1. Product and Company Identifaction

Product Name	RXSOL-60-6181-001
Product Type	**Denatured Alcohol**

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

Stock Point ::: Mumbai. Kamdla. Chennai, Visakhapatnam, Kolkata, Fujairah

Phone	+91 22 27815540 / 41 / 42
Fax	+91 22 2781 1318 :::AOH :0091 9821214367
Email	mail@rxmarine.com
Website	www.rxmarine.com

2. Composition / Information on ingredients

Chemica Name	**CAS #**	**% by weight**
Ethylalcohol 200 Proof	64-17-5	9.5
Methanol	67-56-1	1.0

Toxicological Data on Ingredients: Ethyl alcohol 200 Proof: ORAL (LD50): Acute: 7060 mg/kg [Rat]. 3450 mg/kg [Mouse].VAPOR (LC50):Acute: 20000 ppm 8 hours [Rat]. 39000 mg/m 4 hours [Mouse].

Denatured alcohol or methylated spirits is ethanol that has additives to make it poisonous, extremely bad tasting, foul smelling or nauseating, to discourage recreational consumption. In some cases it is also dyed.Its poisonous nature, can result in blindness or death if the denatured alcohol contains methanol.

3. Hazards Identification

Potential Acute Health Effects	Hazardous in case of skin contact (irritant), of eye contact (irritant), . hazardous in case of skin contact(permeator), of ingestion. Non-corro corrosive to the eyes. Non-corrosive for lungs.
Potential Chronic Health Effects	Slightly hazardous in case of skin contact (sensitizer)
CARCINOGENIC EFFECTS	Classified PROVEN by State of California Proposition 65 [Ethyl alco A4 (Not classifiable for human or animal.) by ACGIH [Ethyl alcohol
MUTAGENIC EFFECTS	Mutagenic for mammalian somatic cells. [Ethyl alcohol Mutagenic fo yeast. [Ethyl alcohol].
TERATOGENIC EFFECTS	Classified PROVEN for human [Ethyl alcohol .
DEVELOPMENTAL TOXICITY	Classified Development toxin [PROVEN] [Ethyl alcohol . Classified system/toxin/female, Reproductive system/toxin/male [POSSIBLE] [Proof].The substance is toxic to blood, the reproductive system, liver, tract, skin, central nervous

4. First Aid Measures

EyeContact	Check for and remove any contact lenses. Immediately flush eyes wit for at least 15 minutes,keeping eyelids open. Cold water may be used attention.
Skin Contact	In case of contact, immediately flush skin with plenty of water. Cover with an emollient. Remove contaminated clothing and shoes. Cold wa

	used.Wash clothing before reuse. Thoroughly clean shoes before reus attention.
Serious Skin Contact	Wash with a disinfectant soap and cover the contaminated skin with a cream. Seek medical attention.
Inhalation	If inhaled, remove to fresh air. If not breathing, give artificial respirat is difficult, give oxygen. Get medical attention if symptoms appear.
Serious Inhalation	Evacuate the victim to a safe area as soon as possible. Loosen tight clo collar, tie, belt or waistband. If breathing is difficult, administer oxyg not breathing, perform mouth-to-mouth resuscitation. Seek medical a
Ingestion	Do NOT induce vomiting unless directed to do so by medical personn anything by mouth to an unconscious person. Loosen tight clothing su belt or waistband. Get medical attention if symptoms appear
Serious Ingestion	Not available.

