



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

1.1 Product identifier

Product form	Dispersion
Trade name	Magnus I
Chemical name	Iron oxide(III), magnetic nanoparticles dispersion
IUPAC name	Iron (III) oxide
CAS No	137-61-9

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

1.2.1.	Relevant identified uses
Use of the substance/mixture	For R & D use only. Not for pharmaceutical, household or other uses.
1.2.2.	Uses advised against

1.3 Details of the supplier of the safety data sheet

Manufacturer:	NCHEMI ENGENHARIA DE MATERIAIS LTDA
Supplier:	

1.4 Emergency telephone number

2.1.

Classification of the substance or mixture

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

Eye Irrit. 2 H319

STOT SE 3 H335

Full text of H-phrases: see section 16

Classification according to Directive 67/548/EEC or 1999/45/EC

Xi; R36/37

Full text of R-phrases: 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)



GHS07

Signal word (CLP)

Warning

Hazard statements
(CLP)

H319 - Causes serious eye irritation
H335 - May cause respiratory irritation

Precautionary
statements (CLP)

P261 - Avoid breathing dust/fume/gas/mist/vapours/spray P264 – Wash hands thoroughly after handling
P271 - Use only outdoors or in a well-ventilated area
P280 - Wear protective gloves/protective clothing/eye protection/face protection
P304+P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

2.3.

Other hazards

SECTION 3: Composition/information on ingredients

3.1.	Substance		
name	Product identifier	%	Classification according to Directive 67/548/EEC
POLYETHYDROFURAN	25190-06-1		
name Tetrahidrofuran	Product identifier 109-99-9	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Full text of R- and H-phrases: see section 16			

3.2.	Mixture

SECTION 4: First aid measures

4.1.	Description of first aid measures
First-aid measures after inhalation	Remove to fresh air and keep at rest in a position comfortable for breathing.
First-aid measures after skin contact	Wash with plenty of soap and water. Remove/Take off immediately all contaminated clothing. Wash contaminated clothing before reuse.
First-aid measures after eye contact	Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
4.2.	Most important symptoms and effects, both acute and delayed
To our knowledge, the chemical, physical and toxicological properties have not been thoroughly investigated.	
4.3.	Indication of any immediate medical attention and special treatment needed
Data not available	

SECTION 5: Firefighting measures

5.1.	Extinguishing media	
Suitable extinguishing media	Powder, alcohol-resistant foam, water spray, carbon dioxide.	
Unsuitable extinguishing media	None known	
5.2.	Special hazards arising from the substance or mixture	
Fire hazard		
Explosion hazard		
Hazardous decomposition products in case of fire	The nature of the products of decomposition is not known.	
5.3.	Advice for firefighters	
Protective equipment for firefighters	In case of fire: Wear self-contained breathing apparatus.	

SECTION 6: Accidental release measures

6.1.	Personal precautions, protective equipment and emergency procedures	
6.1.1. For non-emergency personnel		
Protective equipment	Wear suitable protective clothing.	
Emergency procedures	Avoid formation of dust. Avoid contact with skin, eyes and clothes. Ensure adequate ventilation. Evacuate area.	
6.1.2. For emergency responders		
Protective equipment	Wear suitable protective clothing, gloves and eye/face protection.	
Emergency procedures	Provide adequate ventilation. Evacuate area. Avoid generation of dust. Avoid contact with skin and eyes.	
6.2.	Environmental precautions	
Do not allow to enter into surface water or drains. Collect contaminated fire extinguishing water separately. This must not be discharged into drains.		
6.3.	Methods and material for containment and cleaning up	
For containment	Keep in suitable, closed containers for disposal.	
Methods for cleaning up	Keep in suitable, closed containers for disposal.	
6.4.	Reference to other sections	
For waste disposal see section 13.		

