Material Safety Data Sheet

Methanol AR Grade 500 ml (RXSOL-60-6129-500)

1. Product and Company Identifaction

Product Name	RXSOL-60-6103-2.5
Product Type	**METHANOL (Dried)**

Company Details:

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

Stock Point : Mumbai, Kandla, Kolkata, Chennai, Vizag, Fujairah, Muscat, Nairobi

Phone	+91 22 65113333 / 5555 / 9999 / 27611360
Fax	+91 22 2781 1318:AOH :0091 9821214367
Email	mail@rxmarine.com

2. Composition / informationon ingredients

Chemica Name	CAS #	Percent	EINECS/ELINCS
Methyl alcohol	67-56-1	99.98	200-659-6

3. Hazards Identification

Appearance: clear, colorless. Flash Point: 11 deg C. Poison! Cannot be made non-poisonous. Causes eye and skin irritation. May be absorbed through intact skin. This substance has caused adverse reproductive and fetal effects in animals. Danger! Flammable liquid and vapor. Harmful if inhaled. May be fatal or cause blindness if swallowed. May cause central nervous system depression. May cause digestive tract irritation with nausea, vomiting, and diarrhea. Causes respiratory tract irritation. May cause liver, kidney and heart damage.
Target Organs: Kidneys, heart, central nervous system, liver, eyes.

Potential Health Effects
Eye: Produces irritation, characterized by a burning sensation, redness, tearing, inflammation, and possible corneal injury. May cause painful sensitization to light.
Skin: Causes moderate skin irritation. May be absorbed through the skin in harmful amounts. Prolonged and/or repeated contact may cause defatting of the skin and dermatitis.
Ingestion: May be fatal or cause blindness if swallowed. May cause gastrointestinal irritation with nausea, vomiting and diarrhea. May cause systemic toxicity with acidosis. May cause central nervous system depression, characterized by excitement, followed by headache, dizziness, drowsiness, and nausea. Advanced stages may cause collapse, unconsciousness, coma and possible death due to respiratory failure. May cause cardiopulmonary system effects. Inhalation: Harmful if inhaled. May cause adverse central nervous system effects including headache, convulsions, and possible death. May cause visual impairment and possible permanent blindness. Causes irritation of the mucous membrane.
Chronic: Prolonged or repeated skin contact may cause dermatitis. Chronic inhalation and ingestion may cause effects similar to those of acute inhalation and ingestion. Chronic exposure may cause reproductive disorders and teratogenic effects. Laboratory experiments have resulted in mutagenic effects. Prolonged exposure may cause liver, kidney, and heart damage.

4. First Aid Measures

Eyes	Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid immediately.
Skin	Immediately flush skin with plenty of soap and water for at least 15 minutes while removing contaminated clothing and shoes. Get medical aid if irritation develops or persists. Wash clothing before reuse.

Ingestion	If victim is conscious and alert, give 2-4 cupfuls of milk or water. Never give anything by mouth to an unconscious person. Get medical aid immediately. Induce vomiting by giving one teaspoon of Syrup of Ipecac.
Inhalation	Get medical aid immediately. Remove from exposure to fresh air immediately. If breathing is difficult, give oxygen. Do NOT use mouth-to-mouth resuscitation. If breathing has ceased apply artificial respiration using oxygen and a suitable mechanical device such as a bag and a mask.
Notes to Physician	Effects may be delayed. Ethanol may inhibit methanol metabolism.

5. Fire-fighting Measures

General Information	Containers can build up pressure if exposed to heat and/or fire. As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Water runoff can cause environmental damage. Dike and collect water used to fight fire. Vapors can travel to a source of ignition and flash back. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Flammable Liquid. Can release vapors that form explosive mixtures at temperatures above the flashpoint. Use water spray to keep fire-exposed containers cool. Water may be ineffective. Material is lighter than water and a fire may be spread by the use of water. Vapors may be heavier than air. They can spread along the ground and collect in low or confined areas. May be ignited by heat, sparks, and flame.
Extinguishing Media	For small fires, use dry chemical, carbon dioxide, water spray or alcohol-resistant foam. Use water spray to cool fire-exposed containers. Water may be ineffective. For large fires, use water spray, fog or alcohol-resistant foam. Do NOT use straight streams of water.

