Material Safety Data Sheet

CRC RXSOL CONTACT CLEANER (RXSOL-16-1688-025)

1. Product and Company Identifaction

Product Name	RXSOL-16-1688-025
Product Type	CRC RXSOL CONTACT CLEANER
Revised Date	18-04-2019

Company Details:

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

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2. Composition / informationon ingredients

COMPONENT	CAS NUMBER	% by Wt.
Decafluoropentane (HFC-43-10mee)	138495-42-8	20 - 60
Methyl nonafluoroisobutyl ether	163702-08-7	10 – 40
Methyl nonafluorobutyl ether	163702-07-6	10 – 40
1,1,1,2-Tetrafluoroethane (HFC-134a)	811-97-2	35 - 45

3. Hazards Identification

WARNING: Contents Under Pressure.

Appearance & Odor:Colorless volatile liquid with ethereal and faint sweetish odor.

Potential Health Effects:

ACUTE EFFECTS:

EYE: May cause eye irritation with tearing, pain or blurred vision.

SKIN: Immediate effects may include irritation, itching, redness and swelling. Prolonged or repeated contact can cause defatting of the skin, with redness and rash.

INHALATION:
Overexposure to vapor may cause dizziness, loss of concentration and irritation. With high exposure levels, effects can include central nervous system (CNS) depression and cardiac arrhythmia. Product vapors displace air and can cause suffocation especially in a confined space.

INGESTION:
The major hazard is aspiration of the liquid into the lungs during swallowing or vomiting. This may result in chemical pneumonia. Symptoms include coughing, gasping, shortness of breath, bluish discoloration of the skin, and fever. Pulmonary edema, confusion, coma and seizures may occur in more serious cases.

CHRONIC EFFECTS: None identified

TARGET ORGANS: None identified

4. First Aid Measures

Eye Contact:	Immediately flush with plenty of water for 15 minutes. Call a physician if irritation persists.
Skin Contact:	Remove contaminated clothing and wash affected area with soap and water. Call a physician if irritation persists. Wash contaminated clothing prior to re-use.
Inhalation:	Remove person to fresh air. Keep person calm. If not breathing, give artificial respiration. If breathing is difficult give oxygen. Do NOT give epinephrine (adrenaline). Call a physician.
Ingestion	Do NOT induce vomiting unless instructed to do so by a physician. Immediately give 2 glasses of water. Do NOT give stimulants. Get medical attention immediately.
Note to Physicians:	Because of possible disturbances of cardiac rhythm, catecholamine drugs such as adrenaline should be used with special caution and only in situations of emergency life support. Treatment of overexposure should be directed at the control of symptoms and the clinical conditions.

5. Fire-fighting Measures

Flammable Properties: This product is nonflammable in accordance with aerosol flammability definitions.
(See 16 CFR 1500.3(c)(6)).

Flash Point: None

Upper Explosive Limit: None

Autoignition Temperature: 761°F / 405°C

Lower Explosive Limit: None

Fire and Explosion Data:

Suitable Extinguishing Media: Choose an extinguishing agent appropriate for the surrounding fire.

Protection of Fire-Fighters:
Firefighters should wear self-contained, NIOSH-approved breathing apparatus for protection against suffocation and possible toxic decomposition products. Proper eye and skin protection should be provided. Use water spray to keep fire-exposed containers cool and to knock down vapors which may result from product decomposition.

6. Accidental Release Measures

Personal Precautions: Use personal protection recommended in Section 8. Avoid inhaling vapors.

Environmental Precautions: Take precautions to prevent contamination of ground and surface waters. Do not flush into sewers or storm drains.

Methods for Containment & Clean-up: Dike area to contain spill. Ventilate the area with fresh air. If in confined space or limited air circulation area, clean-up workers should wear appropriate respiratory protection. Recover or absorb spilled material using an absorbent designed for chemical spills. Place used absorbents into proper waste containers.

