

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product form	: Substance
Trade name	: Manganese (IV) oxide Analytical Grade
Chemical name	: manganese dioxide
IUPAC name	: manganese dioxide
EC Index-No.	: 025-001-00-3
EC-No.	: 215-202-6
CAS-No.	: 1313-13-9
Product code	: MNOX-00A
Formula	: MnO ₂

1.2. Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses

Main use category	: Laboratory use
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1.3. Details of the supplier of the safety data sheet

Labbox Labware S.L.
Migjorn, 1
08338 Premia de Dalt, Barcelona
España
T +34 937 07 79 70, F +34 937 909 532
info@labbox.com, www.labbox.com

1.4. Emergency telephone number

Emergency number	: +34 937 077 970 (For technical information_Office Hours) In case of medical emergency phone 112 or to your local emergency number. 24 hours a day, 7 days a week
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Country/Area	Organisation	Emergency number
United Kingdom	National Poisons Information Service (Belfast Centre). Royal Victoria Hospital. Grosvenor Road BT12 6BA Belfast.	0344 892 0111 Only for healthcare professionals

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Acute toxicity (oral), Category 4 H302
Acute toxicity (inhalation:dust,mist) Category 4 H332
Specific target organ toxicity – Repeated exposure, Category 2 H373
Full text of H- and EUH-statements: see section 16

Adverse physicochemical, human health and environmental effects

No additional information available

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP)



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according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

Signal word (CLP)	: Warning
Hazard statements (CLP)	: H302+H332 - Harmful if swallowed or if inhaled. H373 - May cause damage to organs through prolonged or repeated exposure.
Precautionary statements (CLP)	: P260 - Do not breathe dust/fume/gas/mist/vapours/spray. P264 - Wash hands, forearms and face thoroughly after handling. P270 - Do not eat, drink or smoke when using this product. P271 - Use only outdoors or in a well-ventilated area. P301+P312 - IF SWALLOWED: Call a POISON CENTRE or doctor if you feel unwell. P304+P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing.

2.3. Other hazards

Other hazards which do not result in classification	: Does not contain PBT and/or vPvB substances $\geq 0.1\%$ evaluated according to Annex XIII of REACH.
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PBT: not relevant – no registration required

SECTION 3: Composition/information on ingredients

3.1. Substances

Substance type	: Mono-constituent
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Name	Product identifier	%
Manganese (IV) oxide Analytical Grade	CAS-No.: 1313-13-9 EC-No.: 215-202-6 EC Index-No.: 025-001-00-3	100

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general	: Get medical advice/attention if you feel unwell.
First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing. Give oxygen or artificial respiration if necessary. If you feel unwell, seek medical advice.
First-aid measures after skin contact	: Wash skin with plenty of water. If skin irritation or rash occurs: Get medical advice/attention.
First-aid measures after eye contact	: Rinse eyes with water as a precaution. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
First-aid measures after ingestion	: Rinse mouth. Get medical advice/attention if you feel unwell.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/effects after inhalation	: Harmful if inhaled.
Symptoms/effects after skin contact	: None under normal conditions. Dust may cause irritation in skin folds or by contact in combination with tight clothing.
Symptoms/effects after eye contact	: None under normal conditions. Dust from this product may cause eye irritation.
Symptoms/effects after ingestion	: Harmful if swallowed.

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	: Water spray. Foam. Dry powder.
Unsuitable extinguishing media	: Do not use a heavy water stream.

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5.2. Special hazards arising from the substance or mixture

Fire hazard	: No fire hazard.
Explosion hazard	: No direct explosion hazard.
Hazardous decomposition products in case of fire	: Toxic fumes may be released.

5.3. Advice for firefighters

Firefighting instructions	: Exercise caution when fighting any chemical fire. Fight fire from safe distance and protected location. Do not enter fire area without proper protective equipment, including respiratory protection.
Protection during firefighting	: Do not enter fire area without proper protective equipment, including respiratory protection.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures	: Notify authorities if product enters sewers or public waters.
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For non-emergency personnel

Protective equipment	: Wear recommended personal protective equipment.
Emergency procedures	: Do not breathe dust. Ventilate spillage area. Evacuate unnecessary personnel.