SECTION 7: Handling and storage

7.1.	Precautions for safe handling	
Additional hazards when processed	None known	
Precautions for safe handling	Avoid contact with skin, eyes and clothes. Carry out operations in the open/under local exhaust/ventilation or with respiratory protection.	
Hygiene measures	Do not eat, drink or smoke when using this product. Wash contaminated clothing before reuse	
7.2.	Conditions for safe storage, including any incompatibilities	
Technical measures	Provide adequate ventilation to minimize dust concentrations.	
Storage duration	12 months	
Storage conditions	Store in dry, cool, well-ventilated area. Keep container tightly closed	
7.3.	Specific end use(s)	
Data not available		

SECTION 8: Exposure controls/personal protection

8.1.	Control parameters	
We are not aware of any occupational exposure limit.		
8.2.	Exposure controls	
Personal protective equipment	Gloves. Protective clothing. Dust production: dust mask with filter type (?)	
Materials for protective clothing	Wear suitable protective clothing. Wear chemical resistant protective clothing (EN 14605) and protective shoes (S1P or S3).	
Hand protection	Wear suitable gloves tested to EN374.	
Skin and body protection	Safety glasses with face shield. DIN EN 14605.	
Respiratory protection	Dust production: dust mask with filter type P1. half-mask with filter according to EN 149. Use multi-purpose combination (US) or type ABEK (EN) respirator cartridges. Use respirators and components tested and approved under appropriate government standards such as NIOSH	

SECTION 9: Handling and storage

9.1.	Control parameters
Physical state	liquid
Appearance	brown colored liquid
Colour	brown
odour	Data not available
Odour threshold	Data not available
pH	Data not available
Relative evaporation rate	Data not available
Melting point	Data not available
Freezing point	Data not available
Boiling point	100°C
Flash point	Data not available
Auto-ignition temperature	Data not available
Decomposition temperature	Data not available
Flammability (solid, gas)	Data not available
Vapour pressure	Data not available
Relative vapour density at 20 °C	Data not available
Relative density	1g/cm ³
Density	Data not available
Solubility	Data not available
Log Pow	Data not available
Viscosity, kinematic	Data not available
Viscosity, dynamic	Data not available
Explosive properties	Data not available
Oxidising properties	Data not available
Explosive limits	Data not available
9.2.	Other information
VOC content	

SECTION 10: Stability and reactivity

10.1	Reactivity
Stable under normal conditions.	
10.2	Chemical stability
Stable under normal conditions.	
10.3	Possibility of hazardous reactions
None known.	
10.4	Conditions to avoid
Data not available	
10.5	Incompatible materials
Strong oxidizing agents	
10.6	Hazardous decomposition products
Data not available	

SECTION 11: Toxicological information

11.1	Information on toxicological effects
Acute toxicity	Not classified
Skin corrosion/irritation	Not classified
Serious eye damage/irritation	Causes serious eye irritation.
Respiratory or skin sensitisation	Not classified
Germ cell mutagenicity	Not classified
Carcinogenicity	Not classified
Reproductive toxicity	Not classified
Specific target organ toxicity (single exposure)	May cause respiratory irritation.
Specific target organ toxicity (repeated exposure)	Not classified
Aspiration hazard	Not classified

SECTION 12: Ecological information

12.1	Toxicity
No additional information available	
12.2	Persistence and degradability
No additional information available	
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
No additional information available	
12.6	Other adverse effects
No additional information available	

SECTION 13: Disposal considerations

13.1	Waste treatment methods
Regional legislation (waste)	Dispose of this material and its container to hazardous or special waste collection point.
Waste treatment methods	Disposal through controlled incineration or authorised waste dump.
Sewage disposal recommendations	Prevent entry to sewers and public waters.

SECTION 14: Transport information

14.1	UN number
No dangerous good in sense of transport regulations	
14.2	UN proper shipping name
Not applicable	

14.3	Transport hazard class(es)	
	Not applicable	
14.4	Packing group	
	Not applicable	
14.5	Environmental hazards	
	Dangerous for the environment	No
	Marine pollutant	No
	Other information	No supplementary information available.
14.6	Special precautions for user	
	14.6.1. Overland transport	
	No additional information available	
	14.6.2. Transport by sea	
	No additional information available	
	14.6.3. Air transport	
	No additional information available	
	14.6.4. Inland waterway transport	
	No additional information available	
14.7	Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	
	Not applicable	
SECTION 15: Regulatory information		
15.1	Safety, health and environmental regulations/legislation specific for the substance or mixture	
	15.1.1. EU-Regulations	

15.1.2. National regulations

No additional information available

15.2 | Chemical safety assessment

SECTION 16: Other information