7. Handling and Storage

Handling Procedures:
Minimize vapor accumulation by providing air circulation. Avoid breathing vapors or mist. Wear eye protection. Wash thoroughly after handling. No smoking while using this product. Avoid continuous exposure of this material to extreme conditions of heat, i.e., above 300°F / 149°C. Use caution around energized equipment. The metal container will conduct electricity if it contacts a live source. This may result in injury to the user from electrical shock and/or flash fire. For product use instructions, please see the product label.

Storage Procedures:
Store in a cool dry area out of direct sunlight. Aerosol cans must be maintained below 120°F / 49°C to prevent cans from rupturing. If stored below 14°F / -10°C, mix prior to use.

Aerosol Storage Level: I

8. Exposure controls and personal protection

Exposure Guidelines:

	OSHA		ACGIH		OTHER		
COMPONENT	TWA	STEL	TWA	STEL	TWA	SOURCE	UNIT
Decafluoropentane	NE	NE	NE	NE	200	mfr	ppm
Methyl nonafluoroisobutyl ether					750	AIHA	ppm
Methyl nonafluorobutyl ether					750	AIHA	ppm
1,1,1,2-Tetrafluoroethane					1000	AIHA	ppm
N.E. – Not Established (c) – ceiling (s) – skin (v) – vacated							

mfr – manufacturer's recommendation

Controls and Protection:

Engineering Controls:
Area should have ventilation to provide fresh air. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at the source, preventing dispersion into the general work area. Use mechanical means if necessary to maintain vapor levels below the exposure guidelines. If working in a confined space, follow applicable OSHA regulations.

Respiratory Protection:
None required for normal work where adequate ventilation is provided. If engineering controls are not feasible or if exposure exceeds the applicable exposure limits, use a NIOSH-approved cartridge respirator with organic vapor cartridge. Air monitoring is needed to determine actual employee exposure levels. Use a self-contained breathing apparatus in confined spaces and for emergencies.

Eye/face Protection:
For normal conditions, wear safety glasses. Where there is reasonable probability of liquid contact, wear splash-proof goggles.

Skin Protection:
Use protective gloves such as nitrile, PVA or neoprene. Also, use full protective clothing if there is prolonged or repeated contact of liquid with skin.

9. Physical and chemical properties

Physical State:	liquid
Color:	clear, colorless
Odor:	ethereal and sweetish odor
Odor Threshold:	ND
Specific Gravity:	1.5 - 1.58
Initial Boiling Point:	131°F / 55°C
Freezing Point:	ND
Vapor Pressure:	202 - 226 mmHg @ 77°F / 25°C
Vapor Density:	> 1 (air = 1)
Evaporation Rate:	very fast
Solubility:	140 ppm (water)
Coefficient of water/oil distribution:	ND
pH:	NA

Volatile Organic Compounds: Federal: wt %: 0 g/L: 0 lbs./gal: 0 CARB: wt %: 60 g/L: 900 lbs./gal: 7.497

10. Stability and reactivity

Stability: Stable

Conditions to Avoid: Avoid temperature extremes. Exposure of this product to high energy sources may yield toxic and/or corrosive decomposition products.

Incompatible Materials:
Strong bases, alkali or alkaline earth metals such as powdered or freshly abraded aluminum, sodium, magnesium, zinc, beryllium, etc.; strong bases such as sodium hydroxide, potassium hydroxide, etc.

Hazardous Decomposition Products:
Hydrofluoric acids and carbonyl halides, such as phosgene, hydrogen fluoride, perfluoroisobutylene (PFIB), perfluorinated acid fluorides. Decafluoropentane is incompatible with strong bases and can react to form salts of hydrofluoric acid.

