



SAFETY DATA SHEET

MATERION

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

1.1. Product identifier

Name of the substance	Manganese oxide (MnO ₂)
Identification number	025-001-00-3 (Index number)
Synonyms	manganese dioxide
Document number	1WS
Materion Code	1WS
Issue date	26-May-2015
Version number	04
Revision date	12-January-2018
Supersedes date	17-January-2017

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

Identified uses	Not available.
Uses advised against	None known.

1.3. Details of the supplier of the safety data sheet

Supplier

Company name	Materion Advanced Chemicals Inc.
Address	407 N. 13th Street 1316 W. St. Paul Avenue Milwaukee, WI 53233 United States
Division	Milwaukee
Telephone	414.212.0257
e-mail	advancedmaterials@materion.com
Contact person	Noreen Atkinson

1.4. Emergency telephone number

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

The product has been assessed and/or tested for its physical, health and environmental hazards following the regulations ABN1 NBR 14725-4: (Safety data sheet for chemicals (SDS)) (Aug. 26, 2009) The substance has been assessed and/or tested for its physical, health and environmental hazards and the following classification applies. According to GHS criteria.

Classification according to Regulation (EC) No 1272/2008 as amended

Physical hazards

Oxidising solids	Category 3	H272 - May intensify fire; oxidiser.
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Health hazards

Acute toxicity, oral	Category 4
Acute toxicity, inhalation	Category 4

Hazard summary

DANGER

DANGER--OXIDIZER

Oxidising material. Contact with combustible material may cause fire.

Harmful if inhaled. Harmful by inhalation and if swallowed. Causes serious eye irritation. Causes mild skin irritation. May cause irritation to the respiratory system. Causes damage to organs.

2.2. Label elements

Label according to Regulation (EC) No. 1272/2008 as amended

Contains:	Manganese oxide
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Hazard pictograms



Signal word

Danger

Hazard statements

H272	May intensify fire; oxidiser.
H302 + H332	Harmful if swallowed or if inhaled
H316	Causes mild skin irritation.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
H370	Causes damage to organs ().
H372	Causes damage to organs (respiratory system) through prolonged or repeated exposure

Precautionary statements

Prevention

P210	Keep away from heat.
P221	Take any precaution to avoid mixing with combustibles.
P261	Avoid breathing dust/fume.
P264	Wash thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P271	Use only outdoors or in a well-ventilated area.
P280	Wear protective gloves/eye protection/face protection.

Response

P301 + P312	IF SWALLOWED: Call a POISON CENTRE/doctor if you feel unwell.
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.
P311	Call a poison centre/doctor.
P321	Specific treatment (see this label).
P330	Rinse mouth.
P332 + P313	If skin irritation occurs: Get medical advice/attention.
P337 + P313	If eye irritation persists: Get medical advice/attention.
P370 + P378	In case of fire: Use appropriate media to extinguish.

Storage

P403 + P233	Store in a well-ventilated place. Keep container tightly closed.
P405	Store locked up.

Disposal

P501	Dispose of contents/container in accordance with local/regional/national/international regulations.
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Supplemental label information

None.

2.3. Other hazards

The Safety Information Sheet Chemicals of hazardous chemical can be obtained through phone, email or on the company website.

SECTION 3: Composition/information on ingredients

3.1. Substances

General information

Chemical name	%	CAS-No. / EC No.	REACH Registration No.	INDEX No.	Notes
Manganese oxide	90 - 100	1313-13-9 215-202-6	-	025-001-00-3	
Classification:	Ox. Sol. 3;H272, STOT SE 3;H335, STOT SE 1;H370, STOT RE 1;H372				

List of abbreviations and symbols that may be used above

CLP: Regulation No. 1272/2008.

DSD: Directive 67/548/EEC.

M: M-factor

vPvB: very persistent and very bioaccumulative substance.

PBT: persistent, bioaccumulative and toxic substance.

*Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret. #: This substance has been assigned Community workplace exposure limit(s).

Composition comments

The full text for all R- and H-phrases is displayed in section 16.

