

MN-FX-R2B - DETERMINATION OF MANGANESE REAGENT 2B**SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING****1.1 Product identifier:** MN-FX-R2B - DETERMINATION OF MANGANESE REAGENT 2B

Formaldehyde

CAS: 50-00-0

EC: 200-001-8

Index: 605-001-00-5

REACH: 01-2119488953-20-XXXX

Other means of identification:

Not relevant

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

Relevant uses: Used in Spectrophotometry. For industrial user only.

Uses advised against: All uses not specified in this section or in section 7.3

1.3 Details of the supplier of the safety data sheet:

3S Analyzers Srl
Via Molino Nuovo 12
16036 Avegno - Ge - Italy
Phone: +390185799024
SDS@3s-analyzers.eu
www.3s-analyzers.eu

1.4 Emergency telephone number:**SECTION 2: HAZARDS IDENTIFICATION****2.1 Classification of the substance or mixture:****CLP Regulation (EC) No 1272/2008:**

Classification of this product has been carried out in accordance with CLP Regulation (EC) No 1272/2008.

Acute Tox. 3: Acute toxicity, Category 3, H301+H311+H331

Carc. 1B: Carcinogenicity, Category 1B, H350

Muta. 2: Germ cell mutagenicity, Category 2, H341

Skin Corr. 1B: Skin corrosion, Category 1B, H314

Skin Sens. 1: Sensitisation, skin, Category 1, H317

2.2 Label elements:**CLP Regulation (EC) No 1272/2008:****Danger****Hazard statements:**

Acute Tox. 3: H301+H311+H331 - Toxic if swallowed, in contact with skin or if inhaled.

Carc. 1B: H350 - May cause cancer.

Muta. 2: H341 - Suspected of causing genetic defects.

Skin Corr. 1B: H314 - Causes severe skin burns and eye damage.

Skin Sens. 1: H317 - May cause an allergic skin reaction.

Precautionary statements:

P280: Wear protective gloves/face protection/protective clothing/respiratory protection/protective footwear.

P301+P330+P331: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

P302+P352: IF ON SKIN: Wash with plenty of water.

P303+P361+P353: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.

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.

P308+P313: IF exposed or concerned: Get medical advice/attention.

P501: Dispose of contents/container in accordance with regulations on hazardous waste or packaging and packaging waste respectively.

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MN-FX-R2B - DETERMINATION OF MANGANESE REAGENT 2B**SECTION 2: HAZARDS IDENTIFICATION (continued)****Supplementary information:**

Contains Formaldehyde.

Additional Labelling:

Restricted to professional users


2.3 Other hazards:

Product does not meet PBT/vPvB criteria

Endocrine-disrupting properties: The product does not meet the criteria.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS**3.1 Substance:****Chemical description:** Mixture of substances**Components:**

In accordance with Annex II of Regulation (EC) No 1907/2006 (point 3), the product contains:

Identification	Chemical name/Classification		Concentration
CAS: 50-00-0 EC: 200-001-8 Index: 605-001-00-5 REACH: 01-2119488953-20-XXXX	Formaldehyde ATP ATP06		75 - <100 %
	Regulation 1272/2008	Acute Tox. 3: H301+H311+H331; Carc. 1B: H350; Muta. 2: H341; Skin Corr. 1B: H314; Skin Sens. 1: H317 - Danger 	

To obtain more information on the hazards of the substances consult sections 11, 12 and 16.

Other information:

Identification	Specific concentration limit
Formaldehyde CAS: 50-00-0 EC: 200-001-8	% (w/w) >=25: Skin Corr. 1B - H314 5<= % (w/w) <25: Skin Irrit. 2 - H315 % (w/w) >=25: Eye Dam. 1 - H318 5<= % (w/w) <25: Eye Irrit. 2 - H319 % (w/w) >=0,2: Skin Sens. 1 - H317 % (w/w) >=5: STOT SE 3 - H335

3.2 Mixture:

Non-applicable

Acute toxicity estimate for the substance in Part 3 of Annex VI to Regulation (EC) No 1272/2008 or as determined in accordance with Annex I to that Regulation:

Identification	Acute toxicity		Genus
Formaldehyde CAS: 50-00-0 EC: 200-001-8	LD50 oral	100 mg/kg	
	LD50 dermal	300 mg/kg	
	LC50 inhalation	3 mg/L (ATEi)	

SECTION 4: FIRST AID MEASURES**4.1 Description of first aid measures:**

Request medical assistance immediately, showing the SDS of this product.

