



Safety Data Sheet

RMT3501

Revision date : 04/01/2018
Version: 1.0

Page: 1/11

1. Identification

Product identifier used on the label

RMT3501

Recommended use of the chemical and restriction on use

* The "Recommended use" identified for this product is provided solely to comply with a US Federal requirement and is not part of the seller's published specification. The terms of this Safety Data Sheet (SDS) do not create or infer any warranty, express or implied, including by incorporation into or reference in the seller's sales agreement.

Details of the supplier of the safety data sheet

Company:

RhinoTech Supplies, Inc.
2955 Lone Oak Circle, Unit 2
Eagan, MN 55121, USA

Telephone: +1 651-686-5027

Emergency telephone number

ChemTel, Inc. 800-255-3924, International 813-248-0585

Other means of identification

2. Hazards Identification

According to Regulation 2012 OSHA Hazard Communication Standard; 29 CFR Part 1910.1200

Classification of the product

Flam. Liq.	2	Flammable liquids
Eye Dam./Irrit.	2A	Serious eye damage/eye irritation

Label elements

Pictogram:



Safety Data Sheet

RMT3501

Revision date : 04/01/2018

Page: 2/11

Version: 2.0

Signal Word:

Danger

Hazard Statement:

H225 Highly flammable liquid and vapour.

H319 Causes serious eye irritation.

Precautionary Statements (Prevention):

P210 Keep away from heat/sparks/open flames/hot surfaces. – No smoking.

P280 Wear protective gloves and eye/face protection.

P243 Take precautionary measures against static discharge.

P241 Use explosion-proof electrical/ventilating/lighting/equipment.

P233 Keep container tightly closed.

P240 Ground/bond container and receiving equipment.

P242 Use only non-sparking tools.

P264 Wash with plenty of water and soap thoroughly after handling.

Precautionary Statements (Response):

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

P337 + P311 If eye irritation persists: Call a POISON CENTER or doctor/physician.

P370 + P378 In case of fire: Use (...) to extinction.

Precautionary Statements (Storage):

P403 + P235 Store in a well-ventilated place. Keep cool.

Precautionary Statements (Disposal):

P501 Dispose of contents/container to hazardous or special waste collection point.

Hazards not otherwise classified

If applicable information is provided in this section on other hazards which do not result in classification but which may contribute to the overall hazards of the substance or mixture.

According to Regulation 1994 OSHA Hazard Communication Standard; 29 CFR Part 1910.1200

Emergency overview

DANGER:

FLAMMABLE LIQUID.

Irritating to eyes.

May cause skin irritation.

Prolonged and repeated exposure may cause blood disorders.

Ingestion may cause gastrointestinal disturbances.

Avoid all sources of ignition: heat, sparks, open flame.

Avoid contact with the skin, eyes and clothing.

Avoid inhalation of mists/vapours.

3. Composition / Information on Ingredients

According to Regulation 2012 OSHA Hazard Communication Standard; 29 CFR Part 1910.1200

CAS Number

Content (W/W) Chemical name

Safety Data Sheet

RMT3501

Revision date : 04/01/2018

Page: 4/11

Version: 1.0

Protective equipment for fire-fighting:

Firefighters should be equipped with self-contained breathing apparatus and turn-out gear.

Further information:

Cool endangered containers with water- spray. Collect contaminated extinguishing water separately, do not allow to reach sewage or effluent systems.

Impact Sensitivity:

Remarks: Based on the chemical structure there is no shock-sensitivity.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Breathing protection required. Avoid contact with the skin, eyes and clothing.

Environmental precautions

Do not discharge into drains/surface waters/groundwater.

This product is regulated by RCRA. This product is regulated by CERCLA ('Superfund').

Methods and material for containment and cleaning up

For small amounts: Rinse away with water.

For large amounts: Dike spillage. Pump off product.

For residues: Pick up with suitable absorbent material (e.g. sand, sawdust, general-purpose binder, kieselguhr). Dispose of absorbed material in accordance with regulations.

Cleaning operations should be carried out only while wearing breathing apparatus.

7. Handling and Storage

Precautions for safe handling

Ensure thorough ventilation of stores and work areas. Handle under dry inert gas.

Protection against fire and explosion:

Vapours may form explosive mixture with air. Prevent electrostatic charge - sources of ignition should be kept well clear - fire extinguishers should be kept handy.

