Material Safety Data Sheet

Butyl Carbitol (RXSOL-19-1250-210)

1. Product and Company Identifaction

Product Name	:Butyl Carbitol Rx
Part Number	:RXSOL-19-1250-210

Company Details:
RX MARINE INTERNATIONAL
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2. Composition / informationon ingredients

Name of Substance	Cas Number	EC Number	Weight %
2-(2-butoxyethoxy)ethanol; diethylene glycol monobutyl ether	112-34-5	203-961-6	100%

3. Hazards Identification

Signal Word	Warning
Hazard Statements	Causes serious eye irritation May cause damage to organs through prolonged or repeated exposure
Precautionary statements - prevention	Wash face, hands and any exposed skin thoroughly after handling Wear eye/face protection Do not breathe dust/fume/gas/mist/vapors/spray
Precautionary statements -response	Get medical attention/advice if you feel unwellEyes IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing If eye irritation persists: Get medical advice/attentionDisposal Dispose of contents/container to an approved waste disposal plant

4. First Aid Measures

Skin Contact	Remove contaminated clothing. Wash with plenty of soap and water. If skin irritation occurs: Get medical advice/attention. Wash contaminated clothing before reuse.
Eye Contact	Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists.
Inhalation:	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Oxygen or artificial respiration
Ingestion	Call a physician or poison control center immediately. Rinse mouth. Do not induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.

Most important symptoms/effects	No information available
Notes to Physician	Provide general supportive measures and treat symptomatically. Keep victim warm. Keep victim under observation. Symptoms may be delayed. Treat symptomatically

5. Fire-fighting Measures

Suitable extinguishing media	Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
Unsuitable extinguishing media	No information available
Flash Point	100 °C / 212 °F Method - Closed cup ISO 2719
Sensitivity to Static Discharge	No information available
Specific Hazards Arising from the Chemical	Thermal decomposition can lead to release of irritating gases and vapors. Keep product and empty container away from heat and sources of ignition.
Autoignition Temperature	227 °C / 440.6 °F
Protective Equipment and Precautions for Firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.In case of fire and/or explosion do not breathe fumes. Move containers from fire area if you can do so without risk.
Explosion Limits	Upper 5.30 vol % Lower 0.70 vol %

6. Accidental Release Measures

Personal precautions, protective equipment and emergency procedures	Keep unnecessary personnel away. Remove all sources of ignition. Avoid contact with skin, eyes and clothing.
Methods and materials for containment and cleaning up	Remove all sources of ignition. Soak up with inert absorbent material. Keep in suitable, Up closed containers for disposal.
Enviromental Precaution	Avoid release to the environment. Inform appropriate managerial or supervisory personnel of all environmental releases. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground.

7. Handling and Storage

Handling	Avoid contact with eyes. Wash thoroughly after handling. Minimize exposure to air. After opening, purge container with nitrogen before reclosing. Periodically test for peroxide formation on long-term storage. Do not allow to evaporate to near dryness. Do not distill to near dryness. Addition of water or appropriate reducing materials will lessen peroxide formation.
Storage	Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from heat and sources of ignition.
Hygiene measures	Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance.

8. Exposure controls and personal protection

Engineering Control	Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

Personal Protection	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 EN166. Skin and body protection : Wear appropriate protective gloves and clothing to prevent skin exposure. Long sleeved clothing.Flame retardant antistatic protective clothing. Respiratory Protection : : Respiratory protection should be worn when there is a potential to exceed the exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, wear respiratory protection when adverse effects, such as respiratory irritation or discomfort have been experienced, or where indicated by your risk assessment process. For most conditions no respiratory protection should be needed; however, if discomfort is experienced, use an approved air-purifying respirator. Use the following CE approved air-purifying respirator: Organic vapor cartridge, type A (boiling point >65 ºC, meeting standard EN 14387).

Occupational exposure limits	Components	Regulation	Type of Listing	Limit
	Diethylene glycol monobutyl Ether	ACGIH TLV	TWA Inhalable fraction and vapo	10 PPM

Hygiene Measures	Observe any medical surveillance requirements. When using do not smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties

Form	Liquid
Colour	Colourless
Odour	Faint
Odor Threshold	No Information Available
pH	Not Applicable
Freezing Point	-68 °C
Boiling Point	230 °C (760 mmHg)
Flash Point	114 °C closed cup
Evaporation Rate	0.01 (Butyl Acetate =1)
Melting point/range	Not applicable to liquids
Flammability (solid, gas)	Not applicable to liquids
Explosive limits Lower / Uper	Lower explosion limit 0.85 % vol Upper explosion limit 24.6 % vol
Vapour pressure	2.9 Pa at 25 °C
Vapour Density	No test data available
Relative Density (water = 1)	0.951 at 20 °C
Water solubility	Completely Miscible
Partition coefficient noctanol/water log Pow	1 Measured
Autoignition Temperature	210 °C
Decomposition temperature	No test data available
Dynamic Viscosity	6 mPa.s at 20 °C
Kinematic Viscosity	5.2 cSt at 25 °C
Explosive properties	Not explosive.
Oxidizing properties	Not oxidizing.
Liquid Density	0.955 g/cm3 at 20 °C Measured
Molecular weight	162.2 g/mol Calculated

