Material Safety Data Sheet

Methyl Ethyl Ketone Peroxide (RXSOL-18-1804-030)

1. Product and Company Identifaction

Product Name	Methyl Ethyl Ketone Peroxide
Product Type	RXSOL-18-1804-030

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

Phone	+91 22 65113333/ 5555 / 9999 / 27611360 / 27815540
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2. Composition / informationon ingredients

Name	CAS #	% By Weight
Methy Ethyle Ketone	78-93-3	100

Composition:
Toxicological Data on Ingredients:
Methyl ethyl ketone: ORAL (LD50): Acute: 2737 mg/kg [Rat]. 4050 mg/kg [Mouse]. DERMAL (LD50): Acute: 6480 mg/kg [Rabbit]. VAPOR (LC50): Acute: 23500 mg/m 8 hours [Rat].

3. Hazards Identification

Potential Acute Health Effects:	Hazardous in case of skin contact (irritant, permeator), of eye contact (irritant), of ingestion, of inhalation (lung irritant).
Potential Chronic Health Effects CARCINOGENIC EFFECTS:	Not available.
MUTAGENIC EFFECTS:	Mutagenic for bacteria and/or yeast.
TERATOGENIC EFFECTS:	Classified POSSIBLE for human.
DEVELOPMENTAL TOXICITY:	Not available. The substance may be toxic to gastrointestinal tract, upper respiratory tract, skin, eyes, central nervous system (CNS). Repeated or prolonged exposure to the substance can produce target organs damage.

4. First Aid Measures

Eye Contact:	Check for and remove any contact lenses. Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open. Cold water may be used. Get medical attention.

Skin Contact:	In case of contact, immediately flush skin with plenty of water. Cover the irritated skin with an emollient. Remove contaminated clothing and shoes. Cold water may be used.Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention.
Serious Skin Contact:	Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek medical attention.
Inhalation:	If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.
Serious Inhalation:	Evacuate the victim to a safe area as soon as possible. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, administer oxygen. If the victim is not breathing, perform mouth-to-mouth resuscitation. Seek medical attention.
Ingestion:	Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Loosen tight clothing such as a collar, tie, 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:	404°C (759.2°F)
Flash Points:	CLOSED CUP: -9°C (15.8°F). OPEN CUP: -5.5556°C (22°F) (Tag).
Flammable Limits:	LOWER: 1.8% UPPER: 10%
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. Explosion Hazards in Presence of Various Substances Risks of explosion of the product in presence of mechanical impact: Not available. Risks of explosion of the product in presence of static discharge: Not available. Explosive in presence of oxidizing materials, of acids.
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:	Ignition on contact with potassium t-butoxide. Vapor may cause a flash fire
Special Remarks on Explosion Hazards:	Reaction with Hydrogen Peroxide + nitric acid forms heat and shock-sensitive explosive product. Mixture with 2-propanol will produce explosive peroxides during storage.

6. Accidental Release Measures

Small Spill:
Dilute with water and mop up, or absorb with an inert dry material and place in an appropriate waste disposal container.

Large Spill:
Flammable liquid. Keep away from heat. Keep away from sourc Stop leak if without risk. Absorb with DRY earth,sand or other non-combustible material. Do not touch spilled material. Prevent entry into sewers, basements or confined areas; dike if needed. Be careful that the product is not present at a concentration level above 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 ignition. Ground all equipment containing material. Do not ingest. Do not breathe gas/fumes/ vapor/spray. Wear suitable protective clothing. In case of insufficient ventilation, wear suitable respiratory equipment. If ingested, seek medical advice immediately and show the container or the label. Avoid contact with skin and eyes. Keep away from incompatibles such as oxidizing agents, metals, acids, alkalis.

Storage:

Store in a segregated and approved area. Keep container in a cool, well-ventilated area. Keep container tightly closed and sealed until ready for use. Avoid all possible sources of ignition (spark or flame).

8. Exposure controls and personal protection

Engineering Controls:
Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value. Ensure that eyewash stations and safety showers are proximal to the work-station location.

Personal Protection:
Splash goggles. Lab coat. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Gloves. Personal Protection in Case of a Large Spill: Splash goggles. Full suit. Vapor respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Exposure Limits:
TWA: 200 STEL: 300 (ppm) from ACGIH (TLV) [United States] [1999] TWA: 150 STEL: 300 (ppm) [Australia] TWA: 590 STEL: 885 (mg/m3) from NIOSH TWA: 200 STEL: 300 (ppm) from NIOSH TWA: 590 STEL: 885 (mg/m3) [Canada] TWA: 200 STEL:300 (ppm) from OSHA (PEL) [United States] TWA: 590 STEL: 885 (mg/m3) from OSHA (PEL) [United States] Consult local authorities for acceptable exposure limits.

9. Physical and chemical properties

Information on basic physical and chemical properties:

Physical state at 20 °C	Lique?ed gas
Colour	Colourless
Odour	No odour warning properties.
Molecular weight	44
Melting point [°C],	-56.6
Boiling point [°C]	-78.5
Critical temperature[C]	-30
Vapour pressure [20°C]	57.3 bar
Relative density, gas (air=1)	1.52
Relative density,liquid (water=1)	1.1
Solubility in water [mg/l]	0.82
Flammability range [vol% in air]	Flammable
Auto-ignition temperature [°C]	Not applicable
Other data	Gas/vapour heavier than air. May accumulate in con?ned spaces, particularly at obelow ground level.