Conditions for safe storage, including any incompatibilities

Suitable materials for containers: Carbon steel (Iron), Stainless steel 1.4401, Stainless steel 1.4301 (V2), aluminum, tinned carbon steel (Tinplate), glass, Galvanized carbon steel (Zinc)

Further information on storage conditions: Keep container tightly closed and in a cool place.

additives:

BHT (CAS Number: 128-37-0)

8. Exposure Controls/Personal Protection

Safety Data Sheet

RMT3501

Revision date : 04/01/2018

Page: 5/11

Version: 1.0

Personal protective equipment

Respiratory protection:

Breathing protection if breathable aerosols/dust are formed. Gas filter for gases/vapours of organic compounds (boiling point >65 °C, e. g. EN 14387 Type A)

Hand protection:

Chemical resistant protective gloves (EN 374), Suitable materials also with prolonged, direct contact (Recommended: Protective index 6, corresponding > 480 minutes of permeation time according to EN 374);, butyl rubber (butyl) - 0.7 mm coating thickness, Suitable materials short-term contact and/or splashes (recommended: At least protective index 2, corresponding > 30 minutes of permeation time according to EN 374), fluoroelastomer (FKM) - 0.7 mm coating thickness, chloroprene rubber (CR) - 0.5 mm coating thickness, polyvinylchloride (PVC) - 0.7 mm coating thickness, Manufacturer's directions for use should be observed because of great diversity of types., Supplementary note: The specifications are based on tests, literature data and information of glove manufacturers or are derived from similar substances by analogy. Due to many conditions (e.g. temperature) it must be considered, that the practical usage of a chemical-protective glove in practice may be much shorter than the permeation time determined through testing.

Eye protection:

Tightly fitting safety goggles (chemical goggles).

Body protection:

Body protection must be chosen depending on activity and possible exposure, e.g. head protection, apron, protective boots, chemical-protection suit.

General safety and hygiene measures:

Handle in accordance with good industrial hygiene and safety practice. Wearing of closed work clothing is required additionally to the stated personal protection equipment. Avoid contact with the skin, eyes and clothing. Do not inhale gases/vapours/aerosols. Take off immediately all contaminated clothing. Store work clothing separately.

9. Physical and Chemical Properties

Form:	liquid	
Odour:	ether-like	
Odour threshold:		not determined
Colour:	colourless	
pH value:		The substance does not dissociate.
Melting temperature:	-95 °C	
boiling temperature:	75.6 °C	
Flash point:	-6 °C	
Flammability:	Highly flammable.	
Lower explosion limit:	2.3 %(V)	For liquids not relevant for classification and labelling. The lower explosion point may be 5 - 15 °C below the flash point.
Upper explosion limit:		For liquids not relevant for classification and labelling.
Autoignition:	250 °C	(Directive 92/69/EEC, A.15)
Vapour pressure:	114 hPa	(20 °C) Literature data.
Density:	1.06 g/cm ³	(20 °C) Literature data.
	1.021 g/cm ³	(55 °C)
Relative density:	1.06	(20 °C) (OECD Guideline 109)
Vapour density:	2.55	Literature data.
Partitioning coefficient n-octanol/water (log Pow):	-0.37	(25 °C) (calculated)

Safety Data Sheet

RMT3501

Revision date : 04/01/2018

Page: 6/11

Version: 1.0

Self-ignition temperature:		(Directive 92/69/EEC, A.13) Based on its structural properties the product is not classified as self-igniting.
Thermal decomposition:	300 °C	Thermal decomposition above the indicated temperature is possible.
Viscosity, dynamic:	0.6 mPa.s	(20 °C)
Particle size:		The substance / product is marketed or used in a non solid or granular form.
Solubility in water:	> 1,000 g/l	(25 °C) Literature data.
Molar mass:	74.08 g/mol	
Evaporation rate:		Value can be approximated from Henry's Law Constant or vapor pressure.

10. Stability and Reactivity

Reactivity

Vapours may form explosive mixture with air.

Corrosion to metals:

Corrosive effects to metal are not anticipated.

Oxidizing properties:

Based on its structural properties the product is not classified as oxidizing.

Formation of flammable gases: Remarks: Forms no flammable gases in the presence of water.

Method: Flammability (contact with water)

Chemical stability

The product is stable if stored and handled as prescribed/indicated.

