Material Safety Data Sheet

Dimethyl Sulfoxide (RXSOL-19-6224-200)

1. Product and Company Identifaction

Porduct Name	Dimethyl Sulfoxide
Part Number	RXSOL-19-6224-200

Company Details:

RX MARINE INTERNATIONAL
105, A wing , BSEL , TECH PARK.
VASHI ,NEW BOMBAY 400703 INDIA

Branch : Kandla, Mumbai , Chennai, Vizag, Kolkata, UAE , OMAN , CANADA and KENYA

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Email	mail@rxmarine.com
Website	www.rxmraine.com

2. Composition / informationon ingredients

Chemical Name	Cas No	EC No	Weight	Formula
Dimethyl sulfoxide	67-68-5	200-664-3	78.13 g/mol	C_2H_6OS

3. Hazards Identification

Signal Word	No data available
Hazard Statements	No data available
Precautionary statements	No data available
Classification of the substance or mixture	No data available
Supplemental Hazard Statements	No data available
Other hazards	This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

4. First Aid Measures

General advice	Show this material safety data sheet to the doctor in attendance.
If inhaled	After inhalation fresh air.
Eye Contact	Rinse out with plenty of water. Remove contact lenses
Swallowed	Make victim drink water (two glasses at most). Consult doctor if feeling unwell.
Skin Contact	In case of skin contact Take off immediately all contaminated clothing. Rinse skin with water/ shower.
Inhalation	No data available
Ingestion	No data available
Most important symptoms and effects, both acute and delaye	The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11
Indication of any immediate medical attention and special treatment needed	No data available

5. Fire-fighting Measures

Flammability	No data available
Suitable extinguishing media	Water Foam Carbon dioxide (CO2) Dry powder
Unsuitable extinguishing media	For this substance/mixture no limitations of extinguishing agents are given
Special hazards arising from the substance or mixture	Carbon oxides Sulfur oxides Combustible. Fire may cause evolution of: Sulfur oxides Vapors are heavier than air and may spread along floors. Forms explosive mixtures with air on intense heating. Development of hazardous combustion gases or vapours possible in the event of fire.
Further information	Remove container from danger zone and cool with water. Suppress (knock down) gases/vapors/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system.
Hazardous combustion products	No data available
Advice for firefighters	In the event of fire, wear self-contained breathing apparatus.
Protective Equipment	No data available
Specific Hazards Arising from the Chemical	No data available

6. Accidental Release Measures

Personal precautions, protective equipment and emergency procedures	Advice for non-emergency personnel: Do not breathe vapors, aerosols. Avoid substance contact. Ensure adequate ventilation. Keep away from heat and sources of ignition. Evacuate the danger area, observe emergency procedures, consult an expert. For personal protection see section 8.
Spillage	No data available
Personal Protection	Avoid dust formation. Avoid breathing vapors, mist or gas. For personal protection see section 8
Enviromental Precaution	Do not let product enter drains. Risk of explosion.
Methods and materials for containment and cleaning	Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up with liquid-absorbent material (e.g. Chemizorb®). Dispose of properly. Clean up affected area
Reference to other sections	For disposal see section 13

7. Handling and Storage

Advice on protection against fire and explosion	Keep away from open flames, hot surfaces and sources of ignition.Take precautionary measures against static discharge.
Incompatible materials	No data available
Hygiene measures	Change contaminated clothing. Wash hands after working with substance. For precautions see section 2.2
Advice on safe handling	No data available
Conditions for safe storage, including any incompatibilities	No data available
Storage conditions	Tightly closed. Recommended storage temperature see product labe
Storage class	Storage class (TRGS 510) 10 Combustible liquids
Specific and use	Apart from the uses mentioned in section 1.2 no other specific uses are stipulated
Advice on general occupational hygiene	No data available

8. Exposure controls and personal protection

Exposure controls	Personal protective equipment
Engineering Control	No data available
Eye/face protection	Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Safety glasses
Body Protection	No data available

Skin protection	This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN 16523-1 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de). Full contact Material: Viton® Minimum layer thickness: 0,7 mm Break through time: 480 min Material tested:Vitoject® (KCL 890 / Aldrich Z677698, Size M) This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN 16523-1 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de). Splash contact Material: butyl-rubber Minimum layer thickness: 0,7 mm Break through time: 30 min Material tested:Butoject® (KCL 898)
Respiratory protection	Recommended Filter type: Filter A-(P2) The entrepeneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer. These measures have to be properly documented.
Other Protection Measure	No data available

9. Physical and chemical properties

Physical state	Liquid
Colour	Colorless
Odour	Odorless
Odor Threshold	No data available
pH	No data available
Melting Point	18,5 °C at 1.013 hPa
Boiling Point	189 °C at 1.013 hPa
Flash Point	87 °C - closed cup - ASTM D 93
Evaporation Rate	No data available
Flammability (solid, gas)	No data available
Explosive limits	No data available
Upper/lower flammability or explosive limits	Upper explosion limit 28,5 %(V) Lower explosion limit2,6 %(V)
Autoignition temperature	300 - 302 °C at 1.013 hPa
Decomposition temperature	> 190 °C
Vapour pressure	0,55 hPa at 20 °C
Viscosity	Dynamic 2,14 mPa.s at 20 °C
Density	1,1 g/cm3 at 20 °C
Relative Density	No data available
Specific Gravity	No data available
Partition coefficient	Log Pow -1,35 at 20 °C - Bioaccumulation is not expected.
Explosive properties	No data available
Solubility	No data available
Ignition temperature	No data available
Particle characteristics	No data available

