MnO2

PSI: PRODUCT SAFETY INFORMATION

The implementation of the Global Harmonized System for classification and labelling of chemicals, defined by European Regulations REACH and CLP, has resulted in product evaluation.

This product marketed by Nagpur Pyrolusite Pvt Ltd is not classified as hazardous. Therefore, providing a Safety Data Sheet (SDS) is not mandatory.

However Nagpur Pyrolusite Pvt Ltd, in order to support customers in a safe and reliable use of its products, is committed to provide, on a voluntary basis, information related to health, safety and environment thanks to PSI sheets (Product Safety Information). These sheets contain same information as given in Safety Data Sheet, but compliance with REACH Regulation writing requirements is not mandatory.

SECTION 1

Product Identification

Synonyms: Pyrolusite; Manganese black; Manganese peroxide; Manganese (IV) oxide

CAS No.: 1313-13-9

EC No. : 2015-202-6

Molecular Weight: 86.94

Chemical Formula: MnO2

Information on Ingredients

Ingredient	CAS No	Percent
Manganese Dioxide	1313-13-9	> 98%

Name and Address of the Supplier : -

NAGPUR PYROLUSITE PVT LTD

85,yeshwant Stadium

Dhantoli, Nagpur – 440012, India

SECTION 2

Hazards Identification

Classification of the substance or mixture in accordance with 29 CFR 1910 (OSHA HCS)
GHS07
Acute Tox. 4 H302 Harmful if swallowed.
Acute Tox. 4 H332 Harmful if inhaled.
Hazards not otherwise classified No information known.
Label elements
GHS label elements The product is classified and labeled in accordance with 29 CFR 1910 (OSHA HCS)
Hazard pictograms
GHS07
Signal word Warning
Hazard statements
Harmful if swallowed or if inhaled.
Precautionary statements
Avoid breathing dust/fume/gas/mist/vapours/spray. P264
Wash thoroughly after handling.
IF INHALED: Remove person to fresh air and keep comfortable for breathing. P301+P312
IF SWALLOWED: Call a POISON CENTER/doctor/…/if you feel unwell.
Call a POISON CENTER/doctor/…/if you feel unwell.
Dispose of contents/container in accordance with local/regional/national/international regulations.
Hazardous Materials Identification System
Health Rating: 2 - Severe (Life)
Flammability Rating: 0 - None
Reactivity Rating: 2 - Severe (Oxidizer)
Contact Rating: 2 - Moderate
Other hazards
Results of PBT and vPvB assessment PBT: Not applicable.
vPvB: Not applicable.\

SECTION 3

Information on Ingredients

CAS No.: 1313-13-9
Molecular Weight: 86.94
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SECTION 4

First Aid

Eye Contact: Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. 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. 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 immediate 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: Not available.

Ingestion: Do NOT induce vomiting unless directed to do so by medical personnel.Never give anything by mouth to an unconscious Person. If large quantities of this material are swallowed, call a physician immediately. Loosen tight clothing such as a collar,tie, belt or waistband. Serious Ingestion: Not available.

SECTION 5

Fire Fighting Measures

Fire:

Not combustible, but substance is a strong oxidizer and its heat of reaction with reducing agents or combustibles may cause ignition. Increases the flammability of any combustible material.

Explosion:

Contact with oxidizable substances may cause extremely violent combustion.

Fire Extinguishing Media:

Dry chemical, foam or carbon dioxide.

SECTION 6

Accidental Release Measures

Ventilate area of leak or spill. Keep unnecessary and unprotected people away from area of spill. Wear appropriate personal protective equipment .

Spills: Pick up and place in a suitable container for reclamation or disposal, using a method that does not generate dust. Keep combustibles (wood, paper, oil, etc.) away from spilled material

SECTION 7

Handling and Storage

Keep in a tightly closed container, stored in a cool, dry, ventilated area. Protect against physical damage and moisture. Isolate from any source of heat or ignition. Avoid storage on wood floors. Separate from incompatibles, combustibles, organic or other readily oxidizable materials. Wear special protective equipment for maintenance break-in or where exposures may exceed established exposure levels. Wash hands, face, forearms and neck when exiting restricted areas. Shower, dispose of outer clothing, change to clean garments at the end of the day. Avoid cross-contamination of street clothes. Wash hands before eating and do not eat, drink, or smoke in workplace. Containers of this material may be hazardous when empty since they retain product residues (dust, solids); observe all warnings and precautions listed for the product.