SECTION 4: First aid measures

General information

Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. In the case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). If you feel unwell, seek medical advice (show the label where possible). Show this safety data sheet to the doctor in attendance. In case of shortness of breath, give oxygen. Keep victim warm. Keep victim under observation.

4.1. Description of first aid measures

Inhalation

Remove victim to fresh air and keep at rest in a position comfortable for breathing. Move to fresh air. Oxygen or artificial respiration if needed. Do not use mouth-to-mouth method if victim inhaled the substance. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Call a physician or poison control centre immediately.

Skin contact

Before washing use a dry brush to remove dust from skin. Remove and isolate contaminated clothing and shoes. Immediately flush skin with plenty of water. Wash off with warm water and soap. Get medical attention immediately. For minor skin contact, avoid spreading material on unaffected skin. Wash clothing separately before reuse.

Eye contact

Immediately flush eyes with plenty of water for at least 15 minutes. Rinse cautiously with water for several minutes. Flush eyes with water as a precaution. If a contact lens is present, DO NOT delay irrigation or attempt to remove the lens. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention immediately.

Ingestion

IF SWALLOWED: Immediately call a POISON CENTRE or doctor/physician. If swallowed, seek medical advice immediately and show this container or label. IF SWALLOWED: Call a POISON CENTRE or doctor/physician if you feel unwell. Rinse mouth. Rinse mouth thoroughly. Never give anything by mouth to a victim who is unconscious or is having convulsions. Do not induce vomiting without advice from poison control center. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs. Do not use mouth-to-mouth method if victim ingested the substance. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. If ingestion of a large amount does occur, call a poison control centre immediately.

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

Irritation of eyes and mucous membranes. Narcosis. Decrease in motor functions. Behavioural changes. Prolonged exposure may cause chronic effects.

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

Provide general supportive measures and treat symptomatically. Treat symptomatically. In case of shortness of breath, give oxygen. Oxygen, if needed. Keep victim warm. Keep victim under observation. Symptoms may be delayed.

SECTION 5: Firefighting measures

General fire hazards

No unusual fire or explosion hazards noted.

5.1. Extinguishing media

Suitable extinguishing media

Water.

Unsuitable extinguishing media

None known.

5.2. Special hazards arising from the substance or mixture

Fire may produce irritating, corrosive and/or toxic gases. Container may explode in heat of fire.

5.3. Advice for firefighters

Special protective equipment for firefighters

Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA. Firefighters should wear full protective clothing including self contained breathing apparatus. Structural firefighters protective clothing will only provide limited protection. Wear suitable protective equipment.

Special firefighting procedures

Do not move cargo or vehicle if cargo has been exposed to heat. If tank, rail car or tank truck is involved in a fire, ISOLATE for 800 meters (1/2 mile) in all directions; also consider initial evacuation for 800 meters (1/2 mile) in all directions. ALWAYS stay away from tanks engulfed in flame. In the event of fire, cool tanks with water spray. Move containers from fire area if you can do so without risk. For massive fire in cargo area, use unmanned hose holder or monitor nozzles, if possible. If not, withdraw and let fire burn out.

Specific methods

Cool containers exposed to flames with water until well after the fire is out.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Local authorities should be advised if significant spillages cannot be contained. Isolate spill or leak area immediately for at least 50 to 100 meters (150 to 330 feet) in all directions. Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep out of low areas. Wear appropriate protective equipment and clothing during clean-up. Fully encapsulating, vapour protective clothing should be worn for spills and leaks with no fire. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them.

For emergency responders

Keep unnecessary personnel away. Use personal protection recommended in Section 8 of the SDS.

6.2. Environmental precautions

Avoid discharge into drains, water courses or onto the ground. Runoff from fire control or dilution water may cause pollution.

6.3. Methods and material for containment and cleaning up

Stop the flow of material, if this is without risk. Dike far ahead of spill for later disposal. Prevent entry into waterways, sewer, basements or confined areas. Following product recovery, flush area with water. For waste disposal, see section 13 of the SDS.