10. Stability and reactivity

Reactivity	Forms explosive mixtures with air on intense heating. A range from approx. 15 Kelvin below the flash point is to be rated as critical.
Chemical stability	The product is chemically stable under standard ambient conditions (room temperature)
Possibilityof hazardous reactions	Risk of explosion with acetylidene organic halides perchlorates Acid chlorides nonmetallic halides iron(III) compounds nitrates fluorides chlorates hydrides perchloric acid Oxides of phosphorus Nitric acid silver compounds silicon compounds silanes acid halides Exothermic reaction with boron compounds oxyhalogenic compounds Potassium sodium Strong oxidizing agents phosphorus halides strong reducing agents Acid chlorides Strong acids silver salt nitrogen dioxide Risk of ignition or formation of inflammable gases or vapours with: potassium permanganate
Conditions to avoid	Strong heating.
Incompatible materials	No data available

Hazardous product dicomposition	No data available

11. Toxicological information

Acute toxicity	LD50 Oral - Rat - male and female - 28.300 mg/kg (OECD Test Guideline 401) LC0 Inhalation - Rat - male and female - 4 h - > 5,33 mg/l - dust/mist (OECD Test Guideline 403) LD50 Dermal - Rat - male and female - 40.000 mg/kg(ECHA
Skin corrosion/irritation	Skin - Rabbit Result slight irritation - 4 h (OECD Test Guideline 404)
Serious eye damage/irritation	Eyes - Rabbit Result: slight irritation - 24 h (OECD Test Guideline 405)
Respiratory or skin sensitization	Maximization Test - Guinea pig Result negative (OECD Test Guideline 406) Local lymph node assay (LLNA) - Mouse Result negative (OECD Test Guideline 429)
Carcinogenicity	No data available
Germ cell mutagenicity	Test Type Ames test Test system: Salmonella typhimurium Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 471 Result: negative Test Type: sister chromatid exchange assay Test system: Chinese hamster ovary cells Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 479 Result: negative Test Type Mutagenicity (mammal cell test): chromosome aberration. Test system: Chinese hamster ovary cells Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 473 Result: negative Test Type Mutagenicity (in vivo mammalian bone-marrow cytogenetic test, chromosomal analysis) Species: Rat Application Route: Intraperitoneal Method OECD Test Guideline 474 Millipore- 1.02952 Page 8 of 12 The life science business of Merck operates as MilliporeSigma in the US and Canada Result: negative
Reproductive toxicity	No data available
Specific target organ toxicity-single exposure	No data available
Additional Information	The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher. Repeated dose toxicity - Rat - male and female - Oral - 18 Months - NOAEL (No observed adverse effect level) - 3.300 mg/kg - LOAEL (Lowest observed adverse effect level) - 9.900 mg/kg Repeated dose toxicity - Monkey - male and female - Dermal - 18 Months - NOAEL (No observed adverse effect level) - >= 8.910 mg/kg - LOAEL (Lowest observed adverse effect level) - 990 mg/kg Exposure to large amounts can cause:, redness of skin, Itching, burning, sedation, Headache, Nausea, Dizziness To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated

12. Ecological information

Persistence and degradability	Biodegradability aerobic - Exposure time 28 d Result: 31 % - Not readily biodegradable. (OECD Test Guideline 301D)
Toxicity to fish	Static test LC50 - Danio rerio (zebra fish) - > 25.000 mg/l - 96 h (OECD Test Guideline 203)
Toxicity to daphnia and other aquatic invertebrates	Static test EC50 - Daphnia magna (Water flea) - 24.600 mg/l - 48 h (OECD Test Guideline 202)
Toxicity	No data available
Toxicity to bacteria	EC50 - activated sludge - 10 - 100 mg/l - 30 min (ISO 8192)
Toxicity to algae	Static test ErC50 - Pseudokirchneriella subcapitata (green algae) - 17.000 mg/l - 72 h (OECD Test Guideline 201)
Products Biodegradation	No data available
Mobility in soil	No data available
Results of PBT av PvB assessment	This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.
Endocrine disrupting properties	The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.
Other adverse effects	No data available

13. Disposal considerations

Product	See www.retrologistik.com for processes regarding the return of chemicals and containers, or contact us there if you have further questions.

Contaminated packaging	No data available
Waste treatment Method	No data available

14. Transport information

UN number	ADR/RID:-	IMDG:-	IATA:-
UN proper shipping name	ADR/RID: Not dangerous goods	IMDG: Not dangerous goods	IATA: Not dangerous goods
Transport hazard classess	ADR/RID:-	IMDG:-	IATA:-
Packaging group	ADR/RID:-	IMDG:-	IATA:-
Environmental hazards	ADR/RID:No	IMDG Marine pollutant:No	IATA: No
Special precautions for user	No data available		
Further information	No data available		

15. Regulatory information

Safety, health and environmental regulations/legislation specific for the substance or mixture	This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006
Other regulations	Take note of Dir 94/33/EC on the protection of young people at work.
Chemical Safety Assessment	For this product a chemical safety assessment was not carried out

16. Other information

Other Information

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and weassume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if Rx Marine International has been advised of the possibility of such damages.

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