

Skin corrosion/irritation, Category 2	H315
Serious eye damage/eye irritation, Category 2A	H319
Respiratory sensitisation, Category 1	H334
Skin sensitisation, Category 1	H317
Carcinogenicity, Category 2	H351
Specific target organ toxicity – Single exposure, Category 3, Narcosis	H336
Specific target organ toxicity – Single exposure, Category 3, Respiratory tract irritation	H335
Specific target organ toxicity – Repeated exposure, Category 2	H373

2.2. GHS Label elements, including precautionary statements

Hazard pictograms (GHS AU) :

Exclamation mark Health hazard

Signal word (GHS AU)	:	Danger
Contains	:	Diphenylmethanediisocyanate, isomers and homologues (< 30 %); 4-isocyanatosulphonyltoluene (< 0,5 %); Aromatic polyisocyanate (< 10 %)
Hazard statements (GHS AU)	:	H315 - Causes skin irritation H317 - May cause an allergic skin reaction H319 - Causes serious eye irritation

		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 (GHS AU)	:	P201 - Obtain special instructions before use. P202 - Do not handle until all safety precautions have been read and understood. P260 - Do not breathe dust/fume/gas/mist/vapours/spray. P264 - Wash hands thoroughly after handling. P271 - Use only outdoors or in a well-ventilated area. P272 - Contaminated work clothing should not be allowed out of the workplace. P302+P352 - IF ON SKIN: Wash with plenty of water. 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, a doctor if you feel unwell. P333+P313 - If skin irritation or rash occurs: Get medical attention. P337+P313 - If eye irritation persists: Get medical attention. P342+P311 - If experiencing respiratory symptoms: Call a POISON CENTER, a doctor. P362+P364 - Take off contaminated clothing and wash it before reuse. P403+P233 - Store in a well-ventilated place. Keep container tightly closed. P405 - Store locked up. P501 - Dispose of contents and container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

2.3. Other hazards which do not result in classification

Other hazards not contributing to the classification : Vapours may form explosive mixture with air.

SECTION 3: Composition and information on ingredients

Comments : Aromatic polyisocyanate.

Name	CAS-No.	%	Classification according to the model Work Health and Safety Regulations (WHS Regulations)
Ethyl acetate	141-78-6	< 85	Flam. Liq. 2, H225 Eye Irrit. 2A, H319 STOT SE 3, H336
Diphenylmethanediisocyanate, isomers and homologues	9016-87-9	< 30	Acute Tox. 4 (Inhalation:dust,mist), H332 Skin Irrit. 2, H315 Eye Irrit. 2A, H319 Resp. Sens. 1, H334 Skin Sens. 1, H317 Carc. 2, H351 STOT SE 3, H335 STOT RE 2, H373
Aromatic polyisocyanate	53317-61-6	< 10	Eye Irrit. 2A, H319 Skin Sens. 1, H317
Other substances (not contributing to the classification of this product)	-	Up to 100%	-

SECTION 4: First aid measures

4.1. Description of necessary first-aid measures

First-aid measures general	:	Take off immediately all contaminated clothing. Move the affected person away from the contaminated area. If unconscious place in recovery position and seek medical advice. If you feel unwell, seek medical advice.
First-aid measures after inhalation	:	Move to fresh air in case of accidental inhalation of vapours or decomposition products. Call a physician immediately. Apply artificial respiration if breathing stopped.
First-aid measures after skin contact	:	Wash off immediately with soap and plenty of water. Do not use solvents or thinners. Get medical advice if skin irritation persists.
First-aid measures after eye contact	:	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Consult an eye specialist. Contact lenses should be removed.
First-aid measures after ingestion	:	Do not induce vomiting. Rinse mouth out with water. Drink plenty of water. Never give anything by mouth to an unconscious person. Call a physician immediately. Do not induce vomiting without medical advice.