5. Fire-fighting Measures

Flammability of the Product	Flammable.
Auto-Ignition Temperature	The lowest known value is 363°C (685.4°F) (Ethyl alcohol 200 Proof
Flash Points	CLOSED CUP: 18.5°C (65.3°F).(estimated)
Flammable Limits	The greatest known range is LOWER: 3.3% UPPER: 19% (Ethyl alco
Products of Combustion	These products are carbon oxides (CO, CO2).
Fire Hazards in Presence of Various Substances	Highly flammable in presence of open flames and sparks, of heat. Slightly flammable to flammable in presence of oxidizing materials. Non-flammable in presence of shocks, of reducing materials, of comb of organic materials, of metals, of acids, of alkalis.
Explosion Hazards in Presence of Various Substances	Slightly explosive in presence of open flames and sparks, of heat, of o materials, of acids. Non-explosive in presence of shocks.
Fire Fighting Media and Instructions	Flammable liquid, soluble or dispersed in water.
SMALL FIRE	Use DRY chemical powder.
LARGE FIRE	Use alcohol foam, water spray or fog.
Special Remarks on Fire Hazards	
Containers should be grounded. CAUTION	MAY BURN WITH NEAR INVISIBLE FLAME Vapor may distance to source of ignition and flash back. May form explosi air.Contact with Bromine pentafluoride is likely to cause fire or ignites on contact with chromyl chloride.Ethanol ignites on co heptafluoride gas.It ignites than explodes upon contact perchlorate.Additon of platinum black catalyst caused ignition.(E Proof)

Special Remarks on Explosion Hazards:
Ethanol has an explosive reaction with the oxidized coating around potassium metal.Ethanol ignites and then explodes on contact with acetic anhydride + so (ignites and may explode), disulfuric acid + nitric acid, phosphorous(III) oxide platinum, potassium-tert-butoxide+ acids.Ethanol forms explosive products in following compound : ammonia + silver nitrate (forms silver nitride and silver fulminate), iodine + phosphorus (forms ethane iodide), magnesium perchl perchlorate), mercuric nitrate, nitric acid + silver (forms silver ulminate) silver nitrate (forms ethyl nitrate) silver(I) oxide + ammonia or hydrazine (forms silver fulminate), sodium (evolves hydrogen gas).Sodium Hydrazide + alcohol can produce an explosion.Alcohols should not be mixed with mercuric nit mercuric fulminate may be formed.May form explosive mixture with manganese perchlorate + 2,2-dimethoxypropane.Addition of alcohols to highly con peroxide forms powerful explosives.Explodes on contact with calcium hypochlorite
Vapor may explode if ignited in an enclosed area.Containers may explode when heated or involved in a fire.(Ethyl alcohol 200 Proof)

6. Accidental Release Measures

Small Spill	Dilute with water and mop up, or absorb with an inert dry material an appropriate waste disposal container.
Large Spill	Flammable liquid. Keep away from heat. Keep away from sources of leak if without risk. Absorb with DRY earth, sand or other non-comb Do not touch spilled material. Prevent entry into sewers, basements or

dike if needed. Be careful that the product is not present at a concentr
TLV.Check TLV on the MSDS and with local authorities.

7. Handling and Storage

Precautions

Keep locked up.. Keep away from heat. Keep away from sources of all equipment containing material. Do not ingest. Do not br vapor/spray. Wear suitable protective clothing. In case of insufficien suitable respiratory equipment. If ingested, seek medical advice imm the container or the label. Avoid contact with skin and eyes. Keep awa patibles such as oxidizing agents, acids, alkalis, moisture.

Storage

Store in a segregated and approved area. Keep container in a cool, we Keep container tightly closed and sealed until ready for use. Avoid a of ignition (spark or flame). Do not store above 23°C (73.4°F).

8. Exposure controls and personal protection

Engineering Controls

Provide exhaust ventilation or other engineering controls to concentrations of vapors below their respective threshold limit eyewash stations and safety showers are proximal to the work-station

Personal Protection

Splash goggles. Lab coat. Vapor respirator. Be sure to use an respirator or equivalent. Gloves.

Personal Protection in Case of a Large Spill

Splash goggles. Full suit. Vapor respirator. Boots. Gloves. A self apparatus should be used to avoid inhalation of the product. S clothing might not be sufficient; consult a specialist BEFORE handli

Exposure Limits

Ethyl alcohol 200 Proof

TWA	1900 (mg/m3) from OSHA (PEL) [United States]
TWA	1000 (ppm) from OSHA (PEL) [United States]
TWA	1900 (mg/m3) from NIOSH [United States]
TWA	1000 (ppm) from NIOSH [United States]
TWA	1000 (ppm) [United Kingdom (UK)]
TWA	1920 (mg/m3) [United Kingdom (UK)]
TWA	1000 STEL: 1250 (ppm) [Canada]

Consult local authorities for acceptable exposure limits.

