

1. Product and Company Identification

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Product Name
Part Number

Dimethyl sulfoxide DMSO
RXSOL-60-6224-100

Company Details:

RX MARINE INTERNATIONAL

105, A wing , BSEL , TECH PARK.

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2. Composition / Information on ingredients

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Name of Substance	Cas Number
Dimethyl Sulfoxide (DMSO)	67-68-5

3. Hazards Identification

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Signal Word
Hazard Statements
Precautionary statements - prevention

Warning
Combustible liquid
Keep away from heat/sparks/open flames/hot surfaces.
Fire : In case of fire: Use CO₂, dry chemical, or foam.
Storage : Store in a well-ventilated place. Keep cool.
Disposal : Dispose of contents/container to an approved
Hazards not otherwise classified (HNOC) : None identified
DMSO readily penetrates skin and may carry other dissolved

Other hazards

4. First Aid Measures

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Skin Contact
Eye Contact
Inhalation:
Ingestion
Most important symptoms/effects
Notes to Physician

Take off immediately all contaminated clothing. Rinse immediately with plenty of water, also under attention.
Move to fresh air. If not breathing, give artificial respiration. Risk of serious damage to the lungs.
Clean mouth with water and drink afterwards plenty of water. Call Poison Control Center immediately. If vomiting occurs, do not induce vomiting.
Irritant effects, Headache, Nausea, Tiredness, CNS depression.
Indication of any immediate medical attention and hospital admission.
Laxative: Sodium sulfate (1 tablespoon/1/4 l water)

5. Fire-fighting Measures

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Suitable extinguishing media
Unsuitable extinguishing media
Flash Point
Autoignition Temperature
Explosion Limits Upper
Explosion Limits Lower
Sensitivity to Mechanical Impact
Sensitivity to Static Discharge
Specific Hazards Arising from the Chemical

Hazardous Combustion Products
Protective Equipment and Precautions for Firefighters

Further Information

Foam, Carbon dioxide (CO₂), Dry powder, Water
For this substance/mixture no limitations of extinguishing media
87 °C / 181.6 °F
301 °C / 573.8 °F
42 Vol %
2.6 Vol %
No information available
No information available
Combustible material. Containers may explode when heated. May emit irritating gases and vapors
Carbon monoxide (CO) Carbon dioxide (CO₂) Sulfur dioxide (SO₂)
As in any fire, wear self-contained breathing apparatus (SCBA or equivalent) and full protective gear.
Suppress (knock down) gases/vapours/mists with water spray. Do not contaminate surface water or the ground water source.

6. Accidental Release Measures

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Spillage
Personal Protection

Environmental Precaution

Methods and materials for containment and cleaning

Absorb with an inert material and put the spilled material in a container for disposal.
Use personal protective equipment. Remove all clothing immediately. Wash exposed skin thoroughly with soap and water. Avoid static discharges. Ensure adequate ventilation.
Should not be released into the environment. Do not use open flame. See Section 12 for additional ecological information.
Remove all sources of ignition. Soak up with inert material and dispose of in a safe manner.

7. Handling and Storage

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Handling

Storage

Hygiene measures

Wear personal protective equipment. Ensure adequate ventilation. Avoid flames, hot surfaces and sources of ignition. Avoid contact with skin and inhalation.
Keep containers tightly closed in a dry, cool and well-ventilated area away from sources of ignition.
Change contaminated clothing. Wash hands after work.

8. Exposure controls and personal protection

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Engineering Control

Personal Protection

Ensure adequate ventilation, especially in confined spaces. Workers should not be close to the workstation location.
Eye/face Protection : Wear appropriate protective eyewear.

Skin and body protection : Wear appropriate protective clothing. Long sleeved clothing. Flame retardant antistatic protective clothing.

Respiratory Protection : Follow the OSHA and European Standard EN 149. Use a NIOSH/MSHA approved respirator if exposure limits are exceeded or if irritation or other symptoms occur. Handle in accordance with good industrial hygiene practices. This product does not contain any hazardous materials in quantities or concentrations established by the region specific regulatory agencies.