By inhalation:

Remove the person affected from the area of exposure, provide with fresh air and keep at rest. In serious cases such as cardiorespiratory failure, artificial resuscitation techniques will be necessary (mouth to mouth resuscitation, cardiac massage, oxygen supply, etc.) requiring immediate medical assistance.

By skin contact:

Remove contaminated clothing and footwear, rinse skin or shower the person affected if appropriate with plenty of cold water and neutral soap. In serious cases see a doctor. If the product causes burns or freezing, clothing should not be removed as this could worsen the injury caused if it is stuck to the skin. If blisters form on the skin, these should never be burst as this will increase the risk of infection.

By eye contact:

MN-FX-R2B - DETERMINATION OF MANGANESE REAGENT 2B**SECTION 4: FIRST AID MEASURES (continued)**

Rinse eyes thoroughly with lukewarm water for at least 15 minutes. Do not allow the person affected to rub or close their eyes. If the injured person uses contact lenses, these should be removed unless they are stuck to the eyes, in which case this could cause further damage. In all cases, after cleaning, a doctor should be consulted as quickly as possible with the SDS of the product.

By ingestion/aspiration:

Request medical assistance immediately, showing the SDS of this product. Induce vomiting (ONLY IF PERSON IS CONSCIOUS!) and then ingest large quantities of liquid to dilute the toxin. Keep the person affected at rest.

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

Acute and delayed effects are indicated in sections 2 and 11.

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

Not relevant

SECTION 5: FIREFIGHTING MEASURES**5.1 Extinguishing media:****Suitable extinguishing media:**

Product is non-flammable under normal conditions of storage, handling and use. In the case of combustion as a result of improper handling, storage or use preferably use polyvalent powder extinguishers (ABC powder), in accordance with the Regulation on fire protection systems.

Unsuitable extinguishing media:

Non-applicable

5.2 Special hazards arising from the substance or mixture:

As a result of combustion or thermal decomposition reactive sub-products are created that can become highly toxic and, consequently, can present a serious health risk.

5.3 Advice for firefighters:

Depending on the magnitude of the fire it may be necessary to use full protective clothing and self-contained breathing apparatus (SCBA). Minimum emergency facilities and equipment should be available (fire blankets, portable first aid kit,...) in accordance with Directive 89/654/EC.

Additional provisions:

Act in accordance with the Internal Emergency Plan and the Information Sheets on actions to take after an accident or other emergencies. Eliminate all sources of ignition. In case of fire, cool the storage containers and tanks for products susceptible to combustion, explosion or BLEVE as a result of high temperatures. Avoid spillage of the products used to extinguish the fire into an aqueous medium.

SECTION 6: ACCIDENTAL RELEASE MEASURES**6.1 Personal precautions, protective equipment and emergency procedures:****For non-emergency personnel:**

Isolate leaks provided that there is no additional risk for the people performing this task. Personal protection equipment must be used against potential contact with the spilt product (See section 8). Evacuate the area and keep out those who do not have protection.

For emergency responders:

Wear protective equipment. Keep unprotected persons away. See section 8.

6.2 Environmental precautions:

This product is not classified as hazardous to the environment. Keep product away from drains, surface and ground water.

6.3 Methods and material for containment and cleaning up:

It is recommended:

Absorb the spillage using sand or inert absorbent and move it to a safe place. Do not absorb in sawdust or other combustible absorbents. For any concern related to disposal consult section 13.

6.4 Reference to other sections:

See sections 8 and 13.

MN-FX-R2B - DETERMINATION OF MANGANESE REAGENT 2B**SECTION 7: HANDLING AND STORAGE****7.1 Precautions for safe handling:****A.- General precautions for safe use**

Comply with the current legislation concerning the prevention of industrial risks. Keep containers hermetically sealed. Control spills and residues, destroying them with safe methods (section 6). Avoid leakages from the container. Maintain order and cleanliness where dangerous products are used.

B.- Technical recommendations for the prevention of fires and explosions

Product is non-flammable under normal conditions of storage, handling and use. It is recommended to transfer at slow speeds to avoid the generation of electrostatic charges that can affect flammable products. Consult section 10 for information on conditions and materials that should be avoided.

C.- Technical recommendations on general occupational hygiene

Do not eat or drink during the process, washing hands afterwards with suitable cleaning products.

