Material Safety Data Sheet

DI ISO BUTYL KETONE (RXSOL-19-3356-072)

1. Product and Company Identifaction

Product Name	DI ISO BUTYL KETONE
Part Number	RXSOL-19-3356-072

Company Details:

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

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2. Composition / informationon ingredients

Chemical Name	CAS	EC number	Weight	Formula
Diisobutyl ketone	108-83-8	203-620-1	= 100 %	$C_9H_{18}O$

3. Hazards Identification

Signal Word	Warning
Hazard Statements	H226 Flammable liquid and vapor. H335 May cause respiratory irritation.
Precautionary statements	P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P233 Keep container tightly closed. P240 Ground and bond container and receiving equipment. P241 Use explosion-proof electrical/ ventilating/ lighting/ equipment. P242 Use non-sparking tools. P243 Take action to prevent static discharges.
Classification of the substance or mixture	Not a hazardous substance or mixture according to Regulation (EC) No 1272/2008.
Supplemental Hazard Statements	None.
Other hazards	This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

4. First Aid Measures

General advice	Show this material safety data sheet to the doctor in attendance.
If inhaled	After inhalation: fresh air.
Eye Contact	After eye contact: rinse out with plenty of water. Remove contact lenses.
Swallowed	After swallowing: immediately make victim drink water (two glasses at most). Consult a physician.
Skin Contact	In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower.
Inhalation	Remove patient to fresh air, keep warm and at rest and get medical assistance in necessary.
Ingestion	Rinse mouth with water. Do not induce vomiting. Never give anything by mouth to an unconscious person. Call a doctor or Poison Control Center immediately.
Most important symptoms and effects, both acute and delaye	The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

Indication of any immediate medical attention and special treatment needed	No data available

5. Fire-fighting Measures

Flammability	Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
Suitable extinguishing media	Foam Carbon dioxide (CO2) Dry powder
Unsuitable extinguishing media	For this substance/mixture no limitations of extinguishing agents are given.
Special hazards arising from the substance or mixture	Carbon oxides Combustible. Vapors are heavier than air and may spread along floors. Forms explosive mixtures with air at elevated temperatures. Development of hazardous combustion gases or vapours possible in the event of fire.
Further information	Remove container from danger zone and cool with water. Prevent fire extinguishing water from contaminating surface water or the ground water system.
Hazardous combustion products	Fire may cause the evolution of Sulphur oxides, nitrogen oxides.
Advice for firefighters	In the event of fire, wear self-contained breathing apparatus.
Protective Equipment	Use personal protective equipment.
Specific Hazards Arising from the Chemical	Oxides of phosphorus Sodium oxides Not combustible. Fire may cause evolution of: Oxides of phosphorus Ambient fire may liberate hazardous vapours.

6. Accidental Release Measures

Personal precautions, protective equipment and emergency procedures	Advice for non-emergency personnel: Do not breathe vapors, aerosols. Avoid substance contact. Ensure adequate ventilation. Keep away from heat and sources of ignition. Evacuate the danger area, observe emergency procedures, consult an expert. For personal protection see section 8.
Spillage	Oxidizing material. Stop leak if without risk. Avoid contact with a combustible material (wood, paper, oil, clothing...). Keep substance damp using water spray. Do not touch spilled material. Prevent entry into sewers, basements or confined areas dike if needed. Eliminate all ignition sources. Call for assistance on disposal.
Enviromental Precaution	Do not let product enter drains. Risk of explosion.
Methods and materials for containment and cleaning	Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up with liquid-absorbent material (e.g. Chemizorb®). Dispose of properly. Clean up affected area.