6. Accidental Release Measures

General Information	Use proper personal protective equipment as indicated in Section 8.
Spills/Leaks	Scoop up with a nonsparking tool, then place into a suitable container for disposal. Use water spray to disperse the gas/vapor. Remove all sources of ignition. Absorb spill using an absorbent, non-combustible material such as earth, sand, or vermiculite. Do not use combustible materials such as saw dust. Provide ventilation. A vapor suppressing foam may be used to reduce vapors. Water spray may reduce vapor but may not prevent ignition in closed spaces.

7. Handling and Storage

Handling	Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Ground and bond containers when transferring material. Do not breathe dust, vapor, mist, or gas. Do not get in eyes, on skin, or on clothing. Empty containers retain product residue, (liquid and/or vapor), and can be dangerous. Keep container tightly closed. Avoid contact with heat, sparks and flame. Do not ingest or inhale. Use only in a chemical fume hood. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose empty containers to heat, sparks or open flames.
Storage	Keep away from heat, sparks, and flame. Keep away from sources of ignition. Store in a cool, dry, well-ventilated area away from incompatible substances. Flammables-area. Keep containers tightly closed. Do not store in aluminum or lead containers.

8. Exposure controls and personal protection

Engineering Controls	Use explosion-proof ventilation equipment. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits. Use only under a chemical fume hood.	
Exposure Limits	Chemical Name ACGIH NIOSH OSHA - Final PELs Methyl alcohol 200 ppm TWA; 250 ppm STEL; skin - potential for cutaneous absorption 200 ppm TWA; 260 mg/m3 TWA 6000 ppm IDLH 200 ppm TWA; 260 mg/m3 TWA	
OSHA Vacated PELs	Methyl alcohol	200 ppm TWA; 260 mg/m3 TWA; 250 ppm STEL; 325 mg/m3 STEL
Personal Protective Equipment	Eyes	Wear chemical goggles.
	Skin	Wear appropriate protective gloves to prevent skin exposure.
	Clothing	Wear appropriate protective clothing to prevent skin exposure.
	Respirators	A respiratory protection program that meets OSHA's 29 CFR ?1910.134 and ANSI Z88.2 requirements or European Standard EN 149 must be followed whenever workplace conditions warrant a respirator's use

9. Physical and chemical properties

Physical State	Liquid
Appearance	Clear, colorless
Odor	alcohol-like - weak odor
pH	Not available.
Vapor Pressure	128 mm Hg @ 20 deg C
Vapor Density	1.14 (Air=1)
Evaporation Rate	5.4 (Ether=1)
Viscosity	0.55 cP 20 deg C
Boiling Point	64.3 deg C @ 760.00mm Hg
Freezing/Melting Point	98 deg C
Autoignition Temperature	464 deg C (867.20 deg F)
Flash Point	11 deg C (51.80 deg F)
Decomposition Temperature	Not available.
NFPA Rating	(estimated) Health: 1; Flammability: 3; Reactivity: 0

Explosion Limits, Lower	6.0 vol %
Explosion Limits Upper	36.00 vol %
Solubility	miscible
Specific Gravity/Density	0.79
Molecular Formula	CH3OH
Molecular Weight	32.04

METHANOL			
Test	Unit	Test Method	Results
Purity	wt%	ASTM E-346	99.98
Water	wt%	ASTM D-1364	0.0067
Ethanol	wt%	ASTM E-346	0.0044
Specific Gravity @20°/20°	-	ASTM D-4052	0.7925
Acetone	wt%	ASTM E-346	Less than 0.007
Permanganate time	-	ASTM D-1363	Greater than 50 ME
Non Volatile matter	-	ASTM D- 1353	Less than 0.0005gm
Distillation range @750 MMHG	DEGC	ASTM D-1078	0.4 including 64.5°
Colour, Pt-Cobalt scale	-	ASTM D-1209	Below 6 Apha
Carbonizable, Pt-Cobalt scale	-	ASTM E-346	Below 30 Apha
Clearance	-	-	Clear and free from suspended matter
Odour	-	ASTM D-1296	Non-residual
Acidity as CH3COOH	wt%	ASTM D-1613	0.002
Iron	PPM	ASTM E-202	0.01
Chloride	PPM	ASTM D-512	0.01
Miscibility	-	ASTM D-1722	Passes test
Alkalidity ASNN3	wt%	ASTM D-1614	NIL

10. Stability and reactivity

Chemical Stability	Stable under normal temperatures and pressures.
Conditions to Avoid	High temperatures, incompatible materials, ignition sources, oxidizers.

