

1. Product and Company Identification

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Product Name Itaconic (methylene succinic) acid
Part Number RXSOL-19-3710-025

Company Details:

RX MARINE INTERNATIONAL
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2. Composition / Information on ingredients

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Chemical Name	Cas No	EC No	Whight	Formula
Itaconic acid	97-65-4	202-599-6	130,10 g/mol	C ₅ H ₆ O ₄

3. Hazards Identification

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Signal Word	Danger
Hazard Statements	H300 + H310 Fatal if swallowed or in contact with skin.
Precautionary statements	P262 Do not get in eyes, on skin, or on clothing. P280 Wear protective gloves/ protective clothing. P301 + P310 + P330 IF SWALLOWED: Immediately call a POISON CENTER/ doctor. Rinse mouth. P302 + P352 + P310 IF ON SKIN: Wash with plenty of water. Immediately call a POISON CENTER/ doctor.
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

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General advice	Show this material safety data sheet to the doctor in attendance.
If inhaled	If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.
Eye Contact	After eye contact: rinse out with plenty of water. Immediately call in ophthalmologist. 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

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Flammability	May be combustible at high temperature.
Suitable extinguishing media	For this substance/mixture no limitations of extinguishing agents are given.
Unsuitable extinguishing media	Do NOT use water jet.
Special hazards arising from the substance or mixture	Carbon oxides Combustible. Development of hazardous combustion gases or vapours possible in the event of fire.
Further information	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	Has a fire-promoting effect due to the release of oxygen. Ambient fire may liberate hazardous vapours.

6. Accidental Release Measures

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Personal precautions, protective equipment and emergency procedures	Advice for non-emergency personnel: Avoid inhalation of dusts. Avoid substance contact. Ensure adequate ventilation. 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.
Personal Protection	Advice for non-emergency personnel: Avoid inhalation of dusts. Evacuate the danger area, observe emergency procedures, consult an expert. Advice for emergency responders: Protective equipment see section 8.
Enviromental Precaution	Do not let product enter drains.
Methods and materials for containment and cleaning	Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).
Reference to other sections	For disposal see section 13.

7. Handling and Storage

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Advice on protection against fire and explosion	Keep away from sources of ignition - No smoking. Take measures to prevent the build up of electrostatic charge.
Incompatible materials	Keep away from alkalis, strong oxidizing agents and metals. Provide containment walls of adequate capacity to hold any accidental spills.
Hygiene measures	Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product. For precautions see section 2.2.
Advice on safe handling	Avoid contact with skin and eyes. Avoid inhalation of vapor or mist.

Conditions for safe storage, including any incompatibilities	Tightly closed. Dry. Keep in a well-ventilated place. Keep locked up or in an area accessible only to qualified or authorized persons. Moisture sensitive.
Storage conditions	Tightly closed. Dry. Moisture sensitive.
Storage class	Storage class (TRGS 510): 11: Combustible Solids
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

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Exposure controls	No specific additional engineering controls are required. Provide good natural or artificial ventilation.
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). Tightly fitting safety goggles
Body Protection	protective clothing
Skin protection	Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.
Respiratory protection	Required when dusts 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 P2 The entrepreneur 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	Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

9. Physical and chemical properties

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Physical state	solid
Colour	No data available
Odour	No data available
Odor Threshold	Not Applicable
pH	2 at 10 g/l at 20 °C
Melting Point	165 - 168 °C - lit.
Boiling Point	268 °C - (decomposition) 268 °C - (decomposition)
Flash Point	6 °C - closed cup
Evaporation Rate	Not Applicable
Flammability (solid, gas)	No data available
Explosive limits	No Data Available
Upper/lower flammability or explosive limits	No data available
Autoignition temperature	No data available
Decomposition temperature	No data available
Vapour pressure	0,000 hPa at 20 °C - OECD Test Guideline 104 0,000 hPa at 40 °C - OECD Test Guideline 104
Viscosity	No data available