10. Stability and reactivity

Stability:	The product is stable.
Instability Temperature:	Not available.
Conditions of Instability:	Heat, ignition sources, mechanical shock, incompatible materials.Incompatibility with various substances: Reactive with oxidizing agents, metals, acids, alkalis.
Corrosivity:	Non-corrosive in presence of glass.
Special Remarks on Reactivity:	Incompatible with chloroform, copper, hydrogen peroxide, nitric acid, potassium t-butoxide, 2-propanol, chlorosulfonic acid, strong oxidizers, amines, ammonia, inorganic acids, isocyanates, caustics, pyrindines. Vigorous reaction with chloroform +alkali.
Special Remarks on Corrosivity:	Not available.
Polymerization:	Will not occur.

11. Toxicological information

Routes of Entry:
Absorbed through skin. Dermal contact. Eye contact. Inhalation.

Toxicity to Animals:
WARNING:
THE LC50 VALUES HEREUNDER ARE ESTIMATED ON THE BASIS OF A 4-HOUR EXPOSURE.
Acute oral toxicity (LD50): 2737 mg/kg [Rat]. Acute dermal toxicity (LD50): 6480 mg/kg [Rabbit]. Acute toxicity of the vapor (LC50): 32000 mg/m3 4 hours [Mouse].

Chronic Effects on Humans:

MUTAGENIC EFFECTS:	Mutagenic for bacteria and/or yeast.
TERATOGENIC EFFECTS:	Classified POSSIBLE for human. ay cause damage to the following organs: gastrointestinal tract, upper respiratory tract, skin, eyes, central nervous system (CNS).
Other Toxic Effects on Humans:	Hazardous in case of skin contact (irritant, permeator), of ingestion, of inhalation (lungirritant).
Special Remark on Toxicity to Animals:	Not available.
Special Remarks on Chronic Effects on Humans:	May cause birth defects based on animal dats. Embryotoxic and/or foetotoxic in animal.
Special Remarks on other Toxic Effects on Humans:	Acute Potential Health Effects: Skin: Causes skin irritation. May be absorbed through the skin.
Eyes:	Causes eye irritation.
Inhalation:	Inhalation of high concentrations may cause central nervous effects characterized by headache, dizziness,unconsciousness, and coma. Causes respiratory tract irritation and affects the sense organs. May affect the liver and urinary system.
Ingestion:	the liver.
Chronic Potential Health Effects:	Chronic inhalation may cause effects similar to those of acute inhalation. Prolonged or repeated skin contact may cause defatting and dermatitis.

12. Ecological information

Ecotoxicity:	Ecotoxicity in water (LC50): 3220 mg/l 96 hours [Fathead Minnow]. 1690 mg/l 96 hours [Bluegill].

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

13. Disposal considerations

NA

14. Transport information

DOT Classification: CLASS 3:
Flammable liquid.

Identification:
Ethyl methyl ketone UNNA:
193 PG: II

Special Provisions for Transport:
Not available.

15. Regulatory information

Federal and State Regulations: New York release reporting list:

Methyl ethyl ketone Rhode Island RTK hazardous substances:

Methyl ethyl ketone

Pennsylvania RTK:

Methyl ethyl ketone Minnesota:

Methyl ethyl ketone Massachusetts RTK:

Methyl ethyl ketone New Jersey:

Methyl ethyl ketone California Director's list of Hazardous Substances:

Methyl ethyl ketone TSCA 8(b) inventory:

Methyl ethyl ketone TSCA 8(d) H and S data reporting: Methyl ethyl ketone:

Effective: 10/4/82;Sunset:

10/4/92 SARA 313 toxic chemical
notification and release reporting: Methyl ethyl ketone CERCLA: Hazardous substances.:

Methyl ethyl ketone: 5000 lbs. (2268 kg)

Other Regulations:
OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200).

EINECS:
This product is on the European Inventory of Existing Commercial Chemical Substances.

Other Classifications:
WHMIS (Canada):

CLASS B-2:
Flammable liquid with a flash point lower than 37.8°C (100°F). CLASS D-2A: Material causing other toxic effects (VERY TOXIC).

DSCL (EEC):
R11- Highly flammable. R36/37- Irritating to eyes and respiratory system. S9- Keep container in a well-ventilated place. S16- Keep away from sources of ignition - No smoking. S25- Avoid contact with eyes. S33- Take precautionary measures against static discharges.

HMIS (U.S.A.):
Health Hazard: 2
Fire Hazard: 3
Reactivity: 0
Personal Protection: h

National Fire Protection Association (U.S.A.):
Health: 1
Flammability: 3
Reactivity: 0
Specific hazard:

Protective Equipment:
Gloves. Lab coat. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate. Splash goggles.

16. Other information

The information provided about the product on this Safety Data Sheet has been compiled from knowledge of the individual constituents The data given here is based on current knowledge and experience. This Safety Data Sheet describes the product in terms of safety requirements and does not signify any warranty with regard to the product's properties The data given here only applies when product used for proper application(s). The product is not sold as suitable for other applications usage in such may cause risks not mentioned in this sheet. Do not use for other application(s) without seeking advice from manufacturer.

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