Incompatibilities with Other Materials	Acids (mineral, non-oxidizing, e.g. hydrochloric acid, hydrofluoric acid, muriatic acid, phosphoric acid), acids (mineral, oxidizing, e.g. chromic acid, hypochlorous acid, nitric acid, sulfuric acid), acids (organic, e.g. acetic acid, benzoic acid, formic acid, methanoic acid, oxalic acid), azo, diazo, and hydrazines (e.g. dimethyl hydrazine, hydrazine, methyl hydrazine), isocyanates (e.g. methyl isocyanate), nitrides (e.g. potassium nitride, sodium nitride), peroxides and hydroperoxides (organic, e.g. acetyl peroxide, benzoyl peroxide, butyl peroxide, methyl ethyl ketone peroxide), epoxides (e.g. butyl glycidyl ether), Oxidants (such as barium perchlorate, bromine, chlorine, hydrogen peroxide, lead perchlorate, perchloric acid, sodium hypochlorite)., Active metals (such as potassium and magnesium)., acetyl bromide, alkyl aluminum salts, beryllium dihydride, carbontetrachloride, carbon tetrachloride + metals, chloroform + heat, chloroform + sodium hydroxide, cyanuric chloride, diethyl zinc, nitric acid, potassium-tert-butoxide, chloroform + hydroxide, water reactive substances (e.g. acetic anyhdride, alkyl aluminum chloride, calcium carbide, ethyl dichlorosilane).
Hazardous Decomposition Products	Carbon monoxide, irritating and toxic fumes and gases, carbon dioxide, formaldehyde. Hazardous Polymerization: Will not occur.

11. Toxicological information

RTECS#:
CAS# 67-56-1: PC1400000
LD50/LC50:
CAS# 67-56-1:
Draize test, rabbit, eye: 40 mg Moderate;
Draize test, rabbit, eye: 100 mg/24H Moderate;
Draize test, rabbit, skin: 20 mg/24H Moderate;
Inhalation, rat: LC50 = 64000 ppm/4H;
Oral, mouse: LD50 = 7300 mg/kg;
Oral, rabbit: LD50 = 14200 mg/kg;
Oral, rat: LD50 = 5628 mg/kg;
Skin, rabbit: LD50 = 15800 mg/kg;
Carcinogenicity:
CAS# 67-56-1: Not listed by ACGIH, IARC, NIOSH, NTP, or OSHA.
Epidemiology: Methanol has been shown to produce fetotoxicity in the embr yo or fetus of laboratory animals. Specific developmenta l abnormalities include cardiovascular, musculoskeletal, and urogenital systems.
Teratogenicity: Effects on Newborn: Behaviorial, Oral, rat: TDLo=7500 mg/kg (female 17-19 days after conception). Effects on Embryo or Fetus: Fetotoxicity, Inhalation, rat: TCLo=10000 ppm/7H (female 7-15 days after conception). Specific Developmental Abnormalities: Cardiovascular, Musculoskeletal, Urogenital, Inhalation, rat: TCLo=20000 ppm/7H (7-14 days after conception).
Reproductive Effects: Paternal Effects: Spermatogenesis: Intraperitoneal, mouse TDLo=5 g/kg (male 5 days pre-mating). Fertility: Oral, rat: TDLo = 35295 mg/kg (female 1-15 days after conception). Paternal Effects: Testes, Epididymis, Sperm duct: Oral, rat: TDLo = 200 ppm/20H (male 78 weeks pre-mating).
Neurotoxicity: No information available.
Mutagenicity: DNA inhibition: Human Lymphocyte = 300 mmol/L. DNA damage: Oral, rat = 10 umol/kg. Mutation in microorganisms: Mouse Lymphocyte = 7900 mg/L. Cytogenetic analysis: Oral, mouse = 1 gm/kg.
Other Studies: Standard Draize Test(Skin, rabbit) = 20 mg/24H (Moderate) S tandard Draize Test: Administration into the eye (rabbit) = 40 mg (Moderate). Standard Draize test: Administration int o the eye (rabbit) = 100 mg/24H (Moderate).