Possibility of hazardous reactions

May form explosive peroxides when exposed to air. Reacts with acids. Evolution of explosive gases/vapours. Reacts with strong oxidizing agents. Risk of polymerization. Uncontrolled or accidental polymerization may result in a strongly exothermic reaction. Polymerization produces gases which may burst closed or confined containers.

Conditions to avoid

Avoid heat.

Incompatible materials

oxidizing agents, acids, bases, amines, atmospheric oxygen, reducing agents

Hazardous decomposition products

Decomposition products:

Possible decomposition products: carbon monoxide, Formaldehyde, hydrogen, carbon oxides

Thermal

decomposition: 300 °C

Thermal decomposition above the indicated temperature is possible.

Safety Data Sheet

RMT3501

Revision date : 04/01/2018

Page: 7/11

Version: 1.0

11. Toxicological information

Primary routes of exposure

Routes of entry for solids and liquids are ingestion and inhalation, but may include eye or skin contact. Routes of entry for gases include inhalation and eye contact. Skin contact may be a route of entry for liquefied gases.

Acute Toxicity/Effects

Acute toxicity

Assessment of acute toxicity: In animal studies the substance is virtually nontoxic after a single ingestion. In animal studies the substance is virtually nontoxic after short-term inhalation.

Oral

Species: rat

Value: > 2,000 mg/kg (OECD Guideline 401)

Inhalation

Type of value: LC50

Species: rat

Value: 68.4 mg/l (similar to OECD guideline 403)

Exposure time: 4 h

The vapour was tested.

Assessment other acute effects

Assessment of STOT single:

Based on the available information there is no specific target organ toxicity to be expected after a single exposure.

Irritation / corrosion

Assessment of irritating effects: May cause slight irritation to the skin. Eye contact causes irritation.

Skin

Species: rabbit

Result: Slightly irritating.

Eye

Species: rabbit

Result: Irritant.

Sensitization

Assessment of sensitization: Skin sensitizing effects were not observed in animal studies.

Mouse Local Lymph Node Assay (LLNA)

Species: mouse

Result: Non-sensitizing.

Method: OECD Guideline 429

Aspiration Hazard

not applicable

Chronic Toxicity/Effects

Repeated dose toxicity

Assessment of repeated dose toxicity: The substance may cause damage to the hematological system after repeated ingestion of high doses. The substance may cause damage to the

Safety Data Sheet

RMT3501

Revision date : 04/01/2018

Page: 8/11

Version: 1.0

hematological system after repeated inhalation of high doses. The effects were only observed at doses/concentrations not relevant for classification and/or practical use conditions.

Genetic toxicity

Assessment of mutagenicity: Results from a number of mutagenicity studies with microorganisms, mammalian cell culture and mammals are available. Taking into account all of the information, there is no indication that the substance is mutagenic. Based on the structure, there is a suspicion of a mutagenic effect.

Carcinogenicity

Assessment of carcinogenicity: The whole of the information assessable provides no indication of a carcinogenic effect.

Reproductive toxicity

Assessment of reproduction toxicity: On the basis of animal study findings, an effect on fertility cannot be excluded when given in high doses. Based on available Data, the classification criteria are not met.

Teratogenicity

Assessment of teratogenicity: The potential to cause toxicity to development cannot be excluded at maternally toxic doses. On the basis of currently available information, a final assessment is not possible.

Symptoms of Exposure

The most important known symptoms and effects are described in the labelling (see section 2) and/or in section 11.

12. Ecological Information

Toxicity

Aquatic toxicity

Assessment of aquatic toxicity:

There is a high probability that the product is not acutely harmful to aquatic organisms. The inhibition of the degradation activity of activated sludge is not anticipated when introduced to biological treatment plants in appropriate low concentrations.

Toxicity to fish

LC50 (96 h) > 95.4 mg/l, *Lepomis macrochirus* (OECD Guideline 203, semistatic)

The statement of the toxic effect relates to the analytically determined concentration.

Limit concentration test only (LIMIT test). No effects at the highest test concentration.

Aquatic invertebrates

EC50 (48 h) > 772 mg/l, *Daphnia magna* (OECD Guideline 202, part 1, semistatic) The

statement of the toxic effect relates to the analytically determined concentration.

Aquatic plants

EC50 (72 h) > 877 mg/l (growth rate), *Pseudokirchneriella subcapitata* (OECD Guideline 201, static) The statement of the toxic effect relates to the analytically determined concentration. No effects at the highest test concentration.