D.- Technical recommendations to prevent environmental risks

It is recommended to have absorbent material available at close proximity to the product (See subsection 6.3)

7.2 Conditions for safe storage, including any incompatibilities:**A.- Technical measures for storage**

Minimum Temp.: 5 °C

Maximum Temp.: 20 °C

B.- General conditions for storage

Avoid sources of heat, radiation, static electricity and contact with food. For additional information see subsection 10.5

7.3 Specific end use(s):

Except for the instructions already specified it is not necessary to provide any special recommendation regarding the uses of this product.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**8.1 Control parameters:**

Substances whose occupational exposure limits have to be monitored in the workplace (European OEL, not country-specific legislation):

Directive (EU) 2000/39, Directive 2004/37/EC, Directive (EU) 2006/15, Directive (EU) 2009/161, Directive (EU) 2017/164, Directive (EU) 2019/1831:

Identification		Occupational exposure limits		
Formaldehyde ⁽¹⁾ CAS: 50-00-0 EC: 200-001-8		IOELV (8h)	0,3 ppm	0,37 mg/m ³
		IOELV (STEL)	0,6 ppm	0,74 mg/m ³

⁽¹⁾ Sensitising potential

DNEL (Workers):

Identification		Short exposure		Long exposure	
		Systemic	Local	Systemic	Local
Formaldehyde CAS: 50-00-0 EC: 200-001-8	Oral	Not relevant	Not relevant	Not relevant	Not relevant
	Dermal	Not relevant	Not relevant	240 mg/kg	Not relevant
	Inhalation	Not relevant	0,75 mg/m ³	9 mg/m ³	0,375 mg/m ³

DNEL (General population):

Identification		Short exposure		Long exposure	
		Systemic	Local	Systemic	Local
Formaldehyde CAS: 50-00-0 EC: 200-001-8	Oral	Not relevant	Not relevant	4,1 mg/kg	Not relevant
	Dermal	Not relevant	Not relevant	102 mg/kg	Not relevant
	Inhalation	Not relevant	Not relevant	3,2 mg/m ³	0,1 mg/m ³

PNEC:

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SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION (continued)

Identification				
Formaldehyde	STP	0,19 mg/L	Fresh water	0,44 mg/L
CAS: 50-00-0	Soil	0,2 mg/kg	Marine water	0,44 mg/L
EC: 200-001-8	Intermittent	4,44 mg/L	Sediment (Fresh water)	2,3 mg/kg
	Oral	Not relevant	Sediment (Marine water)	2,3 mg/kg



8.2 Exposure controls:

A.- Individual protection measures, such as personal protective equipment



In accordance with the order of importance to control professional exposure (Directive 98/24/EC) it is recommended to use localized extraction in the work area as a collective protection measure to avoid exceeding the occupational exposure limits. In case of using personal protective equipment it should have CE marking in accordance with Directive 2016/425/EC. For more information on Personal Protective Equipment (storage, use, cleaning, maintenance, class of protection,...) consult the information leaflet provided by the manufacturer. For additional information see subsection 7.1.

All information contained herein is a recommendation which needs some specification from the labour risk prevention services as it is not known whether the company has additional measures at its disposal.



B.- Respiratory protection

Pictogram	PPE	Labelling	CEN Standard	Remarks
 Mandatory respiratory tract protection	Filter mask for gases and vapours	 CAT III	EN 405:2002+A1:2010	Replace when there is a taste or smell of the contaminant inside the face mask. If the contaminant comes with warnings it is recommended to use isolation equipment.





C.- Specific protection for the hands

Pictogram	PPE	Labelling	CEN Standard	Remarks
 Mandatory hand protection	Chemical protective gloves (Material: Nitrile, Breakthrough time: > 480 min, Thickness: 0.4 mm)	 CAT III	EN ISO 21420:2020	Replace the gloves at any sign of deterioration.



D.- Eye and face protection

Pictogram	PPE	Labelling	CEN Standard	Remarks
 Mandatory face protection	Face shield	 CAT II	EN 166:2002 EN 167:2002 EN 168:2002 EN ISO 4007:2018	Clean daily and disinfect periodically according to the manufacturer's instructions. Use if there is a risk of splashing.