4.2. Symptoms caused by exposure

Symptoms/effects after inhalation	:	May cause respiratory irritation. May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause drowsiness or dizziness.
Symptoms/effects after skin contact	:	May cause an allergic skin reaction. Causes skin irritation. Repeated exposure may cause skin dryness or cracking.
Symptoms/effects after eye contact	:	Causes serious eye irritation.
Chronic symptoms	:	Suspected of causing cancer. May cause damage to organs through prolonged or repeated exposure.

4.3. Medical attention and special treatment

Treatment	:	Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1. Extinguishing media

Suitable extinguishing media	:	Alcohol resistant foam. Water spray. Dry powder. Carbon dioxide.
Unsuitable extinguishing media	:	high volume water jet.

5.2. Specific hazards arising from the chemical

Fire hazard	:	Highly flammable liquid and vapour.
Explosion hazard	:	Product is not explosive. Explosive vapour/air mixtures may be formed.
General measures	:	In case of vapour formation use adequate respirator. Ensure adequate air ventilation. Use explosion-proof equipment. Use personal protective clothing.
Hazardous decomposition products in case of fire	:	Fire may produce: Carbon oxides (CO, CO2). Nitrogen oxides. Hydrogen cyanide. Isocyanates.

5.3. Special protective equipment and precautions for fire-fighters

Firefighting instructions	:	Fight fire from safe distance and protected location.
Protection during firefighting	:	Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.
Hazchem Code	:	* 3YE
Other information	:	Vapours are heavier than air and may spread along floors. The vapour/air mixture is explosive, even in empty, uncleaned receptacles. 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 measures	:	In case of vapour formation use adequate respirator. Ensure adequate air ventilation. Use explosion-proof equipment. Use personal protective clothing.

6.1.1. For non-emergency personnel

Emergency procedures : Ventilate spillage area. No open flames, no sparks, and no smoking. Do not breathe vapours. Avoid contact with skin and eyes.

6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

6.2. Environmental precautions

Do not discharge into the drains/surface waters/groundwater. Notify authorities if product enters sewers or public waters.

6.3. Methods and materials for containment and cleaning up

For containment : Dike and contain spill.

Methods for cleaning up : Soak up with inert absorbent material (for example sand, sawdust, a universal binder, silica gel). Shovel or sweep up and put in a closed container for disposal. Do not keep the container sealed. Container can be pressurised by carbon dioxide due to reaction with humid air and/or water.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Keep containers dry and tightly closed to avoid moisture absorption and contamination. Ensure good ventilation of the work station. Vapours are heavier than air. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Take precautionary measures against static discharge. Flammable vapours may accumulate in the container. Wear personal protective equipment. Do not handle until all safety precautions have been read and understood. Do not breathe Vapours. Avoid contact with skin and eyes.

Hygiene measures : Do not inhale vapour. Always wash hands after handling the product. Treat subsequently with skin cream. Do not eat, drink or smoke when using this product. Avoid contact with skin, eyes and clothing. Wash contaminated clothing before reuse.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Pay attention to explosion protection guidelines. Ground/bond container and receiving equipment.

Storage conditions : Keep away from sources of ignition. Store in a well-ventilated place. Keep cool. Keep container tightly closed. Keep away from heat and direct sunlight.

Incompatible materials : oxidizing materials. Acids. Strong bases. Water. Amines. alcohols.

Information on mixed storage : Keep away from food, drink and animal feeding stuffs.

SECTION 8: Exposure controls and personal protection

8.1. Control parameters - exposure standards

No additional information available.

8.2. Biological Monitoring

Monitoring methods : A specific exposure sampling method is not available.

8.3. Engineering controls

Appropriate engineering controls : Pay attention to explosion protection guidelines. Ensure good ventilation of the work station.