Hygiene Measures
Exposure Limits



Gloves Suit

9. Physical and chemical properties

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Form	Liquid
Colour	Colourless
Odour	Odourless
Odor Threshold	No Information Available
pH	Not Applicable
Melting Point	18.4 °C / 65.1 °F
Boiling Point	189 °C / 372.2 °F
Flash Point	87 °C / 188.6 °F
Evaporation Rate	No information available
Flammability (solid, gas)	Not Applicable
Explosive limits	Upper 42 vol % Lower 2.6 vol %
Vapour pressure	0.55 mbar @ 20°C
Vapour Density	2.7
Secific Gravity	1.100
Solubility	Soluble in water
Partition coefficient n-octanol/water	No data available
Autoignition Temperature	301 °C / 573.8 °F
Decomposition Temperature	> 190°C
Viscosity	1.98 mPa.s @ 25°C
Molecular Formula	C ₂ H ₆ O S
Molecular Weight	78.13

10. Stability and reactivity

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Reactivity Hazard None known, based on information available

Stability	Hygroscopic.
Possibility of hazardous reactions	No known hazardous reactions.
Conditions to avoid	Incompatible products. Excess heat. Exposure to moist air or water. Keep away from open flames, hot surfaces and sources of ignition.
Incompatible materials	Strong oxidizing agents, Strong acids, Strong reducing agents, Alkali metals
Hazardous Decomposition Products	Carbon monoxide (CO), Carbon dioxide (CO ₂), Sulfur oxides, Sulfides, Formaldehyde
Hazardous Polymerization	Hazardous polymerization does not occur. Hazardous Reactions Hazardous polymerization does not occur. Hazardous Thermal decomposition can take place above 189°C / 372°F.

11. Toxicological information

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Acute oral toxicity	LD50 Rat: 28,300 mg/kg OECD Test Guideline 401
Acute inhalation toxicity	LC0 Rat: > 5.33 mg/l; 4 h ; dust/mist OECD Test Guideline 403
Acute dermal toxic	LD50 Rat: 40,000 mg/kg
Skin corrosion	Rabbit Result: slight irritation OECD Test Guideline 404 Possible damages: slight irritation
Eye corrosion	Rabbit Result: slight irritation OECD Test Guideline 405 Possible damages: slight irritation
Sensitisation	Maximisation Test Guinea pig Result: negative Method: OECD Test Guideline 406
In animal experiments	Mouse Result: negative Method: OECD Test Guideline 429
No indication of carcinogenic activity. (IUCALD)	Reproductive toxicity This information is not available. Teratogenicity Did not show teratogenic effects in animal experiments. Specific target organ toxicity - single exposure This information is not available. Specific target organ toxicity - repeated exposure This information is not available. Aspiration hazard This information is not available.
Further information	Possible symptoms: After uptake: CNS disorders, Nausea, Tiredness, Headache Damage to: Liver, Kidney However, when the product is handled appropriately, hazardous effects are unlikely to occur. Handle in accordance with good industrial hygiene and safety practice.

12. Ecological information

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Toxicity	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 Analytical monitoring: yes OECD Test Guideline 202 Toxicity to algae static test EC50 Pseudokirchneriella subcapitata (green algae): 17,000 mg/l; 72 h Analytical monitoring: yes OECD Test Guideline 201
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	Toxicity to bacteria EC10 <i>Pseudomonas putida</i> : 7,100 mg/l; 16 h (IUCLID) EC50 activated sludge: 10 - 100 mg/l; 30 min (IUCLID)
Persistence and degradability	Biodegradability 31 %; 28 d; aerobic OECD Test Guideline 301D Not readily biodegradable.
Bioaccumulative potential	Partition coefficient: n-octanol/water log Pow: -1.35 (experimental) (Lit.) Bioaccumulation is not expected.
Mobility in soil	No information available.
Results of PBT and vPvB assessment	PBT/vPvB assessment not available as chemical safety assessment not required/not conducted.
Other adverse effects	Discharge into the environment must be avoided.

13. Disposal considerations

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Waste treatment Method	Waste material must be disposed of in accordance with the national and local regulations. Leave chemicals in original mixing with other waste. Handle uncleaned containers like the product itself.
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14. Transport information

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Transport in	
Land transport (ADR/RID)	Not classified as dangerous in the meaning of transport regulations
Inland waterway transport (ADN)	Not relevant
Air transport (IATA)	Not classified as dangerous in the meaning of transport regulations
Sea transport (IMDG)	Not classified as dangerous in the meaning of transport regulations
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	Not relevant

15. Regulatory information

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Regulatory Information	Safety, health and environmental regulations/legislation National legislation Storage class 10 - 13
Chemical safety assessment	For this product a chemical safety assessment was conducted

16. Other information

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Other Information	<p>The information above is believed to be accurate and reliable. However, we make no warranty of accuracy or completeness, implied, with respect to such information, and we should make their own investigations to determine its suitability for particular purposes. In no event shall we be liable for any damages, including but not limited to, for lost profits or any special, indirect, incidental, or consequential damages, arising, even if Rx Marine International has been advised of the possibility of such damages.</p> <p>DISCLAIMER OF LIABILITY :The information in this document is believed to be accurate and reliable. However, the information is provided without warranty, regarding its correctness. The conditions or methods of use are the responsibility of the user.</p>
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