E.- Body protection

Pictogram	PPE	Labelling	CEN Standard	Remarks
 Mandatory complete body protection	Disposable clothing for protection against chemical risks	 CAT III	EN 13034:2005+A1:2009 EN 168:2002 EN ISO 13982-1:2004/A1:2010 EN ISO 6529:2013 EN ISO 6530:2005 EN 464:1994	For professional use only. Clean periodically according to the manufacturer's instructions.
 Mandatory foot protection	Safety footwear for protection against chemical risk	 CAT III	EN ISO 20345:2011 EN 13832-1:2019	Replace boots at any sign of deterioration.

F.- Additional emergency measures

Emergency measure	Standards	Emergency measure	Standards
 Emergency shower	ANSI Z358-1 ISO 3864-1:2011, ISO 3864-4:2011	 Eyewash stations	DIN 12 899 ISO 3864-1:2011, ISO 3864-4:2011

Environmental exposure controls:

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MN-FX-R2B - DETERMINATION OF MANGANESE REAGENT 2B**SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION (continued)**

In accordance with the community legislation for the protection of the environment it is recommended to avoid environmental spillage of both the product and its container. For additional information see subsection 7.1.D

Volatile organic compounds:

With regard to Directive 2010/75/EU, this product has the following characteristics:

V.O.C. (Supply):	100 % weight
V.O.C. density at 20 °C:	745,83 kg/m ³ (745,83 g/L)
Average carbon number:	1
Average molecular weight:	30 g/mol

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**9.1 Information on basic physical and chemical properties:**

For complete information see the product datasheet.

Appearance:

Physical state at 20 °C:	Liquid
Appearance:	Not available
Colour:	Not available
Odour:	Not available
Odour threshold:	Not relevant *

Volatility:

Boiling point at atmospheric pressure:	206 °C
Vapour pressure at 20 °C:	455933 Pa
Vapour pressure at 50 °C:	1112451,97 Pa (1112,45 kPa)
Evaporation rate at 20 °C:	Not relevant *

Product description:

Density at 20 °C:	745,8 kg/m ³
Relative density at 20 °C:	0,746
Dynamic viscosity at 20 °C:	0,14 cP
Kinematic viscosity at 20 °C:	0,19 mm ² /s
Kinematic viscosity at 40 °C:	Not relevant *
Concentration:	Not relevant *
pH:	Not relevant *
Vapour density at 20 °C:	Not relevant *
Partition coefficient n-octanol/water 20 °C:	Not relevant *
Solubility in water at 20 °C:	Not relevant *
Solubility properties:	Not relevant *
Decomposition temperature:	Not relevant *
Melting point/freezing point:	-92 °C

Flammability:

Flash Point:	Non Flammable (>60 °C)
Flammability (solid, gas):	Not relevant *
Autoignition temperature:	Not relevant *
Lower flammability limit:	7 % Volume
Upper flammability limit:	73 % Volume

Particle characteristics:

Median equivalent diameter:	Non-applicable
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*Not relevant due to the nature of the product, not providing information property of its hazards.

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MN-FX-R2B - DETERMINATION OF MANGANESE REAGENT 2B**SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES (continued)****9.2 Other information:****Information with regard to physical hazard classes:**

Explosive properties:	Not relevant *
Oxidising properties:	Not relevant *
Corrosive to metals:	Not relevant *
Heat of combustion:	17,54 kJ/g
Aerosols-total percentage (by mass) of flammable components:	Not relevant *

Other safety characteristics:

Surface tension at 20 °C:	Not relevant *
Refraction index:	Not relevant *

*Not relevant due to the nature of the product, not providing information property of its hazards.

SECTION 10: STABILITY AND REACTIVITY**10.1 Reactivity:**

No hazardous reactions are expected because the product is stable under recommended storage conditions. See section 7 from Safety Data Sheet.

10.2 Chemical stability:

Chemically stable under the indicated conditions of storage, handling and use.

10.3 Possibility of hazardous reactions:

Under the specified conditions, hazardous reactions that lead to excessive temperatures or pressure are not expected.

10.4 Conditions to avoid:

Applicable for handling and storage at room temperature:

Shock and friction	Contact with air	Increase in temperature	Sunlight	Humidity
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable

10.5 Incompatible materials:

Acids	Water	Oxidising materials	Combustible materials	Others
Avoid strong acids	Not applicable	Avoid direct impact	Not applicable	Avoid alkalis or strong bases

10.6 Hazardous decomposition products:

See subsection 10.3, 10.4 and 10.5 to find out the specific decomposition products. Depending on the decomposition conditions, complex mixtures of chemical substances can be released: carbon dioxide (CO₂), carbon monoxide and other organic compounds.

