

TIP TOP HARDENER E-40

Safety Data Sheet

according to the WHS Regulations

Issue date: Revision date:20/12/2023 Supersedes:26/10/2021 Version: 2.7

SDS No: 00156-0026



SECTION 1: Product identifier

1.1. GHS Product identifier

Product form : Mixture
Product name : TIP TOP HARDENER E-40
Product code : 517 8009, 525 1067, 525 1068, 525 1069, 525 1122, 525 1123, 525 1139, 525 1146

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)

Flammable liquids, Category 2 H225
Specific target organ toxicity – Single exposure, Category 3, Narcosis H336

2.2. GHS Label elements, including precautionary statements

Hazard pictograms (GHS AU) :



Flame

Exclamation
mark

Signal word (GHS AU) : Danger
Contains : Ethylacetate (60 - < 75 %); Thionophosphoric acid-tris-(p-isocyanatophenyl) (10 - < 30 %)
Hazard statements (GHS AU) : H225 - Highly flammable liquid and vapour
H336 - May cause drowsiness or dizziness
Precautionary statements (GHS AU) : P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources.
No smoking.
P233 - Keep container tightly closed.
P240 - Ground and bond container and receiving equipment.
P242 - Use non-sparking tools.
P243 - Take action to prevent static discharges.
P261 - Avoid breathing vapours.
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.

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Rinse skin with water .
P304+P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P312 - Call a POISON CENTER, a doctor if you feel unwell.
P403+P233 - Store in a well-ventilated place. Keep container tightly closed.
P403+P235 - Store in a well-ventilated place. Keep cool.
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 : Preparation with thiophosphate in ethyl acetate.

Name	CAS-No.	%	Classification according to the model Work Health and Safety Regulations (WHS Regulations)
Ethylacetate	141-78-6	60 - < 75	Flam. Liq. 2, H225 Eye Irrit. 2A, H319 STOT SE 3, H336
Thionophosphoric acid-tris-(p-isocyanatophenyl)	4151-51-3	10 - < 30	Acute Tox. 4 (Oral), H302
Specific concentration limits:			

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. In the event of persistent symptoms receive medical treatment.
First-aid measures 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.
First-aid measures after skin contact : Wash off immediately with soap and plenty of water. Get medical advice if skin irritation persists.
First-aid measures after eye contact : Rinse immediately with plenty of water for 15 minutes. Consult an eye specialist.
First-aid measures after ingestion : Do not induce vomiting. Rinse mouth. Call a physician immediately. Do not induce vomiting without medical advice.

4.2. Symptoms caused by exposure

Symptoms/effects after inhalation : May cause drowsiness or dizziness.
Symptoms/effects after skin contact : Repeated exposure may cause skin dryness or cracking.
Symptoms/effects after eye contact : Direct contact with the eyes is likely to be irritating.

4.3. Medical attention and special treatment

Treatment : Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1. Extinguishing media

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

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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. Evacuate personnel to a safe area. Use personal protective clothing. Eliminate every possible source of ignition.
Hazardous decomposition products in case of fire	: Chlorinated hydrocarbons. Hydrogen cyanide. Isocyanates. Phosphorus oxides. Nitrous gasses. Carbon monoxide. Carbon dioxide.

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	: The vapour/air mixture is explosive, even in empty, uncleaned receptacles. Collect contaminated fire-fighting water, avoid any release into the sewerage. 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. Evacuate personnel to a safe area. Use personal protective clothing. Eliminate every possible source of ignition.
6.1.1. For non-emergency personnel	
Emergency procedures	: Ventilate spillage area. No open flames, no sparks, and no smoking. Avoid breathing vapours.
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.

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. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Ground/bond container and receiving equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Flammable vapours may accumulate in the container. Use explosion-proof equipment. Wear personal protective equipment. Use only outdoors or in a well-ventilated area. Avoid breathing vapours.
Hygiene measures	: Do not eat, drink or smoke when using this product. Always wash hands after handling the product. Do not inhale vapour. Avoid contact with skin, eyes and clothing.

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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	: Store in a well-ventilated place. Keep cool. Keep container tightly closed. Store locked up.
Incompatible materials	: Amines. alcohols. Acids. Bases.
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

Ethylacetate (141-78-6)	
Australia - Occupational Exposure Limits	
Local name	Ethyl acetate (Acetic acid ethyl ester; Acetic ester)
OES TWA	720 mg/m ³
	200 ppm
OES STEL	1440 mg/m ³
	400 ppm
Regulatory reference	Workplace exposure standards for airborne contaminants (2022)

8.2. Biological Monitoring

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

8.3. Engineering controls

Appropriate engineering controls : 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
protective gloves	Butyl rubber	3 (> 60 minutes)	≥0.7		EN ISO 374
protective gloves	Nitrile rubber	1 (> 10 minutes)	≥0.4		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 - High-boiling (>65 °C) organic compounds		EN 14387

Environmental exposure controls : Avoid release to the environment.

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Other information : Do not inhale vapour. Wash hands before breaks and at the end of workday. Wash hands immediately after handling the product. Do not eat, drink or smoke during use. Treat subsequently with skin cream. Avoid contact with skin, eyes and clothing. Remove and wash contaminated clothing before re-use.