For emergency responders

Protective equipment	: Do not attempt to take action without suitable protective equipment. Use personal protective equipment as required. For further information refer to section 8: "Exposure controls/personal protection".
Emergency procedures	: Stop leak if safe to do so. Ventilate area. Evacuate unnecessary personnel.

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

For containment	: Using a clean shovel, put the material in a dry container and cover without compressing it.
Methods for cleaning up	: Collect spillage. On land, sweep or shovel into suitable containers. Minimise generation of dust.
Other information	: Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

See Section 8. For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Additional hazards when processed	: Not expected to present a significant hazard under anticipated conditions of normal use.
Precautions for safe handling	: Wear personal protective equipment. Avoid contact with skin and eyes. Use only outdoors or in a well-ventilated area. Avoid dust formation.
Hygiene measures	: Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures	: Keep in a cool, well-ventilated place away from heat.
Storage conditions	: Store in a well-ventilated place. Keep container tightly closed. Store in original container. Store in a dry place. Protect from moisture.
Storage area	: Store in a well-ventilated place. Store away from heat.
Special rules on packaging	: Store in a closed container. Keep only in original container.

7.3. Specific end use(s)

Laboratory chemicals.

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SECTION 8: Exposure controls/personal protection

8.1. Control parameters

National occupational exposure and biological limit values

Manganese (IV) oxide Analytical Grade (1313-13-9)	
EU - Indicative Occupational Exposure Limit (IOEL)	
Local name	Manganese (IV) dioxide
IOEL TWA	0,2 mg/m ³ (inhalable fraction) 0,05 mg/m ³ (respirable fraction)
Remark	SCOEL Recommendations (2011)

DNEL and PNEC

Manganese (IV) oxide Analytical Grade (1313-13-9)	
DNEL/DMEL (Workers)	
Long-term - systemic effects, dermal	0,00414 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	0,2 mg/m ³
DNEL/DMEL (General population)	
Long-term - systemic effects, inhalation	0,043 mg/m ³
Long-term - systemic effects, dermal	0,0021 mg/kg bodyweight/day
PNEC (Water)	
PNEC aqua (freshwater)	0,00014 mg/l
PNEC aqua (marine water)	0,000014 mg/l
PNEC aqua (intermittent, freshwater)	0,00074 mg/l
PNEC (Sediment)	
PNEC sediment (freshwater)	0,037 mg/kg dwt
PNEC sediment (marine water)	0,0037 mg/kg dwt
PNEC (Soil)	
PNEC soil	0,028 mg/kg dwt
PNEC (STP)	
PNEC sewage treatment plant	100 mg/l

8.2. Exposure controls

Personal protection equipment

Personal protective equipment:

Avoid all unnecessary exposure. ISO 374-1.

Personal protective equipment symbol(s):



Eye and face protection

Eye protection:

Chemical goggles or safety glasses

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Skin protection

Skin and body protection:

Wear a mask

Hand protection:

protective gloves

Respiratory protection

Respiratory protection:

Wear appropriate mask

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Solid
Colour	: Black.
Appearance	: Powder.
Molecular mass	: 89,94 g/mol
Odour	: odourless.
Odour threshold	: Not available
Melting point	: > 449,85 °C
Freezing point	: Not available
Boiling point	: Not available
Flammability	: Not available
Lower explosion limit	: Not applicable
Upper explosion limit	: Not applicable
Flash point	: Not applicable
Auto-ignition temperature	: Not applicable
Decomposition temperature	: 535 °C
pH	: Not available
pH solution	: Not available
Viscosity, kinematic	: Not applicable
Solubility	: Soluble in water.
Partition coefficient n-octanol/water (Log Kow)	: Not available
Vapour pressure	: Not available
Vapour pressure at 50°C	: Not available
Density	: Not available
Relative density	: 5,21 Type: 'relative density' Temp.: 21 °C
Relative vapour density at 20°C	: Not applicable
Particle size	: Not available

9.2. Other information

Other safety characteristics

VOC content : 0 %

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Stable under normal conditions of use.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

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10.4. Conditions to avoid

Air contact. Moisture. Direct sunlight.