8.4. Individual protection measures, such as personal protective equipment (PPE)

Hand protection : Splash protection. 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

Type	Material	Permeation	Thickness (mm)	Penetration	Standard
Chemically resistant protective gloves	Nitrile rubber	1 (> 10 minutes)	≥0.4		EN ISO 374
Chemically resistant protective gloves	Butyl rubber	3 (> 60 minutes)	≥0.7		EN ISO 374

Eye protection : Eyewash bottle with clean water (EN 15154)

Type	Field of application	Characteristics	Standard
Protective goggles (EN 166)	Liquid splashes may occur		EN 166

Skin and body protection :

Type	Standard
Long sleeved protective clothing	EN ISO 6530

Respiratory protection :

Device	Filter type	Condition	Standard
Respiratory protective device with a gas filter	Type A, Type A - High-boiling (>65 °C) organic compounds	In case of inadequate ventilation wear	EN 14387

Environmental exposure controls : Avoid release to the environment.

Other information : Do not inhale vapour. Wash hands immediately after handling the product. Wash hands before breaks and at the end of workday. Do not eat, drink or smoke when using this product. Treat subsequently with skin cream.

SECTION 9: Physical and chemical properties

Physical state : Liquid
Appearance : Liquid.
Colour : yellowish
Odour : characteristic
Odour threshold : No data available.
pH : No data available.
pH solution : No data available.
Relative evaporation rate (butylacetate=1) : No data available.
Melting point / Freezing point : No data available.
Boiling point : ≈ 77 °C
Flash point : -4 °C
Auto-ignition temperature : No data available.
Flammability : No data available.
Vapour pressure : Vapour pressure: 97 hPa @20°C
Relative density : No data available.
Density : Density: 0.97 g/cm³ @20°C
Solubility : Soluble in organic solvents.
Water: Not miscible
Log Pow : No data available.
Viscosity, dynamic : 10 mPa·s (20 °C)
Explosive properties : Product is not explosive. Explosive vapour/air mixtures may be formed.
Oxidising properties : Non oxidizing
Explosive limits : No data available.
Minimum ignition energy : No data available.
VOC content : 73.45 %
Fat solubility : No data available.
Additional information : Solid content 26%

SECTION 10: Stability and reactivity

Reactivity : No decomposition if stored and applied as directed.
Chemical stability : Stable under normal conditions.

Possibility of hazardous reactions	:	Reacts with: acids and bases. Water. Amines. alcohols. alkalis. oxidizing materials.
Conditions to avoid	:	Heating can release vapours which can be ignited. Vapour/air-mixtures are explosive at intense warming. To avoid thermal decomposition, do not overheat.
Incompatible materials	:	Amines. Water. alcohols. Strong oxidizing agent. Strong acids. Strong bases.
Hazardous decomposition products	:	Nitrogen oxides. Carbon monoxide. Carbon dioxide. Hydrogen cyanide. Isocyanates.

SECTION 11: Toxicological information

Acute toxicity (oral)	:	Not classified (Based on available data, the classification criteria are not met)
Acute toxicity (dermal)	:	Not classified (Based on available data, the classification criteria are not met)
Acute toxicity (inhalation)	:	Not classified (Based on available data, the classification criteria are not met)

Diphenylmethanediisocyanate, isomers and homologues (9016-87-9)	
LD50 oral	> 10000 mg/kg
LD50 dermal	> 9400 mg/kg
ATE AU (dust,mist)	1.5 mg/l/4h

Ethyl acetate (141-78-6)	
LD50 oral rat	5620 mg/kg
LD50 dermal rabbit	> 18000 mg/kg
LC50 Inhalation - Rat	56 mg/l/4h

Skin corrosion/irritation	:	Causes skin irritation.
Serious eye damage/irritation	:	Causes serious eye irritation.
Respiratory or skin sensitisation	:	May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause an allergic skin reaction.
Germ cell mutagenicity	:	Not classified (Based on available data, the classification criteria are not met)
Carcinogenicity	:	Suspected of causing cancer.
Reproductive toxicity	:	Not classified (Based on available data, the classification criteria are not met)