7. Handling and Storage

Advice on protection against fire and explosion	Keep away from open flames, hot surfaces and sources of ignition.Take precautionary measures against static discharge.
Incompatible materials	Keep away from alkalis, strong oxidizing agents and metals. Provide containment walls of adequate capacity to hold any accidental spills.
Hygiene measures	Change contaminated clothing. Wash hands after working with substance. For precautions see section 2.2.
Precautions for safe handling	For precautions see section 2.2.
Storage conditions	Keep container tightly closed in a dry and well-ventilated place. Keep away from heat and sources of ignition. Recommended storage temperature see product label.
Storage class	Storage class (TRGS 510): 3: Flammable liquids
Specific end use(s)	Apart from the uses mentioned in section 1.2 no other specific uses are stipulated
Advice on general occupational hygiene	Advice on safe handling Observe label precautions. Change contaminated clothing. Wash hands after working with substance.

8. Exposure controls and personal protection

Exposure controls	Appropriate engineering controls Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.
Control parameters	Ingredients with workplace control parameters Contains no substances with occupational exposure limit values.
Engineering Control	Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.
Eye/face protection	Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Safety glasses

Body Protection	Flame retardant antistatic protective clothing.
Skin protection	Required
Respiratory protection	Required when vapours/aerosols are generated.Our recommendations on filtering respiratory protection are based on the following standards: DIN EN 143, DIN 14387 and other accompanying standards relating to the used respiratory protection system. Recommended Filter type: Filter type ABEK The entrepeneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer. These measures have to be properly documented.
Other Protection Measure	Handle in accordance with good industrial hygiene and safety practice.
Control of environmental exposure	Do not let product enter drains. Risk of explosion.

9. Physical and chemical properties

Physical state	Liquid
Colour	Colorless
Odour	No data available
Odor Threshold	No data available
pH	No data available
Melting Point	45,98 °C at ca.1013,0 hPa
Boiling Point	165 - 170 °C at 1.013 hPa
Flash Point	49 °C - closed cup
Evaporation Rate	Not Applicable
Flammability (solid, gas)	No data available
Explosive limits	No Data Available
Upper/lower flammability or explosive limits	6,2 %(V) / 0,8 %(V)
Autoignition temperature	345 °C at 1013,0 hPa
Decomposition temperature	No data available
Vapour pressure	2,3 hPa at 20 °C
Density	0,809 g/cm3
Relative Density	No data available
Relative vapor density	4,91 - (Air = 1.0)
Freezing point	No data available
Viscosity dynamic	0,869 mPa.s at 25 °C
Partition coefficient	log Pow: 3,71 at 25 °C
Explosive properties	No data available
Solubility	0,43 g/l at 25 °C
Ignition temperature	No information available.
Particle characteristics	No data available

10. Stability and reactivity

Reactivity	Vapor/air-mixtures are explosive at intense warming.
Stability	The product is chemically stable under standard ambient conditions (room temperature) .
Possibility of hazardous reactions	No data available
Conditions to avoid	Heating.
Incompatible materials	Strong oxidizing agents, Strong reducing agents, Strong bases
Hazardous decomposition products	In the event of fire: see section 5

11. Toxicological information

Acute toxicity	LD50 Oral - Rat - male and female - > 2.000 mg/kg (OECD Test Guideline 401) LC50 Inhalation - Rat - 4 h - > 14,5 mg/l (OECD Test Guideline 403) LD50 Dermal - Rat - male and female - > 2.000 mg/kg (OECD Test Guideline 402)

Skin corrosion/irritation	Skin - Rabbit Result: No skin irritation - 4 h (OECD Test Guideline 404)
Serious eye damage/eye irritation	Eyes - Rabbit Result: No eye irritation (OECD Test Guideline 405)
Respiratory or skin sensitization	Maximization Test - Guinea pig Result: Does not cause skin sensitization. (OECD Test Guideline 406)
Toxic Effects on Human	May cause damage to the following organs: upper respiratory tract. Other Toxic Effects on Humans: Hazardous in case of skin contact (irritant, sensitizer), of ingestion, of inhalation (lung irritant, lung sensitizer).
Carcinogenicity	No data available
Germ cell mutagenicity	No data available Test Type: Ames test Test system: S. typhimurium Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 471 Result: negative
Reproductive toxicity	No data available
Specific target organ toxicity - single exposure	No data available
Special Remarks on other Toxi Effects on Humans	Acute Potential Health Effects: Skin: Causes skin irritation. May cause skin sensitization, an allergic reation, which becomes evident upon re-exposure to this material. Eyes: Causes eye irritation. Ingestion: Causes gastrointestinal (digestive) tract irritation with nausea, vomiting, and diarrhea. May be harmful if swallowed. Inhalation: Causes respiratory tract irritation. May cause chemical pneumonitis and pulmonary edema, inflammation, edema of bronchi and larynx. Chronic Potential Health Effects: Repeated or prolonged skin exposure may cause allergic reactions in sensitive individuals. Repeated or prolonged exposure by inhalation may affect respiration and metabolism.
Endocrine disrupting properties	The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher. Repeated dose toxicity - Rat - male - Oral - NOAEL (No observed adverse effect level) - 2.000 mg/kg To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

