

1. Product and Company Identification

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Product Name Methylal
Part Number RXSOL-19-3238-200

Company Details:....

RX MARINE INTERNATIONAL
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2. Composition / Information on ingredients

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Component	CAS No	Weight-%
Methylal	109-87-5	> 98

3. Hazards Identification

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Classification	This chemical is not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)
Label elements	
Signal Word	Danger
Hazard statements	Highly flammable liquid and vapor
Precautionary Statements	
Prevention	Keep away from heat/sparks/open flames/hot surfaces. - No smoking Keep container tightly closed Ground/bond container and receiving equipment Use explosion-proof electrical/ventilating/lighting equipment Use only non-sparking tools Take precautionary measures against static discharge
Skin	Wear protective gloves/protective clothing/eye protection/face protection IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower
Fire	In case of fire: Use CO2, dry chemical, or foam for extinction
Storage	Store in a well-ventilated place. Keep cool
Disposal	Dispose of contents/container to an approved waste disposal plant
Hazards not otherwise classified (HNOC)	None identified

4. First Aid Measures

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General Advice	Remove to fresh air.
Eye contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention.
Skin contact	Wash off immediately with plenty of water for at least 15 minutes. If skin irritation persists, call a physician.
Inhalation	Remove to fresh air. If not breathing, give artificial respiration. Get medical attention if symptoms occur.
Ingestion	Clean mouth with water and drink afterwards plenty of water.
Most important symptoms and effects	Difficulty in breathing. Inhalation of high vapor concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting
Notes to Physician	Treat symptomatically

5. Fire-fighting Measures

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Suitable Extinguishing Media	Water mist may be used to cool closed containers.
Unsuitable extinguishing media	No information available
Flash Point	-18 °C / -0.4 °F
Method	No information available
Autoignition Temperature	237 °C / 458.6 °F
Explosion Limits	
Upper	17.60%
Lower	1.60%
Sensitivity to Mechanical Impact	No information available
Sensitivity to Static Discharge	No information available
Specific Hazards Arising from the Chemical	Flammable. Containers may explode when heated. Vapors may form explosive mixtures with air. Vapors may travel to source of ignition and flash back.
Hazardous Combustion Products	None known.
Protective Equipment and Precautions for Firefighters	As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. Accidental Release Measures

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Personal precautions	Ensure adequate ventilation. Use personal protective equipment as required. Remove all sources of ignition. Take precautionary measures against static discharges.
Environmental Precautions	Should not be released into the environment. See Section 12 for additional Ecological Information.
Methods for Containment and Clean Up	Soak up with inert absorbent material. Keep in suitable, closed containers for disposal. Remove all sources of ignition. Use spark-proof tools and explosion-proof equipment.

7. Handling and Storage

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Handling	Ensure adequate ventilation. Wear personal protective equipment/face protection. Do not get in eyes, on skin, or on clothing. Avoid ingestion and inhalation. Keep away from open flames, hot surfaces and sources of ignition. Use only non-sparking tools. To avoid ignition of vapors by static electricity discharge, all metal parts of the equipment must be grounded. Take precautionary measures against static discharges.
Storage	Keep container tightly closed in a dry and well-ventilated place. Keep away from heat, sparks and flame.

8. Exposure controls and personal protection

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Exposure Guidelines

Chemical name	ACGIH TLV	OSHA PEL	NIOSH IDLH	Mexico OEL (TWA)
Methylal	TWA: 1000 ppm	(Vacated) TWA: 1000 ppm (Vacated) TWA: 3100 mg/m3 TWA: 1000 ppm TWA: 3100 mg/m3	IDLH: 2200 ppm TWA: 1000 ppm TWA: 3100 mg/m3	TWA: 1000 ppm

Engineering Measures

Ensure adequate ventilation, especially in confined areas. Ensure that eyewash stations and safety showers are close to the workstation location. Use spark-proof tools and explosion-proof equipment. Use explosion-proof electrical/ventilating/lighting equipment.

Personal Protective Equipment

Eye/face protection

Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN 166.

Skin and body protection

Wear appropriate protective gloves and clothing to prevent skin exposure

Respiratory protection

Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

Hygiene Measures

Handle in accordance with good industrial hygiene and safety practice.