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity (oral)	: Harmful if swallowed.
Acute toxicity (dermal)	: Not classified
Acute toxicity (inhalation)	: Inhalation:dust,mist: Harmful if inhaled.
Skin corrosion/irritation	: Not classified
Serious eye damage/irritation	: Not classified
Respiratory or skin sensitisation	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
STOT-single exposure	: Not classified
STOT-repeated exposure	: May cause damage to organs through prolonged or repeated exposure.
Aspiration hazard	: Not classified

11.2. Information on other hazards

No additional information available

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general	: The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment.
Hazardous to the aquatic environment, short-term (acute)	: Not classified
Hazardous to the aquatic environment, long-term (chronic)	: Not classified

12.2. Persistence and degradability

Manganese (IV) oxide Analytical Grade (1313-13-9)

Persistence and degradability	Rapidly degradable
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12.3. Bioaccumulative potential

No additional information available

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

Manganese (IV) oxide Analytical Grade (1313-13-9)

PBT: not relevant – no registration required

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12.6. Endocrine disrupting properties

Adverse effects on the environment caused by endocrine disrupting properties : Substance(s) not included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605.

12.7. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Regional waste regulation : Disposal must be done according to official regulations.
Waste treatment methods : Must follow special treatment according to local regulation.
Sewage disposal recommendations : Disposal must be done according to official regulations.
Product/Packaging disposal recommendations : Disposal must be done according to official regulations.
Additional information : Do not re-use empty containers.

SECTION 14: Transport information

In accordance with ADR / IMDG / IATA / ADN / RID

14.1. UN number or ID number

Not regulated for transport

14.2. UN proper shipping name

Proper Shipping Name (ADR) : Not regulated
Proper Shipping Name (IMDG) : Not regulated
Proper Shipping Name (IATA) : Not regulated
Proper Shipping Name (ADN) : Not regulated
Proper Shipping Name (RID) : Not regulated

14.3. Transport hazard class(es)

ADR

Transport hazard class(es) (ADR) : Not regulated

IMDG

Transport hazard class(es) (IMDG) : Not regulated

IATA

Transport hazard class(es) (IATA) : Not regulated

ADN

Transport hazard class(es) (ADN) : Not regulated

RID

Transport hazard class(es) (RID) : Not regulated

14.4. Packing group

Packing group (ADR) : Not regulated
Packing group (IMDG) : Not regulated
Packing group (IATA) : Not regulated
Packing group (ADN) : Not regulated
Packing group (RID) : Not regulated

14.5. Environmental hazards

Other information : No supplementary information available

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14.6. Special precautions for user

Overland transport

Not regulated

Transport by sea

Not regulated

Air transport

Not regulated

Inland waterway transport

Not regulated

Rail transport

Not regulated

14.7. Maritime transport in bulk according to IMO instruments

Not applicable

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

EU-Regulations

REACH Annex XVII (Restriction List)

Not listed on REACH Annex XVII

REACH Annex XIV (Authorisation List)

Not listed on REACH Annex XIV (Authorisation List)

REACH Candidate List (SVHC)

Not listed on the REACH Candidate List

PIC Regulation (Prior Informed Consent)

Not listed on the PIC list (Regulation EU 649/2012)

POP Regulation (Persistent Organic Pollutants)

Not listed on the POP list (Regulation EU 2019/1021)

Ozone Regulation (2024/590)

Not listed on the Ozone Depletion list (Regulation EU 2024/590)

Council Regulation (EC) for the control of dual-use items

Not listed on the COUNCIL REGULATION (EC) of dual-use items.