12. Ecological information

Bioaccumulative potential	No data available
Persistence and degradability	Biodegradability aerobic - Exposure time 20 d Result: 88 % - Readily biodegradable. (OECD Test Guideline 301D)
Toxicity to fish	Flow-through test LC50 - Oncorhynchus mykiss (rainbow trout) - 30 mg/l - 96 h (OECD Test Guideline 203)
Toxicity to daphnia and other aquatic invertebrates	Immobilization EC50 - Daphnia magna (Water flea) - 37,2 mg/l - 48 h (OECD Test Guideline 202)
Toxicity to algae	Growth inhibition EC50 - Pseudokirchneriella subcapitata (green algae) - 46,9 mg/l - 72 h (OECD Test Guideline 201)
Toxicity to bacteria	Static test EC50 - activated sludge - 563 mg/l - 3 h (OECD Test Guideline 209) Remarks: (in analogy to similar products) The value is given in analogy to the following substances: sodium hypochlorite solution
Mobility in soil	No Information available
Results of PBT and vPvB assessment	This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.
Endocrine disrupting properties	The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.
Other adverse effects	No data available

13. Disposal considerations

Disposal methods	The material can be disposed of by removal to a licensed chemical destruction plant or by controlled incineration with flue gas scrubbing. Do not contaminate water, foodstuffs, feed or seed by storage or disposal. Do not discharge to sewer systems.
Contaminated packaging	Dispose of as unused product.
Waste treatment Method	No data available

14. Transport information

UN number	ADR/RID:	1157	IMDG:	1157	IATA:	1157

UN proper shipping name	ADR/RID: DIISOBUTYL KETONE IMDG: DIISOBUTYL KETONE IATA:DIISOBUTYL KETONE
Transport hazard class(es)	ADR/RID: 3 IMDG: 3 IATA: 3
Packaging group	ADR/RID: III IMDG: III IATA: III
Environmental hazards	ADR/RID: NO IMDG: NO IATA: NO
Further information	No data available

15. Regulatory information

Inventory status	Components are on the following inventories: Polymaleic acid: - US TSCA, Canadian DSL, EU EINECS, Australian AICS, Korean, Philippine PICCS and Chinese Xi irritant R 36/38 Irritant to eyes & skin R 41 Risk of serious damage to eyes S24/25 Avoid contact with skin and eyes S26/28 In case of contact eyes & skin, rinse with plenty water and seek medical advice Section 312/313: Not listed. Not listed under California proposition 65.
Safety, health and environmental regulations/legislation specific for the substance or mixture	This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006.
Authorisations and/or restrictions on use	REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59). : potassium chromate This product contains a substance listed on Annex XIV of the REACH Regulation (EC) Nr. 1907/2006. Listed substance / Sunset Date : potassium chromate / 21.09.2017 After the sunset date the use of this substance requires either an authorization or can only be used for exempted uses, e.g. use in scientific research and development which includes routine analytics or use as intermediate.REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles (Annex XVII) : potassium chromate
National legislation	Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances. : FLAMMABLE LIQUIDS
Other regulations	Take note of Dir 94/33/EC on the protection of young people at work.
Chemical Safety Assessment	For this product a chemical safety assessment was not carried out

16. Other information

Other Information

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 weassume 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 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 Rx Marine International has been advised of the possibility of such damages.

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