9. Physical and chemical properties

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Physical state	Liquid
Appearance	Colorless
Odor	Sweet
Odor threshold	No information available
pH	
Melting Point/Range	-105 °C / -157 °F
Boiling Point/Range	41 - 42 °C / 105.8 - 107.6 °F @760 mmHg
Flash Point	-18 °C / -0.4 °F
Evaporation Rate	1.5 (Ether = 1.0)
Flammability (solid,gas)	Not applicable
Flammability or explosive limits	
Upper	17.60%
Lower	1.60%
Vapor Pressure	440 mbar @ 20 °C
Vapor Density	2.63 (Air = 1.0)
Specific Gravity	8600
Solubility	Partially soluble
Partition coefficient; n-octanol/water	No data available
Autoignition Temperature	237 °C / 458.6 °F
Decomposition Temperature	No information available
Viscosity	No information available
Molecular Formula	CH ₂ (OCH ₃) ₂
Molecular Weight	76.09

10. Stability and reactivity

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Reactive Hazard	None known, based on information available
Stability	Stable under normal conditions
Conditions to avoid	Keep away from open flames, hot surfaces and sources of ignition
Incompatible materials	Strong oxidizing agents
Hazardous decomposition products	None under normal use conditions
Hazardous Polymerization	Hazardous polymerization does not occur.
Hazardous Reactions	None under normal processing.

11. Toxicological information

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Acute Toxicity

Product Information

Component Information

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation			
Methylal	6423 mg/kg (Rat)	>5000 mg/kg (Rabbit)	Not listed			
Toxicologically Synergistic	No information available.					
Delayed and immediate effects as well as chronic effects from short and long-term exposure	No information available					
Irritation	No information available					
Sensitization	No information available					
Carcinogenicity	The table below indicates whether each agency has listed any ingredient as acarcinogen.					
Component	CAS No	IARC	NTP	ACGIH	OSHA	Mexico
Methylal	109-87-5	Not listed	Not listed	Not listed	Not listed	Not listed
Mutagenic Effects	No information available.					
Reproductive Effects	No information available.					
Developmental Effects	No information available.					
Teratogenicity	No information available.					
STOT - single exposure	None known					
STOT - repeated exposure	None known					
Aspiration hazard	No information available.					
Symptoms / effects, both acute and delayed	Inhalation of high vapor concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting					
Endocrine Disruptor Information	No information available.					
Other Adverse Effects	The toxicological properties have not been fully investigated.					

12. Ecological information

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Ecotoxicity

Component	Freshwater Algae	Freshwater Fish	Microtox	Water Flea
Methylal	Not listed	LC50: 1000 mg/L/96h	Not listed	EC50: 1200 mg/L/48h
Persistence and degradability	Persistence is unlikely based on information available.			
Bioaccumulation	No information available			
Other adverse effects	Will likely be mobile in the environment due to its volatility.			

13. Disposal considerations

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14. Transport informationwww.rxmarine.com**DOT**

UN-No	UN1234
Proper Shipping Name	METHYLAL
Hazard Class	3
Packing Group	II

TDG

UN-No	UN1234
Proper Shipping Name	METHYLAL
Hazard Class	3
Packing Group	II

IATA

UN-No	UN1234
Proper Shipping Name	METHYLAL
Hazard Class	3
Packing Group	II

IMDG

UN-No	UN1234
Proper Shipping Name	METHYLAL
Hazard Class	3
Packing Group	II

15. Regulatory informationwww.rxmarine.com**United States of America Inventory**

Component	CAS No	TSCA	TSCA notification - Active-Inactive	Inventory TSCA - RegulatoryFlags	EPA
Methylal	109-87-5	X	ACTIVE	-	

International Inventories

Canada (DSL/NDSL), Europe (EINECS/ELINCS/NLP), Philippines (PICCS), Japan (ENCS), Japan (ISHL), Australia (AICS), China (IECSC), Korea(KECL).

Component	CAS No	DSL	NDSL	EINECS	PICCS	ENCS	ISHL	AICS	IECSC	KECL
Methylal	109-87-5	X	-	203-714-2	X	X	X	X	X	KE-11074

U.S. Federal Regulations

SARA 313	Not applicable
SARA 311/312 Hazard Categories	See section 2 for more information
CWA (Clean Water Act)	Not applicable
Clean Air Act	Not applicable
OSHA - Occupational Safety and Health Administration	Not applicable
CERCLA	Not applicable
California Proposition 65	This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know

Regulations

Component	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
Methylal	X	X	X	-	X

U.S. Department of Transportation

Reportable Quantity (RQ)	N
DOT Marine Pollutant	N
DOT Severe Marine Pollutant	N
U.S. Department of Homeland Security	This product does not contain any DHS chemicals
Other International Regulations	
Mexico - Grade	No information available

Safety, health and environmental regulations/legislation specific for the substance or mixture

Component	CAS No	OECD HPV	Persistent Organic Pollutant	Ozone Depletion Potential	Restriction of Hazardous Substances (RoHS)
Methylal	109-87-5	Not applicable	Not applicable	Not applicable	Not applicable

Component	CAS No	Seveso III Directive (2012/18/EC) - Qualifying Quantities for Major Accident Notification	Seveso III Directive (2012/18/EC) - Qualifying Quantities for Safety Report Requirements	Rotterdam Convention (PIC)	Basel Convention (Hazardous Waste)
Methylal	109-87-5	Not applicable	Not applicable	Not applicable	Not applicable

16. Other information www.rxmarine.com

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 we assume 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 we 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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