9. Physical and chemical properties

Physical state and appearance	Liquid.
Odor	Alcohol like. Mild to strong. Like wine or whiskey; Ethereal, vinous.
Taste	Burning. Pungent.
Molecular Weight	Not applicable.
Color	Clear Colorless.
pH (1% soln/water)	Neutral.
Boiling Point	The lowest known value is 78.5°C (173.3°F) (Ethyl alcohol 200 Proof average: 79.58°C(175.2°F)
Melting Point	May start to solidify at -114.1°C (-173.4°F) based on data for: Ethyl a
Critical Temperature	The lowest known value is 243°C (469.4°F) (Ethyl alcohol 200 Proof
Specific Gravity	Weighted average: 0.8 (Water = 1)
Vapor Pressure	The highest known value is 5.7 kPa (@ 20°C) (Ethyl alcohol 200 Proo average: 5.53 kPa (@ 20°C)
Vapor Density	The highest known value is 1.59 (Air = 1) (Ethyl alcohol 200 Proof). average: 1.54 (Air = 1)

Volatility	Not available.
Odor Threshold	100 ppm
Water/Oil Dist. Coeff	Not available.
Ionicity (in Water)	Not available.
Dispersion Properties	See solubility in water, methanol, diethyl ether, acetone.
Solubility	Easily soluble in cold water, hot water, methanol, diethyl ether. Solub

10. Stability and reactivity

Stability	The product is stable.
Instability Temperature	Not available.
Conditions of Instability	Incompatible materials, heat, sources of ignition.
Incompatibility with various substances	Reactive with oxidizing agents, acids, alkalis.
Corrosivity	Non-corrosive in presence of glass.

Special Remarks on Reactivity:

Ethanol rapidly absorbs moisture from the air. Can react vigorously with oxiders.The following oxidants have been demonstrated to undergo vigorous/explo ethanol: barium perchlorate, bromine pentafluoride, calcium hypochlorite, chloryl perchlorate, chromium trioxide, chromyl chloride,dioxygen difluoride, dis fluorine nitrate, hydrogen peroxide, iodine heptafluoride, nitric acid nitrosyl
perchlorate, perchloric acid permanganic acid, peroxodisulfuric acid, potassium dioxide, potassium perchlorate,potassium permanganate, ruthenium(V perchlorate, silver peroxide, uranium hexafluoride, uranyl perchlorate.Ethanol reacts violently/expodes with the following compounds: acetyl bromide (bromide) acetyl chloride, aluminum, sesquibromide ethylate, ammonium hydroxide & silver oxide, chlorate, chromic anhydride, cyanuric acid + water, d sulfuric acid + nitrate (or) nitrite, hydrogen peroxide + sulfuric acid, iodine + methanol + mercuric oxide, manganese perchlorate + 2,2-dimethoxy pro permanganates + sulfuric acid,
potassium superoxide, potassium tert-butoxide, silver & nitric acid, silver perchlorate, sodium hydrazide, sulfuric acid + sodium dichromate, tetrachlorisilan is also incompatible with platinium, and sodium. No really safe conditions exist under which ethyl alcohol and chlorine oxides can be handled. Reacts vigo chloride (Ethyl alcohol 200 Proof)

Special Remarks on Corrosivity:	Not available.
Polymerization	Will not occur.

