

1. Product and Company Identification

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Product Name Manganese Oxide
Part Number RXSOL-19-6250-050

Company Details:

RX MARINE INTERNATIONAL
105, A wing , BSEL , TECH PARK.
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2. Composition / Information on ingredients

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Component	Cas No	Weight %
Manganese oxide	1313-13-9	88

3. Hazards Identification

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Classification This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Oxidizing solids	Category 2
Acute oral toxicity	Category 4
Acute Inhalation Toxicity - Dusts and Mists	Category 4
Specific target organ toxicity - (repeated exposure)	Category 2
Target Organs - Brain.	

Label Elements

Signal Word	Danger
Hazard Statements	May intensify fire; oxidizer May cause damage to organs through prolonged or repeated exposure Harmful if swallowed or if inhaled
Precautionary Statements	
Prevention	Use only outdoors or in a well-ventilated area Do not breathe dust/fume/gas/mist/vapors/spray Keep away from heat/sparks/open flames/hot surfaces. - No smoking Keep/Store away from clothing/ other combustible materials Take any precaution to avoid mixing with combustibles Wear protective gloves/protective clothing/eye protection/face protection Wash face, hands and any exposed skin thoroughly after handling Use only outdoors or in a well-ventilated area Do not breathe dust/fume/gas/mist/vapors/spray

6. Accidental Release Measures

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Personal Precautions	Ensure adequate ventilation. Use personal protective equipment as required. Avoid dust formation. Ensure adequate ventilation. Use personal protective equipment as required. Avoid dust formation.
Environmental Precautions	Should not be released into the environment. See Section 12 for additional Ecological Information.
Methods for Containment and Clean Up	Sweep up and shovel into suitable containers for disposal. Keep in suitable, closed containers for disposal. Soak up with inert absorbent material. Sweep up and shovel into suitable containers for disposal.
Autoignition Temperature	No information available

7. Handling and Storage

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Handling	Wear personal protective equipment/face protection. Ensure adequate ventilation. Do not get in eyes, on skin, or on clothing. Avoid ingestion and inhalation. Avoid dust formation. Keep away from clothing and other combustible materials.
Storage.	Keep containers tightly closed in a dry, cool and well-ventilated place. Do not store near combustible materials. Incompatible Materials. Strong reducing agents. Combustible material.

8. Exposure controls and personal protection

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Component	ACGIH TLV	OSHA PEL	NIOSH IDLH	Mexico OEL (TWA)
Manganese(IV) oxide	TWA: 0.02 mg/m ³ 0.1 mg/m ³	(Vacated) Ceiling: 5 mg/m ³ Ceiling: 5 mg/m ³	IDLH: 500 mg/m ³ mg/m ³ STEL: 3 mg/m ³	TWA: 0.2 mg/m ³

Personal Protective Equipment

Engineering Measures	Ensure that eyewash stations and safety showers are close to the workstation location. Ensure adequate ventilation, especially in confined areas American Conference of Governmental Industrial Hygienists
Eye/face Protection	Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN 166
Skin and body protection	Wear appropriate protective gloves and clothing to prevent skin exposure.
Respiratory Protection	Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.
Hygiene Measures	Handle in accordance with good industrial hygiene and safety practice.

9. Physical and chemical properties

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Physical state	Solid
Appearance	No information available

Odor	No information available
Odor Threshold	No information available
pH	No information available
Melting point/freezing point	-535 °C / 995 °F
Boiling Point/Range	No information available
Flash Point	No information available
Evaporation Rate	Not Applicable
Flammability (solid,gas)	No information available
Flammability or explosive limits	
Upper	No data available
Lower	No data available
Vapor Pressure	No information available
Vapor Density	available Vapor Density N
Specific Gravity	No information available
Solubility	No information available
Partition coefficient; n-octanol/water	No data available
Autoignition Temperature	No information available
Decomposition Temperature	No information available
Viscosity	Not applicable
Molecular Formula	Mn O2
Molecular Weight	86.94

10. Stability and reactivity

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Reactive Hazard	Yes
Stability	Stable under normal conditions. Oxidizer: Contact with combustible/organic material may cause fire.
Conditions to Avoid	Incompatible products. Excess heat. Avoid dust formation. Combustible material.
Incompatible Materials	Strong reducing agents, Combustible material
Hazardous Decomposition Products	None under normal use conditions
Hazardous Reactions	In the event of fire: see section 5 None under normal processing.

11. Toxicological information

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Acute Toxicity

Product Information

Component Information

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Manganese(IV) oxide	LD50 = 9000 mg/kg (Rat)	Not listed	LC50 > 1500 mg/m ³ (Rat) 4 h

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Irritation	No information available
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Sensitization	No information available
Carcinogenicity	The table below indicates whether each agency has listed any ingredient as acarcinogen
Mutagenic Effects	No information available
Reproductive Effects	No information avai
Developmental Effects	No information available.
Teratogenicity	No information available.
Stot- single exposure	None known
Stot- repeated exposu	Brain
Aspiration hazard	No information available
Symptoms / effects,both acute and delayed	No information available
Endocrine Disruptor Information	No information available
Mobility	No information available

12. Ecological information

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Persistence and Degradability	Persistence is unlikely
Bioaccumulation/ Accumulation	dicates whether each agency has listed any ingredient as acarcinogen
Mutagenic Effects	No information available
Reproductive Effects	No information avai
Developmental Effects	No information available.
Teratogenicity	No information available.
Stot- single exposure	None known

13. Disposal considerations

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Waste Disposal Methods	Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classificatio
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14. Transport information

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<u>DOT</u>	
UN-No	UN1479
Proper Shipping Name	Oxidizing solid, n.o.s.
Hazard Class	5.1
Packing Group	II
<u>TDG</u>	
UN-No	UN1479
Proper Shipping Name	Oxidizing solid, n.o.s
Hazard Class	5.1
Packing Group	II
<u>IATA</u>	
UN-No	UN1479
Proper Shipping Name	Oxidizing solid, n.o.s
Hazard Class	5.1

Packing Group	II
IMDG/IMO	
UN-No	UN1479
Proper Shipping Name	Oxidizing solid, n.o.s
Hazard Class	5.1
Packing Group	II

15. Regulatory information

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United States of America Inventory

Component	CAS No	TSCA	TSCA Inventory notification	TSCA - EPA Regulatory
			-	Flags
			Active-Inactive	
Manganese(IV) oxide	1313-13-9	X	ACTIVE	

Legend

TSCA US EPA (TSCA) - Toxic Substances Control Act, (40 CFR Part 710)

X - Listed

X - Listed '-' - Not Listed

TSCA 12(b) - Notices of Export Not applicable

Component	CAS No	DSL	NDSL	EINECS	PICCS	ENCS	ISHL	AICS	KECL
Manganese oxide	1313-13-9	X		215-202-6	X	X	X	X	KE-23017

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 we 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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No data available

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

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