SECTION 9: Physical and chemical properties

Physical state : Liquid
Appearance : No data available
Colour : yellowish
Odour : Ester like
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 : $\approx 77\text{ }^{\circ}\text{C}$
Flash point : $-4\text{ }^{\circ}\text{C}$ DIN 51755
Auto-ignition temperature : $\approx 460\text{ }^{\circ}\text{C}$
Flammability (solid, gas) : No data available
Vapour pressure : Vapour pressure: $\approx 97\text{ hPa @ }20\text{ }^{\circ}\text{C}$
Relative density : No data available
Density : Density: $\approx 1\text{ g/cm}^3\text{ @ }20\text{ }^{\circ}\text{C}$, DIN 53217
Solubility : Water: Reacts with water, @ $20\text{ }^{\circ}\text{C}$
Acetone: Miscible
Organic solvent: Miscible with: Dichloromethane
Log Pow : No data available
Viscosity, kinematic : $\approx 3\text{ mm}^2/\text{s @ }20\text{ }^{\circ}\text{C}$, DIN 53019
Explosive properties : Product is not explosive. May form flammable/explosive vapour-air mixture.
Oxidising properties : Non oxidizing
Explosive limits : No data available
Minimum ignition energy : No data available
VOC content : $< 75\%$ VOC Directive 2004/42/EC - Decorative paints and varnishes
Fat solubility : No data available
Additional information : Solvent content $< 75\%$

SECTION 10: Stability and reactivity

Reactivity : No decomposition if stored normally. Highly flammable liquid and vapour.
Chemical stability : Stable under normal conditions.
Possibility of hazardous reactions : Container can be pressurized by carbon dioxide due to reaction with humid air and/or water.
Reacts with: Strong acids. alkalis. alcohols. Amines.
Conditions to avoid : To avoid thermal decomposition, do not overheat. Vapour/air-mixtures are explosive at intense warming. Heating can release vapours which can be ignited.
Incompatible materials : alcohols. Amines. acids and bases.
Hazardous decomposition products : Thermal decomposition generates : Chlorinated hydrocarbons. Hydrogen cyanide. Phosphorus oxides. Nitrogen oxides. Carbon monoxide. Carbon dioxide. 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)

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LD50 oral rat	$> 2000\text{ mg/kg}$ (OECD 423 method)
LD50 dermal	No data available
LC50 Inhalation - Rat	No data available

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Thionophosphoric acid-tris-(p-isocyanatophenyl) (4151-51-3)

ATE AU (oral)	500 mg/kg bodyweight
Skin corrosion/irritation	: Not classified (Based on available data, the classification criteria are not met)
Serious eye damage/irritation	: Not classified (Based on available data, the classification criteria are not met)
Respiratory or skin sensitisation	: Not classified (Based on available data, the classification criteria are not met)
Germ cell mutagenicity	: Not classified (Based on available data, the classification criteria are not met)
Carcinogenicity	: Not classified (Based on available data, the classification criteria are not met)
Reproductive toxicity	: Not classified (Based on available data, the classification criteria are not met)
STOT-single exposure	: May cause drowsiness or dizziness.
STOT-repeated exposure	: Not classified (Based on available data, the classification criteria are not met)
Aspiration hazard	: Not classified (Based on available data, the classification criteria are not met)
Potential adverse human health effects and symptoms	: Irritation of mucous membranes. High concentration of vapours may induce: headache, nausea, dizziness

SECTION 12: Ecological information

12.1. Ecotoxicity

Ecology - general	: The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment.
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 discharge into surface water. Prevent product from entering drains. The transformation with water into CO ₂ and polyureas is strongly stimulated by so-called liquid crushers (ammonia, soda or alcohols, combined with liquid soap). In aqueous systems, formation of insoluble and chemically inert (inactive) polyureas.

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LC50 fish 1	Brachydanio rerio (zebra-fish): No toxic effects in saturated solution (OECD 203 method)
EC50 Daphnia 1	Daphnia magna: No toxic effects in saturated solution (OECD 202 method)

12.2. Persistence and degradability

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Persistence and degradability	Not readily biodegradable
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12.3. Bioaccumulative potential

No additional information available

12.4. Mobility in soil

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Ecology - soil	No data available.
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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.

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.
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Product/Packaging disposal recommendations : 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.

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
Excepted quantities (ADG) : E2
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
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
EmS-No. (Fire) : F-E - FIRE SCHEDULE Echo - NON-WATER-REACTIVE FLAMMABLE LIQUIDS

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EmS-No. (Spillage) : S-D - SPILLAGE SCHEDULE Delta - FLAMMABLE LIQUIDS
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 specific for the product in question

Australian Industrial Chemicals Introduction Scheme (AICIS)

Australian Inventory of Industrial Chemicals (AICIS) : All components of this mixture are listed on or exempted from AICIS Inventory) status

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

Relevant Poisons Schedule number : none allocated

15.2. International agreements

No additional information available

SECTION 16: Other information

Revision date : 20/12/2023

Classification	
Flam. Liq. 2	H225
STOT SE 3	H336

Full text of H-statements	
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Eye Irrit. 2A	Serious eye damage/eye irritation, Category 2A
Flam. Liq. 2	Flammable liquids, Category 2
STOT SE 3	Specific target organ toxicity – Single exposure, Category 3, Narcosis
H225	Highly flammable liquid and vapour
H302	Harmful if swallowed
H319	Causes serious eye irritation
H336	May cause drowsiness or dizziness

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.