Chronic toxicity to fish

No observed effect concentration (30 d) 546.3 mg/l (other)

Chronic toxicity to aquatic invertebrates

Safety Data Sheet

RMT3501

Revision date : 04/01/2018

Page: 9/11

Version: 1.0

No observed effect concentration 197.4 mg/l, Daphnia sp. (other)

Assessment of terrestrial toxicity

No data available concerning terrestrial toxicity.

Microorganisms/Effect on activated sludge

Toxicity to microorganisms

OECD Guideline 209 static

activated sludge of a predominantly domestic sewage/EC50 (3 h): > 100 mg/l

The details of the toxic effect relate to the nominal concentration. Limit concentration test only (LIMIT test).

Persistence and degradability

Assessment biodegradation and elimination (H2O)

Not readily biodegradable (by OECD criteria). Poorly biodegradable.

Elimination information

3.7 % BOD of the ThOD (35 d) (OECD 301D; EEC 92/69, C.4-E) (aerobic, activated sludge, domestic, non-adapted)

Assessment of stability in water

In contact with water the substance will hydrolyse slowly.

Information on Stability in Water (Hydrolysis)

< 5 % (4 d), (OECD Guideline 111, pH4)

< 5 % (4 d), (OECD Guideline 111, pH7)

< 5 % (4 d), (OECD Guideline 111, pH9)

Bioaccumulative potential

Assessment bioaccumulation potential

No significant accumulation in organisms is expected as a result of the distribution coefficient of n-octanol/water (log Pow).

Mobility in soil

Assessment transport between environmental compartments not determined

Additional information

Other ecotoxicological advice:

Do not discharge product into the environment without control.

13. Disposal considerations

Waste disposal of substance:

Incinerate in suitable incineration plant, observing local authority regulations.

Observe national and local legal requirements. Disposal requirements are dependent on the hazard classification and will vary by location and the type of disposal selected. All waste materials should be reviewed to determine the applicable hazards (testing may be necessary).

Safety Data Sheet

RMT3501

Revision date : 04/01/2018
Version: 1.0

Page: 10/11

Container disposal:

Contaminated packaging should be emptied as far as possible; then it can be passed on for recycling after being thoroughly cleaned.

Contaminated packaging should be emptied as far as possible and disposed of in the same manner as the substance/product. Contact manufacturer regarding recycling.

14. Transport Information

Land transport

USDOT

Hazard class: 3
Packing group: II
ID number: UN 1166
Hazard label: 3
Proper shipping name: DIOXOLANE

Sea transport

IMDG

Hazard class: 3
Packing group: II
ID number: UN 1166
Hazard label: 3
Marine pollutant: NO
Proper shipping name: DIOXOLANE

Air transport

IATA/ICAO

Hazard class: 3
Packing group: II
ID number: UN 1166
Hazard label: 3
Proper shipping name: DIOXOLANE

15. Regulatory Information

Federal Regulations

Registration status:

Chemical TSCA, US released / listed

EPCRA 311/312 (Hazard categories): Acute; Chronic; Fire; Sudden release of pressure

<u>CERCLA RQ</u>	<u>CAS Number</u>	<u>Chemical name</u>
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5 mg/l		
5000 mg/kg		
500 mg/kg		
50 mg/l		
50 LBS		

State regulations

Safety Data Sheet

RMT3501

Revision date : 04/01/2018

Page: 11/11

Version: 1.0

<u>State RTK</u>	<u>CAS Number</u>	<u>Chemical name</u>
MA, NJ, PA	646-06-0	1,3-dioxolane

NFPA Hazard codes:

Health : 1 Fire: 3 Reactivity: 0 Special:

HMIS III rating

Health: 1 α Flammability: 3 Physical hazard: 0

Assessment of the hazard classes according to UN GHS criteria (most recent version):

Eye Dam./Irrit.	2A	Serious eye damage/eye irritation
Flam. Liq.	2	Flammable liquids

16. Other Information

SDS Prepared by:

RhinoTech Supplies, Inc.

SDS Prepared on: 2015/06/01

We support worldwide Responsible Care® initiatives. We value the health and safety of our employees, customers, suppliers and neighbors, and the protection of the environment. Our commitment to Responsible Care is integral to conducting our business and operating our facilities in a safe and environmentally responsible fashion, supporting our customers and suppliers in ensuring the safe and environmentally sound handling of our products, and minimizing the impact of our operations on society and the environment during production, storage, transport, use and disposal of our products.

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