VOC Directive (2004/42)

VOC content : 0 %

Explosives Precursors Regulation (EU 2019/1148)

Not listed on the Explosives Precursors list (EU)

Drug Precursors Regulation (EC 273/2004)

Not listed on the Drug Precursors list (EU)

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National regulations

Denmark

Danish National Regulations

- : Young people below the age of 18 years are not allowed to use the product
- Pregnant/breastfeeding women working with the product must not be in direct contact with it.
- If an employee is pregnant or breastfeeding and the person in question uses or is exposed to this product at work, the employer must always carry out a risk assessment of the work. The assessment must both deal with the dangerousness of the impact and its strength and duration. The employer's decision that a pregnant or lactating woman can perform a specific work task must therefore be made in the context of her specific working conditions. See also WEA-Guideline A.1.8-7 on the working environment of pregnant and breastfeeding workers.

France

Occupational diseases	
Code	Description
RG 39	Occupational diseases caused by manganese dioxide

Germany

Water hazard class (WGK)

- : WGK 2, Significantly hazardous to water (Classification according to AwSV; ID No. 7145).

VOC content

- : 0 %

Netherlands

- SZW List of Carcinogenic Substances : The substance is not listed
- SZW List of Mutagenic Substances : The substance is not listed
- SZW List of Reprotoxic Substances – Breastfeeding : The substance is not listed
- SZW List of Reprotoxic Substances – Fertility : The substance is not listed
- SZW List of Reprotoxic Substances – Development : The substance is not listed

Poland

Polish National Regulations

- : Act of 25 February 2011 on chemical substances and their mixtures (J. o L. No. 63, item 322 as amended; consolidated text J. o L. 2019, item 1225).
- Act of 14 December 2012 on waste (J. o L. 2013, item 322 as amended; consolidated text J. o L. 2020, item 797).
- The announcement of Marshal of the Sejm of the Republic of Poland dated 19 October 2016 concerning the consolidated text announcement of the decree on the management of packaging and packaging waste (J. o L. 2016, item 1863 as amended).
- Decree of the Minister of Environment of 14 December 2014 on the catalogue of waste (J. o L. 2014, item 1923).
- Act of 19 August 2011 on the Carriage of Dangerous Goods (J. o L. 2011 No. 227, item 1367 as amended; consolidated text J. o L. 2020, item 154).
- Regulation of the Minister of Family, Labour and Social Policy of 12 June 2018 on the highest permissible concentration and intensity of noxious agents for health at work environment (J. o L. item 1286 as amended).
- The announcement of Minister of Health dated 9 September 2016 concerning the consolidated text announcement of the decree of the Minister of Health of 30 December 2004 on health and safety at work related to exposure to chemical agents at work (J. o L. of 16 September 2016, item 1488)
- Regulation of the Minister of Health of 2 February 2011 on tests and measurements of the noxious agents for health at work environment (J. o L. No. 33, item 166 as amended).
- Regulation of the Minister of Environment of 9 December 2003 on particularly hazardous substances to the environment (J. o L. No. 217, item 2141).
- ADR Agreement: Government Statement of 13 March 2023 on the entry into force of amendments to Annexes A and B to the Agreement concerning the International Carriage of Dangerous Goods by Road (ADR), signed in Geneva on 30 September 1957 (J. o. L. 2023, item 891)
- Regulation of the Minister of Health of 25 August 2015 on the method of marking places, pipelines, and containers and tanks used for storing or containing hazardous substances or hazardous mixtures (J.o.L. 2015, item 1368 as amended)

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15.2. Chemical safety assessment

No additional information available

SECTION 16: Other information

Full text of H- and EUH-statements:

Acute Tox. 4 (Inhalation:dust,mist)	Acute toxicity (inhalation:dust,mist) Category 4
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
STOT RE 2	Specific target organ toxicity – Repeated exposure, Category 2
H302	Harmful if swallowed.
H332	Harmful if inhaled.
H373	May cause damage to organs through prolonged or repeated exposure.

Safety Data Sheet (SDS), EU

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.