SECTION 11: TOXICOLOGICAL INFORMATION**11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008:****Dangerous health implications:**

In case of exposure that is repetitive, prolonged or at concentrations higher than the recommended occupational exposure limits, adverse effects on health may result, depending on the means of exposure:

A- Ingestion (acute effect):

- Acute toxicity: Can be fatal if consumed. For more information see section 2.
- Corrosivity/Irritability: Corrosive product, if it is swallowed causes burns destroying the tissues. For more information about secondary effects from skin contact see section 2.

B- Inhalation (acute effect):

- Acute toxicity : Inhalation after prolonged exposure may be lethal.
- Corrosivity/Irritability: Prolonged inhalation of the product is corrosive to mucous membranes and the upper respiratory tract

C- Contact with the skin and the eyes (acute effect):

- Contact with the skin: Can be fatal if the product is absorbed through the skin. For more information on the secondary effects of skin contact see section 2.
- Contact with the eyes: Produces serious eye damage after contact.

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MN-FX-R2B - DETERMINATION OF MANGANESE REAGENT 2B**SECTION 11: TOXICOLOGICAL INFORMATION (continued)****D- CMR effects (carcinogenicity, mutagenicity and toxicity to reproduction):**

- Carcinogenicity: Exposure to this product can cause cancer. For more specific information on the possible health effects see section 2.
IARC: Formaldehyde (1)
- Mutagenicity: Exposure to this product can cause genetic modifications. For more specific information on the possible health effects see section 2.
- Reproductive toxicity: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for this effect. For more information see section 3.

E- Sensitizing effects:

- Respiratory: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous with sensitising effects. For more information see section 3.
- Skin: Prolonged contact with the skin can result in episodes of allergic contact dermatitis.

F- Specific target organ toxicity (STOT) - single exposure:

Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for this effect. For more information see section 3.

G- Specific target organ toxicity (STOT)-repeated exposure:

- Specific target organ toxicity (STOT)-repeated exposure: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for this effect. For more information see section 3.
- Skin: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for this effect. For more information see section 3.

H- Aspiration hazard:

Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for this effect. For more information see section 3.

Other information:

Not relevant

Product-specific toxicological information:

Acute toxicity		Genus
LD50 oral	100 mg/kg	
LD50 dermal	300 mg/kg	

Specific toxicology information on the substances:

Identification	Acute toxicity		Genus
Formaldehyde CAS: 50-00-0 EC: 200-001-8	LD50 oral	100 mg/kg (ATEi)	
	LD50 dermal	300 mg/kg (ATEi)	
	LC50 inhalation	3 mg/L (ATEi)	

11.2 Information on other hazards:**Endocrine disrupting properties**

Endocrine-disrupting properties: The product does not meet the criteria.

Other information

Not relevant

SECTION 12: ECOLOGICAL INFORMATION

Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for this effect. For more information see section 3.

12.1 Toxicity:**Product-specific aquatic toxicity:**

Acute toxicity		Species	Genus
LC50	100 mg/L (96 h)	Non-applicable	Fish
EC50	42 mg/L (48 h)	Non-applicable	Crustacean

Substance-specific aquatic toxicity:**Acute toxicity:**

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SECTION 12: ECOLOGICAL INFORMATION (continued)

Identification	Concentration	Species	Genus
Formaldehyde	LC50 100 mg/L (96 h)	Lepomis macrochirus	Fish
CAS: 50-00-0	EC50 42 mg/L (24 h)	Daphnia magna	Crustacean
EC: 200-001-8	EC50 Not relevant		

Chronic toxicity:

Identification	Concentration	Species	Genus
Formaldehyde	NOEC Not relevant		
CAS: 50-00-0 EC: 200-001-8	NOEC 6,4 mg/L	Daphnia magna	Crustacean

12.2 Persistence and degradability:

Substance-specific information:

Identification	Degradability	Biodegradability
Formaldehyde	BOD5 Not relevant	Concentration 100 mg/L
CAS: 50-00-0	COD Not relevant	Period 14 days
EC: 200-001-8	BOD5/COD Not relevant	% Biodegradable 92 %

12.3 Bioaccumulative potential:

Substance-specific information:

Identification	Bioaccumulation potential
Formaldehyde	BCF 3
CAS: 50-00-0	Pow Log 0.35
EC: 200-001-8	Potential Low

12.4 Mobility in soil:

Identification	Absorption/desorption	Volatility
Formaldehyde	Koc Not relevant	Henry Not relevant
CAS: 50-00-0	Conclusion Not relevant	Dry soil Not relevant
EC: 200-001-8	Surface tension 1,416E-2 N/m (25 °C)	Moist soil Not relevant

12.5 Results of PBT and vPvB assessment:

Product does not meet PBT/vPvB criteria

12.6 Endocrine disrupting properties:

Endocrine-disrupting properties: The product does not meet the criteria.

12.7 Other adverse effects:

Not described

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods:

Code	Description	Waste class (Regulation (EU) No 1357/2014)
16 05 06*	laboratory chemicals, consisting of or containing hazardous substances, including mixtures of laboratory chemicals	Hazardous

Type of waste (Regulation (EU) No 1357/2014):

HP6 Acute Toxicity, HP7 Carcinogenic, HP11 Mutagenic, HP13 Sensitising, HP8 Corrosive

Waste management (disposal and evaluation):

Consult the authorized waste service manager on the assessment and disposal operations in accordance with Annex 1 and Annex 2 (Directive 2008/98/EC). As under 15 01 (2014/955/EC) of the code and in case the container has been in direct contact with the product, it will be processed the same way as the actual product. Otherwise, it will be processed as non-hazardous residue. Waste should not be disposed of to drains. See paragraph 6.2.

Regulations related to waste management:

In accordance with Annex II of Regulation (EC) No 1907/2006 (REACH) the community or state provisions related to waste management are stated

Community legislation: Directive 2008/98/EC, 2014/955/EU, Regulation (EU) No 1357/2014

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MN-FX-R2B - DETERMINATION OF MANGANESE REAGENT 2B**SECTION 14: TRANSPORT INFORMATION****Transport of dangerous goods by land:**

With regard to ADR 2023 and RID 2023:



- | | |
|--|-----------------------|
| 14.1 UN number or ID number: | UN2209 |
| 14.2 UN proper shipping name: | FORMALDEHYDE SOLUTION |
| 14.3 Transport hazard class(es): | 8 |
| Labels: | 8 |
| 14.4 Packing group: | III |
| 14.5 Environmental hazards: | No |
| 14.6 Special precautions for user | |
| Special regulations: | 533 |
| Tunnel restriction code: | E |
| Physico-Chemical properties: | see section 9 |
| Limited quantities: | 5 L |
| 14.7 Maritime transport in bulk according to IMO instruments: | Not relevant |

Transport of dangerous goods by sea:

With regard to IMDG 41-22:



- | | |
|--|-----------------------|
| 14.1 UN number or ID number: | UN2209 |
| 14.2 UN proper shipping name: | FORMALDEHYDE SOLUTION |
| 14.3 Transport hazard class(es): | 8 |
| Labels: | 8 |
| 14.4 Packing group: | III |
| 14.5 Marine pollutant: | No |
| 14.6 Special precautions for user | |
| Special regulations: | Not relevant |
| EmS Codes: | F-A, S-B |
| Physico-Chemical properties: | see section 9 |
| Limited quantities: | 5 L |
| Segregation group: | Not relevant |
| 14.7 Maritime transport in bulk according to IMO instruments: | Not relevant |

Transport of dangerous goods by air:

With regard to IATA/ICAO 2024:



- | | |
|--|-----------------------|
| 14.1 UN number or ID number: | UN2209 |
| 14.2 UN proper shipping name: | FORMALDEHYDE SOLUTION |
| 14.3 Transport hazard class(es): | 8 |
| Labels: | 8 |
| 14.4 Packing group: | III |
| 14.5 Environmental hazards: | No |
| 14.6 Special precautions for user | |
| Physico-Chemical properties: | see section 9 |
| 14.7 Maritime transport in bulk according to IMO instruments: | Not relevant |

SECTION 15: REGULATORY INFORMATION**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture:**

- Article 95, REGULATION (EU) No 528/2012: *Formaldehyde (50-00-0) - PT: (2,3,22)*
- Candidate substances for authorisation under the Regulation (EC) No 1907/2006 (REACH): Not relevant
- Regulation (EC) No 1005/2009, about substances that deplete the ozone layer: Not relevant
- REGULATION (EU) No 649/2012, in relation to the import and export of hazardous chemical products: Not relevant
- Substances included in Annex XIV of REACH ("Authorisation List") and sunset date: Not relevant