6.4. Reference to other sections

For personal protection, see section 8 of the SDS. For waste disposal, see section 13 of the SDS.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

DO NOT handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. Minimise dust generation and accumulation. Keep away from clothing and other combustible materials. Do not breathe dust/fume/gas/mist/vapors/spray. Do not get this material in contact with eyes. Do not get this material in contact with skin. Do not taste or swallow. Avoid prolonged exposure. Do not get this material on clothing. Use only outdoors or in a well-ventilated area. Wear personal protective equipment. When using, do not eat, drink or smoke. Wash thoroughly after handling.

7.2. Conditions for safe storage, including any incompatibilities

CAUTION

Keep away from heat and sources of ignition. Store in a closed container away from incompatible materials. Store in a cool, dry place out of direct sunlight. Store in a well-ventilated place. Keep container dry. Do not store near combustible materials. Keep out of the reach of children.

7.3. Specific end use(s)

Not available.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits

Austria. MAK List, OEL Ordinance (GwV), BGBl. II, no. 184/2001

Material	Type	Value	Form
Manganese oxide (CAS 1313-13-9)	MAK	0,5 mg/m ³	Inhalable fraction.
	STEL	2 mg/m ³	Inhalable fraction.

Belgium. Exposure Limit Values.

Material	Type	Value
Manganese oxide (CAS 1313-13-9)	TWA	0,2 mg/m ³

Bulgaria. OELs. Regulation No 13 on protection of workers against risks of exposure to chemical agents at work

Material	Type	Value
Manganese oxide (CAS 1313-13-9)	STEL	3 mg/m ³
	TWA	0,3 mg/m ³

Croatia. Dangerous Substance Exposure Limit Values in the Workplace (ELVs), Annexes 1 and 2, Narodne Novine, 13/09

Material	Type	Value
Manganese oxide (CAS 1313-13-9)	MAC	0,5 mg/m ³

Cyprus. OELs. Control of factory atmosphere and dangerous substances in factories regulation, PI 311/73, as amended.

Material	Type	Value
Manganese oxide (CAS 1313-13-9)	TWA	5 mg/m ³

Czech Republic. OELs. Government Decree 361

Material	Type	Value
Manganese oxide (CAS 1313-13-9)	Ceiling	2 mg/m ³
	TWA	1 mg/m ³

Denmark. Exposure Limit Values

Material	Type	Value
Manganese oxide (CAS 1313-13-9)	TLV	0,2 mg/m ³

Estonia. OELs. Occupational Exposure Limits of Hazardous Substances. (Annex of Regulation No. 293 of 18 September 2001)

Material	Type	Value	Form
Manganese oxide (CAS 1313-13-9)	TWA	0,2 mg/m ³	Total dust.
		0,1 mg/m ³	Respirable dust.

Finland. Workplace Exposure Limits

Material	Type	Value	Form
Manganese oxide (CAS 1313-13-9)	TWA	0,02 mg/m ³	Respirable.

Germany. DFG MAK List (advisory OELs). Commission for the Investigation of Health Hazards of Chemical Compounds in the Work Area (DFG)

Material	Type	Value	Form
Manganese oxide (CAS 1313-13-9)	TWA	0,2 mg/m ³	Inhalable fraction.
		0,02 mg/m ³	Respirable fraction.

Germany. TRGS 900, Limit Values in the Ambient Air at the Workplace

Material	Type	Value	Form
Manganese oxide (CAS 1313-13-9)	AGW	0,5 mg/m ³	Inhalable fraction.

Greece. OELs (Decree No. 90/1999, as amended)

Material	Type	Value
Manganese oxide (CAS 1313-13-9)	TWA	5 mg/m ³

Iceland. OELs. Regulation 154/1999 on occupational exposure limits

Material	Type	Value	Form
Manganese oxide (CAS 1313-13-9)	STEL	5 mg/m ³	Total dust.
	TWA	2,5 mg/m ³	Total dust.
		1 mg/m ³	Respirable dust.