12. Ecological information

Ecotoxicity: Fish: Fathead Minnow: 29.4 g/L; 96 Hr; LC50 (unspecified) Goldfish: 250 ppm; 11 Hr; resulted in death Rainbow trout: 8000 mg/L; 48 Hr; LC50 (unspecified) Rainbow trout: LC50 = 13-68 mg/L; 96 Hr.; 12 degrees C Fathead Minnow: LC50 = 29400 mg/L; 96 Hr.; 25 degrees C, pH 7.63 Rainbow trout: LC50 = 8000 mg/L; 48 Hr.; Unspecified ria: Phytobacterium phosphoreum: EC50 = 51,000-320,000 mg/L; 30 minutes; Microtox test No data available. Environmental: Dangerous to aquatic life in high concentrations. Aquatic toxicity rating: TLm 96>1000 ppm. May be dangerous if it enters water intakes. Methyl alcohol is expected to biodegrade in soil and water very rapidly. This product will show high soil mobility and will be degraded from the ambient atmosphere by the reaction with photochemically produced hyroxyl radicals with an estimated half-life of 17.8 days. Bioconcentration factor for fish (golden ide) 10. Based on a log Kow of -0.77, the BCF value for methanol can be estimated to be 0.2. Physical: No informa ion available. Other: None.

13. Disposal considerations

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.

RCRA P-Series	None listed.
RCRA U-Series	CAS# 67-56-1: waste number U154; (Ignitable waste).

14. Transport information

	US DOT	IATA	RID/ADR	IMO	CanadaTDG
Shipping Name:	METHANOL				METHANOL
Hazard Class:	3				3(6.1)
UN Number:	UN1230				UN1230
Packing Group:	II				II
Additional Info:					FLASHPOINT 11 C

15. Regulatory information

US FEDERAL

TSCA	CAS# 67-56-1 is listed on the TSCA inventory. Health & Safety Reporting List.None of the chemicals are on the Health & Safety Reporting List. Chemical Test Rules. None of the chemicals in this product are under a Chemical Test Rule. Section 12b None of the chemicals are listed under TSCA Section 12b. TSCA Significant New Use Rule. None of the chemicals in this material have a SNUR under TSCA.
SARA	Section 302 (RQ). CAS# 67-56-1: final RQ = 5000 pounds (2270 kg) Section 302 (TPQ) None of the chemicals in this product have a TPQ. SARA Codes CAS # 67-56-1: acute, flammable. Section 313 This material contains Methyl alcohol (CAS# 67-56-1, 99%),which is subject to the reporting requirements of Section 313 of SARA Title III and 40 CFR Part 373.
Clean Air Act	CAS# 67-56-1 is listed as a hazardous air pollutant (HAP). This material does not contain any Class 1 Ozone depletors. This material does not contain any Class 2 Ozone depletors. Clean Water Act: None of the chemicals in this product are listed as Hazardous Substances under the CWA. None of the chemicals in this product are listed as Priority Pollutants under the CWA. None of the chemicals in this product are listed as Toxic Pollutants under the CWA.
OSHA	None of the chemicals in this product are considered highly hazardous by OSHA.
STATE	CAS# 67-56-1 can be found on the following state right to know lists: California, New Jersey, Florida, Pennsylvania, Minnesota, Massachusetts. California No Significant Risk Level: None of the chemicals in this product are listed. European/International Regulations European Labeling in Accordance with EC Directives
Hazard Symbols	T F
Risk Phrases	R 11 Highly flammable. R 23/24/25 Toxic by inhalation, in contact with skin and if swallowed. R 39/23/24/25 Toxic : danger of very serious irreversible effects through inhalation, in contact with skin and if swallowed.
Safety Phrases	S 16 Keep away from sources of ignition - No smoking. S 36/37 Wear suitable protective clothing and gloves. S 45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). S 7 Keep container tightly closed.

16. Other information

MSDS Creation Date: 7/21/2008 Revision #4 Date: 3/3/2009 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 Fisher 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 Fisher has been advised of the possibility of such damages.