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MN-FX-R2B - DETERMINATION OF MANGANESE REAGENT 2B**SECTION 15: REGULATORY INFORMATION (continued)****Seveso III:**

Section	Description	Lower-tier requirements	Upper-tier requirements
H2	ACUTE TOXIC	50	200

Limitations to commercialisation and the use of certain dangerous substances and mixtures (Annex XVII REACH, etc):

Product classified hazardous under the CMR. Sale and distribution to the general public is prohibited. Due to its CMR category, it is essential to apply the specific measures for workplace hazard prevention covered in articles 4 and 5 of the 2004/37/EC Directive and later modifications.

Shall not be used in:

- ornamental articles intended to produce light or colour effects by means of different phases, for example in ornamental lamps and ashtrays,
- tricks and jokes,
- games for one or more participants, or any article intended to be used as such, even with ornamental aspects.

Specific provisions in terms of protecting people or the environment:

It is recommended to use the information included in this safety data sheet as a basis for conducting workplace-specific risk assessments in order to establish the necessary risk prevention measures for the handling, use, storage and disposal of this product.

Other legislation:

The product could be affected by sectorial legislation

15.2 Chemical safety assessment:

The supplier has not carried out evaluation of chemical safety.

SECTION 16: OTHER INFORMATION**Legislation related to safety data sheets:**

The SDS shall be supplied in an official language of the country where the product is placed on the market. This safety data sheet has been designed in accordance with ANNEX II-Guide to the compilation of safety data sheets of Regulation (EC) No 1907/2006 (COMMISSION REGULATION (EU) 2020/878).

Modifications related to the previous Safety Data Sheet which concerns the ways of managing risks.:

Not relevant

Texts of the legislative phrases mentioned in section 2:

H301+H311+H331: Toxic if swallowed, in contact with skin or if inhaled.

H317: May cause an allergic skin reaction.

H341: Suspected of causing genetic defects.

H350: May cause cancer.

H314: Causes severe skin burns and eye damage.

Texts of the legislative phrases mentioned in section 3:

The phrases indicated do not refer to the product itself; they are present merely for informative purposes and refer to the individual components which appear in section 3

CLP Regulation (EC) No 1272/2008:

Acute Tox. 3: H301+H311+H331 - Toxic if swallowed, in contact with skin or if inhaled.

Carc. 1B: H350 - May cause cancer.

Muta. 2: H341 - Suspected of causing genetic defects.

Skin Corr. 1B: H314 - Causes severe skin burns and eye damage.

Skin Sens. 1: H317 - May cause an allergic skin reaction.

Advice related to training:

Training is recommended in order to prevent industrial risks for staff using this product and to facilitate their comprehension and interpretation of this safety data sheet, as well as the label on the product.

Principal bibliographical sources:

<http://echa.europa.eu>

<http://eur-lex.europa.eu>

Abbreviations and acronyms:

Safety data sheet

This SDS is an English translation of COMMISSION REGULATION (EU) 2020/878, without any country-specific legislation

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SECTION 16: OTHER INFORMATION (continued)

ADR: European agreement concerning the international carriage of dangerous goods by road
IMDG: International maritime dangerous goods code
IATA: International Air Transport Association
ICAO: International Civil Aviation Organisation
COD: Chemical Oxygen Demand
BOD5: 5day biochemical oxygen demand
BCF: Bioconcentration factor
LD50: Lethal Dose 50
LC50: Lethal Concentration 50
EC50: Effective concentration 50
LogPOW: Octanolwater partition coefficient
Koc: Partition coefficient of organic carbon
UFI: unique formula identifier
IARC: International Agency for Research on Cancer

The information contained in this safety data sheet is based on sources, technical knowledge and current legislation at European and state level, without being able to guarantee its accuracy. This information cannot be considered a guarantee of the properties of the product, it is simply a description of the security requirements. The occupational methodology and conditions for users of this product are not within our awareness or control, and it is ultimately the responsibility of the user to take the necessary measures to obtain the legal requirements concerning the manipulation, storage, use and disposal of chemical products. The information on this safety data sheet only refers to this product, which should not be used for needs other than those specified.

- END OF SAFETY DATA SHEET -