Ireland. Occupational Exposure Limits

Material	Type	Value
Manganese oxide (CAS 1313-13-9)	TWA	0,2 mg/m ³

Italy. Occupational Exposure Limits

Material	Type	Value	Form
Manganese oxide (CAS 1313-13-9)	TWA	0,1 mg/m ³	Inhalable fraction.
		0,02 mg/m ³	Respirable fraction.

Latvia. OELs. Occupational exposure limit values of chemical substances in work environment

Material	Type	Value	Form
Manganese oxide (CAS 1313-13-9)	TWA	0,3 mg/m ³	Decomposition aerosol.

Lithuania. OELs. Limit Values for Chemical Substances, General Requirements

Material	Type	Value	Form
Manganese oxide (CAS 1313-13-9)	TWA	1 mg/m ³	Inhalable fraction.
		0,5 mg/m ³	Respirable fraction.

Norway. Administrative Norms for Contaminants in the Workplace

Material	Type	Value	Form
Manganese oxide (CAS 1313-13-9)	TLV	1 mg/m ³	Inhalable fraction.
		0,1 mg/m ³	Respirable fraction.

Poland. MACs. Regulation regarding maximum permissible concentrations and intensities of harmful factors in the work environment, Annex 1

Material	Type	Value	Form
Manganese oxide (CAS 1313-13-9)	TWA	0,2 mg/m ³	Inhalable fraction.
		0,05 mg/m ³	Respirable fraction.

Portugal. VLEs. Norm on occupational exposure to chemical agents (NP 1796)

Material	Type	Value
Manganese oxide (CAS 1313-13-9)	TWA	0,2 mg/m ³

Slovakia. OELs. Regulation No. 300/2007 concerning protection of health in work with chemical agents

Material	Type	Value
Manganese oxide (CAS 1313-13-9)	TWA	0,5 mg/m ³

Slovenia. OELs. Regulations concerning protection of workers against risks due to exposure to chemicals while working (Official Gazette of the Republic of Slovenia)

Material	Type	Value	Form
Manganese oxide (CAS 1313-13-9)	TWA	0,5 mg/m ³	Inhalable fraction.

Spain. Occupational Exposure Limits

Material	Type	Value
Manganese oxide (CAS 1313-13-9)	TWA	0,2 mg/m ³

Sweden. OELs. Work Environment Authority (AV), Occupational Exposure Limit Values (AFS 2015:7)

Material	Type	Value	Form
Manganese oxide (CAS 1313-13-9)	TWA	0,2 mg/m ³	Total dust.
		0,1 mg/m ³	Respirable dust.

Switzerland. SUVA Grenzwerte am Arbeitsplatz

Material	Type	Value	Form
Manganese oxide (CAS 1313-13-9)	TWA	0,5 mg/m ³	Inhalable dust.

UK. EH40 Workplace Exposure Limits (WELs)

Material	Type	Value
Manganese oxide (CAS 1313-13-9)	TWA	0,5 mg/m ³

Biological limit values**Switzerland. BAT-Werte (Biological Limit Values in the Workplace as per SUVA)**

Material	Value	Determinant	Specimen	Sampling time
Manganese oxide (CAS 1313-13-9)	20 µg/l	Mangan	Blood	*

* - For sampling details, please see the source document.

Recommended monitoring procedures Follow standard monitoring procedures.

Derived no effect levels (DNELs) Not available.

Predicted no effect concentrations (PNECs) Not available.

8.2. Exposure controls

Appropriate engineering controls Ensure adequate ventilation, especially in confined areas. Provide eyewash station.

Individual protection measures, such as personal protective equipment

General information	Eye wash fountain is recommended.
Eye/face protection	Chemical goggles are recommended. Face-shield. Eye wash fountain is recommended.
Skin protection	
- Hand protection	Wear protective gloves. Not normally needed.
- Other	Wear protective gloves. Wear chemical protective equipment that is specifically recommended by the manufacturer. It may provide little or no thermal protection. Personal protection equipment should be chosen according to the CEN standards and in discussion with the supplier of the personal protective equipment. Normal work clothing (long sleeved shirts and long pants) is recommended.
Respiratory protection	Wear positive pressure self-contained breathing apparatus (SCBA).
Thermal hazards	Not available.
Hygiene measures	When using, do not eat, drink or smoke. Avoid contact with eyes. Avoid contact with skin. Wash hands before breaks and immediately after handling the product. Handle in accordance with good industrial hygiene and safety practices.
Environmental exposure controls	Not available.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance

Physical state	Solid.
Form	Solid.
Colour	Not available.
Odour	Not available.
Odour threshold	Not available.
pH	Not available.
Melting point/freezing point	Not available.
Initial boiling point and boiling range	Not available.
Flash point	Not available.
Evaporation rate	Not available.
Flammability (solid, gas)	Not available.

Upper/lower flammability or explosive limits

Flammability limit - lower (%)	Not available.
Flammability limit - upper (%)	Not available.

Vapour pressure	Not available.
Vapour density	Not available.
Relative density	Not available.

Solubility(ies)

Solubility (water)	Not available.
Partition coefficient (n-octanol/water)	Not available.

Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	Not available.
Explosive properties	Not available.
Oxidising properties	Not available.

9.2. Other information

Molecular formula	MnO2
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SECTION 10: Stability and reactivity

10.1. Reactivity	Not available.
10.2. Chemical stability	Unstable. Risk of ignition. Decomposes on heating.

10.3. Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use. Hazardous polymerisation does not occur.
10.4. Conditions to avoid	None under normal conditions. Heat, flames and sparks.
10.5. Incompatible materials	None known.
10.6. Hazardous decomposition products	No hazardous decomposition products are known.

SECTION 11: Toxicological information

General information Occupational exposure to the substance or mixture may cause adverse effects.

Information on likely routes of exposure

Inhalation	Harmful if inhaled.
Skin contact	Causes mild skin irritation. Frequent or prolonged contact may defat and dry the skin, leading to discomfort and dermatitis.
Eye contact	Causes serious eye irritation.
Ingestion	Harmful if swallowed.

Symptoms Narcosis. Behavioural changes. Decrease in motor functions. Irritant effects.

11.1. Information on toxicological effects

Acute toxicity	Harmful if inhaled. Harmful if swallowed. May cause respiratory irritation.
Skin corrosion/irritation	Causes mild skin irritation.
Serious eye damage/eye irritation	Causes serious eye irritation.
Respiratory sensitisation	Due to lack of data the classification is not possible.
Skin sensitisation	Frequent or prolonged contact may defat and dry the skin, leading to discomfort and dermatitis. Due to lack of data the classification is not possible.
Germ cell mutagenicity	Due to lack of data the classification is not possible.
Carcinogenicity	This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.

Hungary. 26/2000 EüM Ordinance on protection against and preventing risk relating to exposure to carcinogens at work (as amended)

Not listed.

Reproductive toxicity	Due to lack of data the classification is not possible.
Specific target organ toxicity - single exposure	Respiratory tract irritation. Causes damage to organs ().
Specific target organ toxicity - repeated exposure	Causes damage to organs () through prolonged or repeated exposure.
Aspiration hazard	Due to lack of data the classification is not possible.
Mixture versus substance information	Not available.
Other information	Not available.

SECTION 12: Ecological information

12.1. Toxicity	No toxicity data noted for the ingredient(s).
12.2. Persistence and degradability	No data is available on the degradability of this product.
12.3. Bioaccumulative potential	Not available.
Partition coefficient n-octanol/water (log Kow)	Not available.
Bioconcentration factor (BCF)	Not available.
12.4. Mobility in soil	Not available.
12.5. Results of PBT and vPvB assessment	Not a PBT or vPvB substance or mixture.
12.6. Other adverse effects	Not available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Residual waste	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions). Avoid discharge into water courses or onto the ground.
Contaminated packaging	Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.
EU waste code	The Waste code should be assigned in discussion between the user, the producer and the waste disposal company. Waste codes should be assigned by the user based on the application for which the product was used.
Disposal methods/information	Contract with a disposal operator licensed by the Law on Disposal and Cleaning. This material and its container must be disposed of as hazardous waste. Incinerate the material under controlled conditions in an approved incinerator. Must be incinerated in a suitable incineration plant holding a permit delivered by the competent authorities. Do not incinerate sealed containers. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. If discarded, this product is considered a RCRA ignitable waste, D001. Dispose of contents/container in accordance with local/regional/national/international regulations. Dispose of contents/container (in accordance with related regulations). Collect entire waste and then charge to a licensed industrial waste management professional with manifests for industrial waste.