Diphenylmethanediisocyanate, isomers and homologues (9016-87-9)	
Reproductive toxicity	Not classified (Based on available data, the classification criteria are not met)

Aromatic polyisocyanate (53317-61-6)	
Reproductive toxicity	Not classified (Based on available data, the classification criteria are not met)

Ethyl acetate (141-78-6)	
Reproductive toxicity	Not classified (Based on available data, the classification criteria are not met)

STOT-single exposure	:	May cause drowsiness or dizziness. May cause respiratory irritation.
STOT-repeated exposure	:	May cause damage to organs through prolonged or repeated exposure.
Aspiration hazard	:	Not classified (Based on available data, the classification criteria are not met)
Potential adverse human health effects and symptoms	:	A longer or repeated contact my lead to irritation of eyes and mucous membranes. High concentration of vapours may induce: headache, nausea, dizziness. May cause kidney and liver disease, and disorders of the central nervous system

SECTION 12: Ecological information

12.1. Ecotoxicity

Hazardous to the aquatic environment, short–term (acute)	:	Not classified (Based on available data, the classification criteria are not met)
Hazardous to the aquatic environment, long–term (chronic)	:	Not classified (Based on available data, the classification criteria are not met)
Other information	:	Do not flush into surface water or sewer system. In aqueous systems, formation of unsoluble and chemically inert (inactive) polyureas.

Ethyl acetate (141-78-6)	
LC50 fish 1	230 mg/l (Exposure time: 96 h - Species: Pimephales promelas)
EC50 Daphnia 1	610 mg/l (Exposure time: 48 h - Species: Daphnia magna)
NOEC chronic crustacea	2.4 mg/l 21 d, Daphnia magna (Water flea)
NOEC chronic algae	> 100 mg/l 72 h, Desmodesmus subspicatus
LD50 dermal rabbit	> 18000 mg/kg
LD50 oral rat	5620 mg/kg

12.2. Persistence and degradability

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Persistence and degradability	No data available.

12.3. Bioaccumulative potential

TIP TOP HARDENER ER-42	
Bioaccumulative potential	No data available.

12.4. Mobility in soil

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Ecology - soil	No data available.

12.5. Other adverse effects

Ozone : Not classified (Based on available data, the classification criteria are not met)
Other adverse effects : Low hazard to waters.

Diphenylmethanediisocyanate, isomers and homologues (9016-87-9)	
Fluorinated greenhouse gases	False

Aromatic polyisocyanate (53317-61-6)	
Fluorinated greenhouse gases	False

Ethyl acetate (141-78-6)	
Fluorinated greenhouse gases	False

SECTION 13: Disposal considerations

Waste treatment methods : Recycling is preferred to disposal or incineration. Can be incinerated according to local regulations. Dispose of contents/container in accordance with licensed collector's sorting instructions.

Product/Packaging disposal recommendations : Packaging that cannot be cleaned should be disposed of like the product. Contaminated packaging should be emptied as far as possible and after appropriate cleansing may be taken for reuse. Empty containers should be taken for local recycling, recovery or waste disposal.

Additional information : Flammable vapours may accumulate in the container.

SECTION 14: Transport information

In accordance with ADG / IMDG / IATA

ADG	IMDG	IATA
14.1. UN number		
1133	1133	1133
14.2. UN Proper Shipping Name		
ADHESIVES	ADHESIVES	Adhesives
14.3. Transport hazard class(es)		
3	3	3
14.4. Packing group		
II - Substances presenting medium danger	II	II
14.5. Environmental hazards		
Dangerous for the environment: No	Dangerous for the environment: No Marine pollutant: No	Dangerous for the environment: No

14.6. Special precautions for user

Specific storage requirement : No data available.
Shock sensitivity : No data available.

