

**Safety Data Sheet**

according to 29 CFR 1910.1200(g)

**TIP TOP HARDENER UT-R20**

Revision date: 09/30/2025

Product code: 00156-0028

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**1. Identification****Product identifier**

TIP TOP HARDENER UT-R20

**Art.-No.**

525 1005, 525 1036, 525 1043, 525 1046, 525 1047, 525 1048

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

Hardener

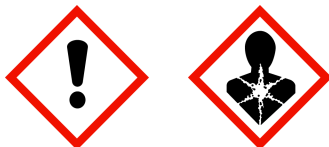
**Details of the supplier of the safety data sheet**

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
Responsible Department:	Responsible for the safety data sheet: sds@gbk-ingelheim.de

**Emergency phone number:** (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**

Carcinogenicity: Carc. 2  
Skin corrosion/irritation: Skin Irrit. 2  
Serious eye damage/eye irritation: Eye Irrit. 2A  
Respiratory or skin sensitization: Resp. Sens. 1  
Respiratory or skin sensitization: Skin Sens. 1  
Specific target organ toxicity single exposure: STOT SE 3 (narcotic effects) (respiratory tract irritation)  
Specific target organ toxicity repeated or prolonged exposure: STOT RE 2

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

Causes skin irritation  
May cause an allergic skin reaction  
Causes serious eye irritation  
May cause allergy or asthma symptoms or breathing difficulties if inhaled  
May cause respiratory irritation  
May cause drowsiness or dizziness  
Suspected of causing cancer  
May cause damage to organs through prolonged or repeated exposure

**Precautionary statements**

Obtain special instructions before use.  
Do not handle until all safety precautions have been read and understood.  
Do not breathe vapour.

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

If exposed or concerned: Get medical advice/attention.

Store locked up.

**Special labelling of certain mixtures**

Restricted to professional users.

**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.

**3. Composition/information on ingredients****Mixtures****Chemical characterization**

Preparation with isocyanates and dichloromethane

**Hazardous components**

CAS No	Components	Quantity
75-09-2	Dichloromethane	60 - < 85 %
9016-87-9	Diphenylmethanediisocyanate, isomers and homologues	20 - < 30 %

**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.

Refer for medical treatment.

**After contact with skin**

Wash off immediately with soap and plenty of water.

Consult a physician.

**After contact with eyes**

Remove contact lens.

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.

Summon a doctor immediately.

Induce vomiting only upon the advice of a physician.

Attention. Beware of aspiration danger.

**Most important symptoms and effects, both acute and delayed**

Suspected of causing cancer.

Causes serious eye irritation.

Causes skin irritation.

May cause respiratory irritation.

May cause an allergic skin reaction.

May cause allergy or asthma symptoms or breathing difficulties if inhaled.

May cause damage to organs through prolonged or repeated exposure.

May cause drowsiness or dizziness.

**Indication of any immediate medical attention and special treatment needed**

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Treat symptoms.

**5. Fire-fighting measures****Extinguishing media****Suitable extinguishing media**Foam, carbon dioxide (CO<sub>2</sub>), dry chemical, water-spray.**Unsuitable extinguishing media**

Full water jet.

**Specific hazards arising from the chemical**

Fire may produce:

Chlorine and traces of phosgene.

Hydrogen chloride gas.

Carbon monoxide (CO), carbon dioxide (CO<sub>2</sub>) and nitrogen oxides (NO<sub>x</sub>).

Hydrogen cyanide (HCN)

**Special protective equipment and precautions for fire-fighters**

Wear self-contained breathing apparatus and protective suit.

**Additional information**

Cool containers at risk with water spray jet.

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**

Vapours are heavier than air and spread along ground.

Ensure adequate ventilation.

Remove persons to safety.

**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****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.

Container should not be gas-tight closed.

Container can be pressurized by carbon dioxide due to reaction with humid air and/or water.

**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**

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**Advice on safe handling**

Keep container tightly closed.  
Vapours are heavier than air and spread along ground.  
Do not breathe vapours.  
Local exhaust.  
Use only in thoroughly ventilated areas.

**Advice on protection against fire and explosion**

Keep away from heat and sources of ignition.

**Advice on general occupational hygiene**

Do not inhale vapours.  
Avoid contact with eyes and skin.  
Wash hands before breaks and immediately after handling the product.  
When using do not eat, drink or smoke.  
Take off immediately all contaminated clothing.