11. Toxicological information

Routes of Entry	Absorbed through skin. Eye contact. Inhalation. Ingestion.
Toxicity to Animals	Acute oral toxicity (LD50): 3632 mg/kg (Mouse) (Calculated value fo
Chronic Effects on Humans	
CARCINOGENIC EFFECTS	Classified PROVEN by State of California Proposition 65 [Ethyl alco Classified A4 (Not classifiable for human or animal.) by ACGIH [Eth Proof].
MUTAGENIC EFFECTS	Mutagenic for mammalian somatic cells. [Ethyl alcohol 200 Proof]. M bacteria and/or yeast. [Ethyl alcohol 200 Proof].
TERATOGENIC EFFECTS	Classified PROVEN for human [Ethyl alcohol 200 Proof].
DEVELOPMENTAL TOXICITY	Classified Development toxin [PROVEN] [Ethyl alcohol 200 Proof]. Reproductive system/toxin/female, Reproductive system/toxin/m [Ethyl alcohol 200 Proof].
Other Toxic Effects on Humans	Hazardous in case of skin contact (irritant), of inhalation. Slightly hazardous in case of skin contact (permeator), of ingestion.
Special Remarks on Toxicity to Animals	
Lowest Published Dose/Conc	
LDL[Human] - Route	Oral; Dose: 1400 mg/kg
LDL[Human child] - Route	Oral; Dose: 2000 mg/kg
LDL[Rabbit] - Route	Skin; Dose: 20000 mg/kg (Ethyl alcohol 200 Proof)
Special Remarks on Chronic Effects on Humans	May affect genetic material (mutagenic) Causes adverse reproductive defects (teratogenic) , based on moderate to heavy consumption.M based on animal data.

Human	passes through the placenta, excreted in maternal milk. (Ethyl alcohol
Special Remarks on other Toxic Effects on Humans	
Acute potential health effects	
Skin	causes skin irritation
Eyes	causes eye irritation
Ingestion	May cause gastrointestinal tract irritation with nausea, vomitin alterations in gastric secretions. May affect behavior/central nervou nervous system depression - amnesia, headache, muscular incoordi mild euphoria, slurred speech, drowsiness, staggaring gait, fa mood/personality, excessive talking, dizziness, ataxia, somnolenc hallucinations,distorted perceptions, general anesthetic), peripheria (spastic paralysis)vision (diplopia).Moderately toxic and na concentrations. May also affect metabolism, blood, liver, respirat endocrine system.May affect respiratory tract, cardiovascular(car hypotension), and urinary systems.
Inhalation	May cause irritation of the respiratory tract and affect behavior/centr with symptoms similar to ingestion
Chronic Potential Health Effects	Skin: Prolonged or repeated skin contact may casue dermatitis, an alle Ingestion: Prolonged or repeated ingestion will have similiar effects a It may also affect the brain. (Ethyl alcohol 200 Proof)

12. Ecological information

Ecotoxicity	Not available.
BOD5 and COD	Not available.
Products of Biodegradation	Possibly hazardous short term degradation products are not likely. Ho degradation products may arise
Toxicity of the Products of Biodegradation	The product itself and its products of degradation are not toxic
Special Remarks on the Products of Biodegradation	Not available.

13. Disposal considerations

Waste Disposal	Waste must be disposed of in accordance with federal, state and local control regulations.

14. Transport information

DOT Classification	CLASS 3: Flammable liquid.
Identification	Ethanol (Ethyl alcohol 200 Proof) UNNA: 1170 PG: II
Special Provisions for Transport	Not available

15. Regulatory information

Federal and State Regulations	California prop. 65: This product contains the following ingredients f of California has found to cause cancer, birth defects or other reprodu which would require a warning under the statute: Ethyl alcohol 200 Pr beverage) California prop. 65: This product contains the following ingredients f of California has found to cause birth defects which would require a warning under the statute: E alcoholic beverage)
Connecticut hazardous material survey	Ethyl alcohol

Illinois toxic substances disclosure to employee act	Ethyl alcohol
Rhode Island RTK hazardous substances	Ethyl alcohol
Pennsylvania RTK	Ethyl alcohol
New Jersey	Ethyl alcohol
TSCA 8(b) inventory:	Water; Ethyl alcohol
Other Regulations	OSHA: Hazardous by definition of Hazard Communication Standard 1910.1200).Health Hazard: 2 Fire Hazard: 3 Reactivity: 0 Personal Protection: h
National Fire Protection Association (U.S.A.)	Health: 2 Flammability: 3 Reactivity: 0 Specific hazard:
Protective Equipment	Gloves.Lab coat.Vapor respirator. Be sure to use an approved/certi equivalent. Wear appropriate respirator when ventilation is inadequate. Splash goggles.

16. Other information

Other Special Considerations: Not available.

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