10. Stability and reactivity

Recativity	No dangerous reaction known under conditions of normal use.
Chemical Stability	Thermally stable at typical use temperatures.
Possibility of hazardous reactions	Polymerization will not occur.
Conditions to avoid	Do not distill to dryness. Product can oxidize at elevated temperatures.Generation of gas during decomposition can cause pressure in closed systems.
Incompatible materials	Avoid contact with: Strong acids. Strong bases. Strong oxidizers.
Hazardous Decomposition Products	Decomposition products depend upon temperature, air supply and the presence of other materials.. Decomposition products can include and are not limited to:. Aldehydes.. Ketones.. Organic acids..

11. Toxicological information

Acute toxicity

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
2-(2-butoxyethoxy) ethanol; diethylene glycol monobutyl ether	LD50 = 5660 mg/kg (Rat)	LD50 = 2700 mg/kg (Rabbit)	Not listed

Toxicologically Synergistic	No information available
Irritation	Irritating to eyes
Sensitization	No information available

Carcinogenicity

The table below indicates whether each agency has listed any ingredient as a carcinogen.

Compnent	CAS-No	IARC	NTP	ACGIH	OSHA	Mexico
Diethylene glycol monobutyl ether	112-34-5	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	Kidney Liver
Aspiration hazard	No information available.
Symptoms / effects,both acute anddelayed	No information available.
Endocrine Disruptor Information	No information available.
Other Adverse Effects	The toxicological properties have not been fully investigated.

12. Ecological information

	Component	Fresh water Algae	Fresh water Fish	Microtox	Water Flea
Ecotoxicity	Diethylene glycol monobutyl ether	EC50: > 100 mg/L, 96h(Desmodesmus subspicatus)	LC50: = 1300 mg/L, 96h static (Lepomis macrochirus)	Not listed	EC50: = 2850 mg/L, 24h (Daphnia magna) EC50: > 100 mg/L, 48h (Daphnia magna)

Acute toxicity to algae/aquatic plants	ErC50, alga Scenedesmus sp., static test, 96 Hour, Growth rate inhibition, > 100 mg/l, OECDTest Guideline 201 or Equivalent EbC50, alga Scenedesmus sp., static test, 96 Hour, Biomass, > 100 mg/l, OECD Test Guideline 201 or Equivalent
Persistence and Degradability :	Biodegradability: Material is readily biodegradable. Passes OECD test(s) for ready biodegradability. 10-day Window: Not applicable Biodegradation: 89 - 93 % Exposure time: 28 d Method: OECD Test Guideline 301C or Equivalent 10-day Window: Not applicable Biodegradation: 100 % Exposure time: 28 d Method: OECD Test Guideline 302B or Equivalent
Mobility in soil	Given its very low Henry's constant, volatilization from natural bodies of water or moist soil is not expected to be an important fate process. Potential for mobility in soil is very high (Koc between 0 and 50). Partition coefficient (Koc): 2 Estimated.
Results of PBT and vPvB assessment	This substance is not considered to be persistent, bioaccumulating and toxic (PBT). This substance is not considered to be very persistent and very bioaccumulating (vPvB).
Other adverse effects	This substance is not on the Montreal Protocol list of substances that deplete the ozone layer.

13. Disposal considerations

Disposal instructions	This product, when being disposed of in its unused and uncontaminated state should be treated as a hazardous waste according to EC Directive 2008/98/EC. Any disposalpractices must be in compliance with all national and provincial laws and any municipal or local bylaws governing hazardous waste. For used, contaminated and residual materials additional evaluations may be required. Do not dump into any sewers, on the ground, or into any body of water.
Local disposal regulations :	Dispose in accordance with all applicable regulations.

14. Transport information

DOT	Not regulated
TDG	Not regulated
IATA	Not regulated
IMDG/IMO	Not regulated

15. Regulatory information

Fedral and State Regulation	This product has been classified in accordance with the criteria of the Globally Harmonized System of Classification and Labelling of Chemicals (GHS), rev. 8.
Other Regulation	Not regulated.
SARA 302	Not Listed
SARA 313	Not Listed

16. Other information

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Other Information

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