**Conditions for safe storage, including any incompatibilities****Requirements for storage rooms and vessels**

Keep containers tightly closed in a cool, well-ventilated place.  
Avoid temperatures above 40°C.

**Hints on joint storage**

Exothermic reaction with:  
Alcohol, Amines, Alkaline metals, Acids and bases.

**Further information on storage conditions**

Keep away from food, drink and animal feeding stuffs.  
Container can be pressurized by carbon dioxide due to reaction with humid air and/or water.

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

CAS No	Substance	ppm	mg/m <sup>3</sup>	f/cc	Category	Origin
75-09-2	Dichloromethane	50	174		TWA (8 h)	ACGIH-2024
75-09-2	Methylene chloride	25	-		TWA (8 h)	PEL
		C 125	-		Ceiling	PEL
75-09-2	Methylene chloride				as low as possible	REL

**Biological Exposure Indices (BEI-ACGIH)**

CAS No	Substance	Determinant	Value	Test material	Sampling time
75-09-2	DICHLOROMETHANE	Dichloromethane	0.3 mg/L	urine	End of shift

**Exposure controls****Appropriate engineering controls**

Ensure adequate ventilation, especially in confined areas.

**Individual protection measures, such as personal protective equipment****Eye/face protection**

Tightly fitting goggles.  
Eye wash bottle with pure water.

**Hand protection**

Splash protection:

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Protective gloves resistant to chemicals made off viton, Minimum coat thickness 0,7 mm, Permeation resistance (wear duration) approx. 120 minutes, i.e. protective glove <Vitoject 890> 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.

**Respiratory protection**

In case of insufficient ventilation wear suitable respiratory equipment (gas filter type AX).

**9. Physical and chemical properties****Information on basic physical and chemical properties**

Physical state:	Liquid
Color:	Amber
Odor:	Characteristic

**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:	> 61 °C

**Flammability**

Solid/liquid:	n.a.
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**Explosive properties**

The product is not explosive.

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

**Self-ignition temperature**

Solid:	n.a.
Gas:	n.a.

Decomposition temperature:	> 120 °C
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pH-Value:	n.d.
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Viscosity / dynamic:	n.d.
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Viscosity / kinematic:	n.d.
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Flow time:	n.d.
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Water solubility:	Reacts with water
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**Solubility in other solvents**

n.d.

Partition coefficient n-octanol/water:	n.d.
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Vapor pressure: (at 20 °C)	453 hPa
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Relative density (at 20 °C):	0,61
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Bulk density:	n.a.
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Relative vapour density:

n.d.

**Other information****Information with regard to physical hazard classes**

Oxidizing properties

Non-oxidizing.

**Other safety characteristics**

Solvent separation test:

n.d.

Solvent content:

n.d.

Solid content:

28 %

Evaporation rate:

n.d.

**Further Information**

No data available

**10. Stability and reactivity****Reactivity**

No decomposition if stored normally.

**Chemical stability**

Stability:

Stable

Stable under normal conditions.

**Possibility of hazardous reactions**

Hazardous reactions:

Will not occur

Reactions with strong acids and alkalies.

Reactions with alkali metals.

**Conditions to avoid**

To avoid thermal decomposition, do not overheat.

Container can be pressurized by carbon dioxide due to reaction with humid air and/or water.

**Incompatible materials**

Water, Alkaline metals, Amines, Alcohols, Strong acids and strong bases

**Hazardous decomposition products**

No hazardous decomposition products known.

Fire may produce:

Hydrogen cyanide gas.

Chlorine and traces of phosgene.

Hydrogen chloride gas

Carbon monoxide (CO), carbon dioxide (CO<sub>2</sub>) and nitrogen oxides (NO<sub>x</sub>)**11. Toxicological information****Route(s) of Entry**

Skin and eye contact, inhalation and ingestion.

**Information on toxicological effects****Acute toxicity**

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

No toxicological data available.