14.7. Additional information

Other information : No supplementary information available

Transport by road and rail

UN-No. (ADG) : 1133
Limited quantities (ADG) : 5l
Packing instructions (ADG) : P001, IBC02
Special packing provisions (ADG) : PP1
Portable tank and bulk container instructions (ADG) : T4
Portable tank and bulk container special provisions (ADG) : TP1, TP8

Transport by sea

UN-No. (IMDG) : 1133
Transport regulations (IMDG) : Transport in accordance with section 2.3.2.5 of the IMDG (viscous substance) may be applied
Limited quantities (IMDG) : 5 L
Excepted quantities (IMDG) : E2
Packing instructions (IMDG) : P001
Special packing provisions (IMDG) : PP1
IBC packing instructions (IMDG) : IBC02
Tank instructions (IMDG) : T4
Tank special provisions (IMDG) : TP1, TP8
Stowage category (IMDG) : B

Air transport

UN-No. (IATA) : 1133
PCA Excepted quantities (IATA) : E2
PCA Limited quantities (IATA) : Y341
PCA limited quantity max net quantity (IATA) : 1L
PCA packing instructions (IATA) : 353
PCA max net quantity (IATA) : 5L

CAO packing instructions (IATA)	:	364
CAO max net quantity (IATA)	:	60L
Special provisions (IATA)	:	A3
ERG code (IATA)	:	3L

14.8. Hazchem or Emergency Action Code

Hazchem Code	:	* 3YE

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations

Australian Industrial Chemicals Introduction Scheme (AICIS)

Australian Inventory of Industrial Chemicals (AICIS Inventory) status	:	All the chemicals contained in this product are listed introductions

Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP)

Relevant Poisons Schedule number	:	Schedule 6

Australian Pesticides and Veterinary Medicines Authority (APVMA)

No additional information available.

New Zealand Inventory of Chemicals (NZIoC)	All substances are listed

15.2. International agreements

No additional information available.

SECTION 16: Other information

Revision date	:	15/01/2026
Other information	:	Data of sections 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.

Abbreviations and acronyms:	
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
DOT	Department of Transport
TDG	Transportation of Dangerous Goods
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006
GHS	Globally Harmonized System of Classification, Labelling and Packaging of Chemicals
IARC	International Agency for Research on Cancer
vPvB	Very Persistent and Very Bioaccumulative
PBT	Persistent Bioaccumulative Toxic

Abbreviations and acronyms:	
PNEC	Predicted No-Effect Concentration
CAS	CAS (Chemical Abstracts Service) number
IBC-Code	International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk
ATE	Acute Toxicity Estimate
CLP	Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008
BCF	Bioconcentration factor
MARPOL 73/78	MARPOL 73/78: International Convention for the Prevention of Pollution From Ships
ADG	Transport of Australian Dangerous Goods

Classification	
Skin Irrit. 2	H315
Eye Irrit. 2A	H319
Resp. Sens. 1	H334
Skin Sens. 1	H317
Carc. 2	H351
STOT SE 3	H336
STOT SE 3	H335
STOT RE 2	H373

Full text of H-statements	
Acute Tox. 4 (Inhalation:dust,mist)	Acute toxicity (inhalation:dust,mist) Category 4
Carc. 2	Carcinogenicity, Category 2
Eye Irrit. 2A	Serious eye damage/eye irritation, Category 2A
Flam. Liq. 2	Flammable liquids, Category 2
Resp. Sens. 1	Respiratory sensitisation, Category 1
Skin Irrit. 2	Skin corrosion/irritation, Category 2
Skin Sens. 1	Skin sensitisation, Category 1
STOT RE 2	Specific target organ toxicity – Repeated exposure, Category 2
STOT SE 3	Specific target organ toxicity – Single exposure, Category 3, Narcosis
STOT SE 3	Specific target organ toxicity – Single exposure, Category 3, Respiratory tract irritation
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

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should therefore not be construed as guaranteeing any specific property of the product.