

1. IDENTIFICATION OF THE PREPARATION AND OF THE COMPANY

Catalogue No.	:	M 10429
Product Name	:	MANGANESE DIOXIDE

Manufacturer/supplier identification

Company : NICE Chemicals (P) Ltd., Cochin, India Tel - 0484 2800212, 2802755

Contact for information : Tel. No.- 0484 2802536 Fax : 0484 2802483 Emergency Telephone No. : 0484 2801583 Telefax No. : 0484 2802483

2. COMPOSITION/INFORMATION ON INGREDIENTS

Synonyms : Pyrolusite, Black Manganese Oxide

Hazardous ingredients :

Name according to EC Directives : Manganese (IV) oxideHazard symbols : XnR-phrases : 20/22Ec-Index No. : 025-001-00-3Harmful by inhalation and if swallowed.CAS-No: 1313-13-9Content : Z25 - 50%

3. HAZARDS IDENTIFICATION : Harmful by inhalation and if swallowed.

4.	FIRST AID MEASURES : After inhalation (particles, dusts) : Fresh air. Summon doctor.
	After skin contact : Wash off with plenty of water.
	Remove contaminated clothing.
	After eye contact : rinse out with plenty of water for
	with the eyelid held wide open. Summon eye specialist
	if necessary.
	After swallowing : Make victim drink plenty of water
	induce vomiting, Summon doctor.



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5. FIRE-FIGHTING MEASURES : Suitable extinguishing media : In adaption to materials stored in the immediate neighbourhood.

Special risks : Has a fire-promoting effect due to release of oxygen. Special protective equipment for fire fighting : Do not stay in dangerous zone without self-contained breathing apparatus.

Other information : Non-combustible.

6. ACCIDENTAL RELEASE MEASURES

Person-related precautionary measures :

Avoid generation of dusts; do not inhale dusts.

 $\label{eq:procedures} Procedures \ for \ cleaning/absorption \ : \ Take \ up \ dry.$

Forward for disposal. Clean up affected area.

7. HANDLING AND STORAGE : Handling : no further requirements.

Storage : Tightly closed. Dry. Away from combustible substances. Keep away from sources of ignition and heat.

Storage temperature : No restrictions.

8. EXPOSURE CONTROLS/: Respiratory protection : Required when dusts are generated.

PERSONAL PROTECTION

Eye protection	: Required	
Hand protection	: Required	



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Industrial hygiene : Change contaminated clothing. Wash hands after working with substance.

9. PHYSICAL AND CHEMICAL PROPERTIES

Form	: Solid
Colour	: Grey to black
Odour	: Odourless
pH value at gm/lt. $H_2 O (20 \degree C)$: 4 - 5 (slurry)
Melting temperature	: 535 ° C (decomposition)
Boiling temperature	: Not available
Ignition temperature	: Not available
Flash Point	: Not available
Explosion limit lower	: Not available
upper	: Not available
Relative vapour density	: Not available
Density (20°C)	: 5.03 gm/cm ³
Bulk density	: $\sim 1000 \text{ kg/m}^3$
Solubility in Water (20° C)	: Insoluble

10. STABILITY & REACTIVITY

Conditions to be avoided : No information available Substances to be avoided : Acids Hazardous decomposition products : Not known to date



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11. TOXICOLOGICAL INFORMATION

Acute toxicity : Quantitative data on the toxicity of this product are not available. Subacute to chronic toxicity : Applicable to partial component(s) : An embryotoxic effect need not be feared when the threshold limit value is observed

Further toxicological information :
After inhalation of dust : Cannot be excluded : tissue damage, pneumonia. Risk of absorption.
After eye contact : Slight irritations.
After swallowing : Mucosal irritations, nausea, vomiting, gastric pain, diarrhoea, absorption.
After absorption : Cannot be excluded : CNS disorders.

Further data : The product should be handled with the care usual when dealing with chemicals.

12. ECOLOGICAL INFORMATION : Ecotoxic effects : Quantitative data on the ecological effect of this product are not available. Further ecologic data : No ecological problems are to be expected when the

product is handled and used with due care cand attention.

 13. DISPOSAL METHOD : There are no uniform EC Regulations for the disposal of chemicals or residues. Chemical residues generally count as special waste. The disposal of the latter is regulated in the EC member countries through corresponding laws & regulations. We recommend that you contact either the authorities in charge or approved waste disposal companies which will advise you on how to dispose of special waste.



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Disposal in compliance with official regulations. Handle contaminated packaging in the same way as the substance itself. If not officially specified differently, non-contaminated packaging may be treated like household waste or recycled.

14. TRANSPORT INFORMATION

Transport over land ADR/RID and GGVS/GGVE : GGVS/GGVE class : 5.1 Number and letter : 27b ADR/RID class : 5.1 Number and letter : 27b Name of material : MANGANESE DIOXIDE

Sea Transport IMDG : IMDG class : 5.1 UN No. : 1479 Packing group : II Ems : 5.1-11 MFAG : 760,4.3 Correct Technical Name : MANGANSE DIOXIDE

Air Transport ICAO-TI

and IATA-DGR : ICAO/IATA class : 5.1 UN No. : 1479 Packaging group : II Correct Technical Name : MANGANESE DIOXIDE

15. REGULATORY INFORMATION

Labelling according to EC Directives

Symbol : Xn Harmful

R-phrases : 20/22 Harmful by inhalation and if swallowed.

S-phrases : 25 Avoid contact with eyes.



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Water pollution class : 1 (slightly polluting substance) (own classification)

16. OTHER INFORMATION

Reason for alteration

General update.

See chapter 8; Specific control parameter.

The information contained herein is based on the present state of our knowledge. It characterises the product with regard to the appropriate safety precautions. It does not represent a guarantee of the properties of the product.