SECTION 8

Exposure Controls/Personal Protection

PEL (USA)
REL (USA)

TLV (USA)
EL (Canada) Ceiling limit value: 5 mg/m³ as Mn
Short-term value: 3 mg/m³ Long-term value: 1 mg/m³ as Mn
Long-term value: 0.02* 0.1* mg/m³
as Mn; *respirable **inhalable fraction
Long-term value: 0.2 mg/m³ as Mn; R

Engineering Controls:

Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

Personal Protection:

Splash goggles. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.

Personal Protection in Case of a Large Spill:

Splash goggles. Full suit. Dust respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoidinhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

SECTION 9

Physical and Chemical Properties

Appearance:

Gray lumps or fine, black to brownish-black powder.

Odor: Odorless.

Solubility: Insoluble in water.

Specific Gravity: 5.0

pH: 9 - 10 (10% aqueous slurry)

% Volatiles by volume @ 21C (70F): 0

Boiling Point:

Not applicable.

Melting Point:

> 1539C (> 2802F)

Vapor Density (Air=1):

No information found.

Vapor Pressure (mm Hg):

No information found.

SECTION 10

Stability and Reactivity

Stability: Stable under ordinary conditions of use and storage.

Incompatibilities:

Easily oxidizable materials, sulfur , sulfides, phosphids, hypophosphites, chlorates, peroxides, aluminum powder, rubidium acetylide, potassium azide, chlorine trifluoride. Reacts with hydrochloric acid to form corrosive chlorine gas. Heating or rubbing this material with organic materials can cause a fire hazard

SECTION 11

Toxicological Information

Routes of Entry: Inhalation. Ingestion.
Toxicity to Animals: Acute oral toxicity (Ld50): >3478 mg/kg [Rat].
Chronic Effects on Humans: May cause damage to the following organs: blood, the nervous system, liver, central nervous system (CNS).
Other Toxic Effects on Humans: Hazardous in case of skin contact (irritant), of ingestion, of inhalation.

SECTION 12

Ecological Information

Environmental Fate : No Information found.

Environmental Toxicity : No information found.

SECTION 13

Disposal Considerations

Not regulated.

SECTION 14

Transport Information

Not regulated.

SECTION 15

Regulatory Information

--------\Chemical Inventory Status - Part 1\----------

Ingredient	TSCA	EC	Japan	Australia
Manganese Dioxide (1313-13-9)	Yes	Yes	Yes	Yes

--------\Chemical Inventory Status - Part 2\----------

Ingredient				
Manganese Dioxide (1313-13 -9)	Yes	Yes	No	Yes

--------\Federal, State & International Regulations - Part 1\----------

	-SARA 302-		------SARA 313------	
Ingredient	RQ	TPQ	List	Chemical Catg.
Manganese Dioxide (1313-13-9)	No	No	No	Manganese co

--------\Federal, State & International Regulations - Part 2\----------

	-RCRA-	-TSCA-	
Ingredient	CERCLA	261.33	8(d)

Manganese Dioxide (1313-13-9) 1 No No
Chemical Weapons Convention: No TSCA 12(b): No CDTA: No
SARA 311/312: Acute: Yes Chronic: Yes Fire: Yes Pressure: No
Reactivity: No (Pure / Solid)
Australian Hazchem Code: 1WE
Poison Schedule: None allocated.
WHMIS:
This MSDS has been prepared according to the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

SECTION 16

Other Information

NFPA Ratings: Health: 2 Flammability: 0 Reactivity: 1 Other: Oxidizer
Label Hazard Warning:
AFFECTS LUNGS, CENTRAL NERVOUS SYSTEM, BLOOD AND KIDNEYS. MAY CAUSE IRRITATION TO EYES AND RESPIRATORY TRACT.
Label Precautions:
Keep from contact with clothing and other combustible materials.
Store in a tightly closed container.
Remove and wash contaminated clothing promptly.
Avoid contact with eyes.
Wash thoroughly after handling.
Avoid breathing dust.
Use only with adequate ventilation.

Product Use:
Laboratory Reagent.

Revision Information:
Revised on 12.06.2023