SECTION 14: Transport information

ADR

14.1. UN number	UN1479
14.2. UN proper shipping name	Oxidizing solid, n.o.s.
14.3. Transport hazard class(es)	
Class	5.1
Subsidiary risk	-
Label(s)	5.1
Hazard No. (ADR)	Not available.
Tunnel restriction code	Not available.
14.4. Packing group	III
14.5. Environmental hazards	No.
14.6. Special precautions for user	Not available.

RID

14.1. UN number	UN1479
14.2. UN proper shipping name	Oxidizing solid, n.o.s.
14.3. Transport hazard class(es)	
Class	5.1
Subsidiary risk	-
Label(s)	5.1
14.4. Packing group	III
14.5. Environmental hazards	No.
14.6. Special precautions for user	Not available.

ADN

14.1. UN number	UN1479
14.2. UN proper shipping name	Oxidizing solid, n.o.s.
14.3. Transport hazard class(es)	
Class	5.1
Subsidiary risk	-
Label(s)	5.1
14.4. Packing group	III
14.5. Environmental hazards	No.
14.6. Special precautions for user	Not available.

IATA

14.1. UN number	UN1479
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14.2. UN proper shipping name Oxidizing solid, n.o.s.

14.3. Transport hazard class(es)

Class 5.1

Subsidiary risk -

14.4. Packing group III

14.5. Environmental hazards No.

ERG Code 5L

14.6. Special precautions for user Not available.

Other information

Passenger and cargo aircraft Allowed with restrictions.

Cargo aircraft only Allowed with restrictions.

IMDG

14.1. UN number UN1479

14.2. UN proper shipping name OXIDIZING SOLID, N.O.S.

14.3. Transport hazard class(es)

Class 5.1

Subsidiary risk -

14.4. Packing group III

14.5. Environmental hazards

Marine pollutant No.

EmS F-A, S-Q

14.6. Special precautions for user Not available.

ADN; ADR; IATA; IMDG; RID



SECTION 15: Regulatory information

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

EU regulations

Regulation (EC) No. 1005/2009 on substances that deplete the ozone layer, Annex I and II, as amended
Not listed.

Regulation (EC) No. 850/2004 On persistent organic pollutants, Annex I as amended
Not listed.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 1 as amended
Not listed.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 2 as amended
Not listed.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 3 as amended
Not listed.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex V as amended
Not listed.

Regulation (EC) No. 166/2006 Annex II Pollutant Release and Transfer Registry, as amended
Not listed.

Regulation (EC) No. 1907/2006, REACH Article 59(10) Candidate List as currently published by ECHA
Not listed.

Authorisations

Regulation (EC) No. 1907/2006, REACH Annex XIV Substances subject to authorization, as amended

Not listed.

Restrictions on use

Regulation (EC) No. 1907/2006, REACH Annex XVII Substances subject to restriction on marketing and use as amended

Not listed.

Directive 2004/37/EC: on the protection of workers from the risks related to exposure to carcinogens and mutagens at work, as amended.

Not listed.

Other EU regulations

Directive 2012/18/EU on major accident hazards involving dangerous substances, as amended

Not listed.

Other regulations

The product is classified and labelled in accordance with EC directives or respective national laws. This Safety Data Sheet complies with the requirements of Regulation (EC) No 1907/2006.

National regulations

Not available.

15.2. Chemical safety assessment

No Chemical Safety Assessment has been carried out.

SECTION 16: Other information

List of abbreviations

Not available.

Information on evaluation method leading to the classification of mixture

Not available.

Further information

HMIS® is a registered trade and service mark of the NPCA.

Disclaimer

Additional information is given in the Material Safety Data Sheet.

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