**ATEmix calculated**

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

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**Irritation and corrosivity**

Skin corrosion/irritation: Causes skin irritation

Serious eye damage/eye irritation: Causes serious eye irritation

**Sensitizing effects**

May cause allergy or asthma symptoms or breathing difficulties if inhaled (Diphenylmethanediisocyanate, isomers and homologues)

May cause an allergic skin reaction (Diphenylmethanediisocyanate, isomers and homologues)

**Carcinogenic/mutagenic/toxic effects for reproduction**

Suspected of causing cancer (Dichloromethane; Diphenylmethanediisocyanate, isomers and homologues)

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

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

**Specific target organ toxicity (STOT) - single exposure**

May cause respiratory irritation (Diphenylmethanediisocyanate, isomers and homologues)

May cause drowsiness or dizziness (Dichloromethane)

**Specific target organ toxicity (STOT) - repeated exposure**

May cause damage to organs through prolonged or repeated exposure (Diphenylmethanediisocyanate, isomers and homologues)

Carcinogenicity (OSHA):

Dichloromethane (Methylene Chloride) (CAS 75-09-2) is listed.

Carcinogenicity (IARC):

Dichloromethane (Methylene Chloride) (CAS 75-09-2) is listed in group 2A.

Polymethylene polyphenyl isocyanate (CAS 9016-87-9) is listed in group 3.

Carcinogenicity (NTP):

Dichloromethane (Methylene Chloride) (CAS 75-09-2) is listed in group RAHC.

**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**

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

Hazard of lung oedema.

With hypersensitive people, reactions as cough or difficulty of breathing may appear even with tiny concentrations of isocyanates; therefore keep room aerated and ventilated.

**12. Ecological information****Ecotoxicity**

Ecological data are not available.

**Persistence and degradability**

No data available

**Bioaccumulative potential**

No data available

**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 meets the criteria.

**Other adverse effects**

Hazardous water pollutant.

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**Further information**

Do not flush into surface water or sanitary sewer system.

**13. Disposal considerations****Waste treatment methods****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 1593

**Proper shipping name:**

Dichloromethane, Solution

**Transport hazard class(es):**

6.1

**Packing group:**

III

Hazard label:

6.1

**Marine transport (IMDG)****UN number or ID number:**

UN 1593

**UN proper shipping name:**

DICHLOROMETHANE, SOLUTION

**Transport hazard class(es):**

6.1

**Packing group:**

III

Hazard label:

6.1



Marine pollutant:

No

Limited quantity:

5 L / 30 kg

Excepted quantity:

E1

EmS:

F-A, S-A

**Air transport (ICAO-TI/IATA-DGR)****UN number or ID number:**

UN 1593

**UN proper shipping name:**

DICHLOROMETHANE, SOLUTION

**Transport hazard class(es):**

6.1

**Packing group:**

III

Hazard label:

6.1



Limited quantity Passenger:

2 L

Passenger LQ:

Y642

Excepted quantity:

E1



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IATA-packing instructions - Passenger:	655
IATA-max. quantity - Passenger:	60 L
IATA-packing instructions - Cargo:	663
IATA-max. quantity - Cargo:	220 L

**Environmental hazards**

ENVIRONMENTALLY HAZARDOUS: No

**Special precautions for user**

Handle in accordance with good industrial hygiene and safety practices.

**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 regulatory information**

SARA Section 304 CERCLA:

Dichloromethane (75-09-2): Reportable quantity = 1,000 (454) lbs. (kg)

SARA Section 311/312 Hazards:

Dichloromethane (75-09-2): Delayed (chronic) health hazard, Immediate (acute) health hazard

Polymeric diphenylmethane diisocyanate (9016-87-9): Delayed (chronic) health hazard, Immediate (acute) health hazard

SARA Section 313 Toxic release inventory:

Dichloromethane (75-09-2): De minimis limit = 0.1 %, Reportable threshold = Standard

Polymeric diphenylmethane diisocyanate (9016-87-9): De minimis limit = 1.0 %, Reportable threshold = Standard

Clean Air Act Section 112(b):

Dichloromethane (75-09-2)

**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 Dichloromethane (Methylene chloride) (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](http://www.P65Warnings.ca.gov).

**16. Other information****Hazardous Materials Identification System (HMIS)**

Health:	*2
Flammability:	1
Physical Hazard:	0

**NFPA Hazard Ratings**

Health:	2
Flammability:	1
Reactivity:	0
Unique Hazard:	

**Changes**

Revision date: 30.09.2025

Revision No: 2,8

This data sheet contains changes from the previous version in section(s): 2,9,12.

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**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)

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