Possibility of Hazardous Reactions: No

11. Toxicological information

Long-term toxicological studies have not been conducted for this product. The following information is available for components of this produc

Acute Toxicity:

Component	Oral LD50 (rat)	Dermal LD50 (rabbit)	Inhalation LC50 (rat)
Decafluoropentane	> 5 mg/kg	> 5 mg/kg	11,100 ppm/4H
Methyl nonafluoroisobutyl ether	No data	No data	No data
Methyl nonafluorobutyl ether	No data	No data	No data
1,1,1,2-Tetrafluoroethane	No data	No data	1500 g/m3/4H

Chronic Toxicity:

Component	OSHA Carcinogen	IARC Carcinogen	NTP Carcinogen	Irritant	Sensitizer
Decafluoropentane	No	No	No	E & S (mild)	No
Methyl nonafluoroisobutyl ether	No	No	No	No	Unknown
Methyl nonafluorobutyl ether	No	No	No	No	Unknown
1,1,1,2-Tetrafluoroethane	No	No	No	E & S (mild)	No

E – Eye S – Skin R - Respiratory

Reproductive Toxicity: No information available
Teratogenicity: No information available
Mutagenicity: No information available
Synergistic Effects: No information available

12. Ecological information

Ecological studies have not been conducted for this product. The following information is available for components of this product.

Ecotoxicity:
Decafluoropentane – daphnia magna: 11.7 mg/L
fathead minnow: 27.2 mg/L

Methyl nonafluoroisobutyl ether & Methyl nonafluorobutyl ether: 96 Hr LC50, Fathead Minnow: > 7.9 mg/L

Persistence / Degradability: No information available

Bioaccumulation / Accumulation: No information available

Mobility in Environment: No information available

13. Disposal considerations

Waste Classification:
The dispensed liquid product is not a RCRA hazardous waste. (See 40 CFR Part 261.20 – 261.33) Empty aerosol containers may be recycled.

All disposal activities must comply with federal, state, provincial and local regulations. Local regulations may be more stringent than state, provincial or national requirements.

14. Transport information

US DOT (ground):Consumer Commodity, ORM-D

ICAO/IATA (air): Consumer Commodity, ID8000, 9

IMO/IMDG (water): Aerosols, UN1950, 2.2, Limited Quantity

Special Provisions: None

15. Regulatory information

U.S. Federal Regulations:

Toxic Substances Control Act (TSCA):

All ingredients are either listed on the TSCA inventory or are exempt.

Comprehensive Environmental Response, Compensation and Liability Act (CERCLA):
Reportable Quantities (RQ's) exist for the following ingredients: None

Spills or releases resulting in the loss of any ingredient at or above its RQ require immediate notification to the National Response Center (800-424-8802) and to your Local Emergency Planning Committee.

Superfund Amendments Reauthorization Act (SARA) Title III:
Section 302 Extremely Hazardous Substances (EHS): None

Section 311/312 Hazard Categories:
Fire Hazard No
Reactive Hazard NoRelease of Pressure Yes
Acute Health Hazard Yes
Chronic Health Hazard No

Section 313 Toxic Chemicals:
This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372: None

Clean Air Act:
Section 112 Hazardous Air Pollutants (HAPs): None
Occupational Safety and Health Administration:
This product is regulated by the Hazard Communications Standard.

U.S. State Regulations:

California Safe Drinking Water and Toxic Enforcement Act (Prop 65):
This product may contain the following chemicals known to the state of California to cause cancer, birth defects or other reproductive harm: None

Consumer Products VOC Regulations: This product complies with Consumer Products VOC regulations as an Electronic Cleaner

State Right to Know:
New Jersey: None
Pennsylvania: None
Massachusetts: None
Rhode Island : None

Canadian Regulations:

Controlled Products Regulations:
This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

WHMIS Hazard Class: A

Canadian DSL Inventory: All ingredients are either listed on the DSL Inventory or are exempt.

European Union Regulations:

RoHS Compliance:
This product is compliant with Directive 2002/95/EC of the European Parliament and of the Council of 27 January 2003. This product does not contain any of the restricted substances as listed in Article 4(1) of the RoHS Directive.

Additional Regulatory Information: None

16. Other information

The information contained in this document applies to this specific material as supplied. It may not be valid for this material if it is used in combination with any other materials. Before using any product, read all warnings and directions on the label. For further clarification of any information contained on this MSDS consult your supervisor, a health & safety professional.