Density	1,573 g/cm3 at 25 °C - lit.
Relative Density	No data available
Specific Gravity	No data available
Partition coefficient	log Pow: -0,4 at 25 °C
Explosive properties	No data available
Solubility	77,49 g/l at 20 °C
Ignition temperature	No information available.
Particle characteristics	No data available

10. Stability and reactivity

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Reactivity	The following applies in general to flammable organic substances and mixtures: in correspondingly fine distribution, when whirled up a dust explosion potential may generally be assumed.
Chemical stability	The product is chemically stable under standard ambient conditions (room temperature) .
Possibility of hazardous reactions	Violent reactions possible with: strong alkalis
Conditions to avoid	Heat, flames and sparks.
Incompatible materials	Strong acids, Strong bases, Strong oxidizing agents, Strong reducing agents
Hazardous decomposition products	In the event of fire: see section 5

11. Toxicological information

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Acute toxicity	LD50 Oral - Rat - > 2.000 mg/kg Symptoms: Irritations of mucous membranes in the mouth, pharynx, oesophagus and gastrointestinal tract. Remarks: (External MSDS) Symptoms: Possible damages:, mucosal irritations Dermal: No data available
Skin corrosion/irritation	Skin - Rabbit Result: No skin irritation Remarks: (IUCLID)
Serious eye damage/irritation	Eyes - Rabbit Result: Eye irritation Remarks: (IUCLID) Risk of serious damage to eyes. Eyes - Rabbit Result: Causes serious eye damage. (OECD Test Guideline 405)
Respiratory or skin sensitization	Sensitisation test: - Guinea pig Result: negative Remarks: (IUCLID)
Carcinogenicity	No data available
Germ cell mutagenicity	Test Type: Ames test Result: negative Remarks: (IUCLID)
Reproductive toxicity	No data available
Specific target organ toxicity - single exposure	No data available
Additional Information	RTECS: UF9625000 Lung irritation, Cyanosis, Central nervous system depression To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

12. Ecological information

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Persistence and degradability	No data available
Toxicity to fish	LC50 - Oncorhynchus mykiss (rainbow trout) - 190 mg/l - 24 h Remarks: (IUCLID)
Toxicity to daphnia and other aquatic invertebrates	EC50 - Daphnia magna (Water flea) - 240 mg/l - 24 h Remarks: (IUCLID)
Toxicity	Toxicity to fish LC50 - Pimephales promelas (fathead minnow) - 1.520 mg/l - 96 h
Toxicity to bacteria	EC10 - Bacteria - 14 mg/l - 72 h Remarks: (Lit.) EC5 - E.coli - 15.000 mg/l Remarks: (Lit.) (maximum permissible toxic concentration)
Toxicity to algae	IC50 - Desmodesmus subspicatus (green algae) - 47 mg/l - 72 h Remarks: (IUCLID)

Products Biodegradation	The methods for determining the biological degradability are not applicable to inorganic substances.
Mobility in soil	No data 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	No data available
Other adverse effects	No data available .

13. Disposal considerations

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Product	Offer surplus and non-recyclable solutions to a licensed disposal company. Waste material must be disposed of in accordance with the Directive on waste 2008/98/EC as well as other national and local regulations. Leave chemicals in original containers. No mixing with other waste. Handle uncleaned containers like the product itself.
Contaminated packaging	Dispose of as unused product.
Waste treatment Method	See www.retrologistik.com for processes regarding the return of chemicals and containers, or contact us there if you have further questions.

14. Transport information

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UN number	ADR/RID: IMDG: IATA:
UN proper shipping name	ADR/RID: IMDG : IATA:
Transport hazard class(es)	ADR/RID: IMDG: IATA:
Packaging group	ADR/RID: IMDG: IATA:
Environmental hazards	ADR/RID: No IMDG: No IATA: No
Special precautions for user	No data available
Further information	Not classified as dangerous in the meaning of transport regulations.

15. Regulatory information

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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.
Other regulations	Observe work restrictions regarding maternity protection in accordance to Dir 92/85/EEC or stricter national regulations where applicable. 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

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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 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 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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