

Iron Rich Material

IRM

SDS Revision Date (dd/mm/yyyy): 16/02/2018

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SAFETY DATA SHEET

This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006, as amended.

SECTION 1. IDENTIFICATION OF THE SUBSTANCE / MIXTURE AND OF THE COMPANY / UNDERTAKING

1.1 Product identifier : **Iron Rich Material**

Product Code(s) : IRM

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

: Aggregate; Water filtration; Cement making.
Use pattern: professional use
No restrictions on use known.

1.3 Details of the supplier of the safety data sheet:

American Zinc Recycling

4955 Steubenville Pike, Suite 405

Pittsburgh, Pennsylvania, USA

15205

Email: info@azr.com

Website: <http://azr.com/american-zinc>

Telephone : +1 (724) 773-2223

1.4 Emergency Telephone Number

: +1 (703) 527-3887 (Chemtrec - U.S.)

SECTION 2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Black solid (slag-like granules). No odour.

Most important hazards:

Continuous long-term exposure above the permissible exposure limits are suspected to cause nervous system damage with neurological effects. Occupational exposure to the substance or mixture may cause adverse effects. For further information, please refer to section 11 of the SDS.

This mixture is classified as hazardous in accordance with Regulation (EC) No 1272/2008. Classification:

Specific target organ toxicity, repeated exposure - Category 2; H373

2.2 Label elements

Hazard pictogram(s)



Hazardous components which must be listed on the label:

Manganese oxide

Signal word:

Warning!

Hazard statements:

H373 - May cause damage to organs through prolonged or repeated exposure if inhaled.

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Precautionary statements:

- P260 - Do not breathe dust or fumes.
- P314 - Get medical advice/attention if you feel unwell.
- P501 - Dispose of contents/container in accordance with local regulation.

Supplemental Hazard Statements:

None required according to Regulation (EC) No. 1272/2008.

2.3 Other hazards

Other hazards which do not result in classification:

Mild respiratory irritant. May cause gastrointestinal irritation. Iron particles in the eye may leave a "rust ring" or brownish stain on the cornea.

PBT assessment:

This mixture contains no substance(s) above reportable levels which are considered to be persistent, bioaccumulating nor toxic (PBT), or very persistent and very bioaccumulating (vPvB).

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Not applicable

3.2 Mixtures

High Temperature Metal Recovery (HTMR) product. Contains inorganic substances in granular form.

The following substances shall be indicated according to legislation:

Chemical name	CAS #	EC No.	Concentration	CLP Classification
Wüstite	1345-25-1	215-721-8	38.0 - 48.0	Not hazardous (self classified)
Magnetite	1317-61-9	215-277-5	20.0 - 30.0	Not hazardous (self classified)
Forsterite	15118-03-3	239-169-2	5.0 - 20.0	Not hazardous (self classified)
Akermanite	14567-90-9	Not specifically listed.	5.0 - 20.0	Not hazardous (self classified)
Iron	7439-89-6	231-096-4	4.0 - 8.0	Not hazardous (self classified)
Gehlenite	1302-56-3	Not specifically listed.	2.0 - 7.5	Not hazardous (self classified)
Manganese oxide	1344-43-0	215-695-8	4.0 - 6.0	STOT RE 1; H372 (self classified)
Franklinite	12063-19-3	235-052-5	0.3 - 2.5	Not hazardous (self classified)

For the full text of the H phrases not mentioned in this Section or in Section 2, see Section 16.

SECTION 4. FIRST-AID MEASURES

4.1 Description of first aid measures

- Ingestion* : Do NOT induce vomiting. Rinse mouth. Never give anything by mouth to an unconscious person. When symptoms persist or in all cases of doubt, seek medical advice.
- Inhalation* : If inhaled, move to fresh air. If breathing is difficult, give oxygen by qualified medical personnel only. If breathing stops, provide artificial respiration. Get medical advice/attention if you feel unwell.
- Skin contact* : For skin contact, wash with soap and water while removing contaminated clothing. Get medical advice/attention if you feel unwell. Launder clothing before reuse.

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Eye contact : Rinse immediately with plenty of water, also under the eyelids. Get medical advice/attention if you feel unwell.

4.2 Most important symptoms and effects, both acute and delayed

- : May cause damage to organs through prolonged or repeated exposure if inhaled. This product contains Manganese compounds. Manganese can attack the central nervous system, causing symptom's similar to Parkinson's Disease. Chronic manganese exposures can lead to neurological problems such as apathy, drowsiness, weakness, spastic gait, paralysis, and other neurological problems resembling Parkinsonism. These symptoms can become progressive and permanent if not treated.
- Mild respiratory irritant. May cause coughing and breathing difficulties. Inhalation of fumes may result in metal fume fever, a flu-like illness. Symptoms of metal fume fever may include fever, fatigue, vomiting, muscle aches and shortness of breath.
- Dust contact with the eyes can lead to mechanical irritation. Symptoms may include stinging and tearing.
- Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.
- Iron particles in the eye may leave a "rust ring" or brownish stain on the cornea.

4.3 Indication of any immediate medical attention and special treatment needed

- : Provide general supportive measures and treat symptomatically.

SECTION 5. FIRE-FIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media

- : Use media suitable to the surrounding fire such as water fog or fine spray, alcohol foams, carbon dioxide and dry chemical.

Unsuitable extinguishing media

- : None known.

5.2 Special hazards arising from the substance or mixture

- : Not considered flammable.
In the event of fire the following can be released: Metal oxides.

5.3 Advice for firefighters

Protective equipment for fire-fighters

- : 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 proper protective equipment and self-contained breathing apparatus with full face piece operated in positive pressure mode.

Special fire-fighting procedures

- : No special requirements under ordinary conditions of use and with adequate ventilation.

SECTION 6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

- : Wear suitable protective equipment.

6.2 Environmental precautions

- : None required under normal conditions.

6.3 Methods and material for containment and cleaning up

- : Sweep up and shovel into suitable containers for disposal. Avoid dust formation.

6.4 Reference to other sections

- : Refer to protective measures listed in sections 7 and 8. Refer to Section 13 for disposal of material.

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SECTION 7. HANDLING AND STORAGE

7.1 Precautions for safe handling

- : Use with adequate ventilation. Wear suitable protective equipment during handling. Do not breathe dust or fume. Do not ingest. Avoid contact with skin, eyes and clothing. Avoid and control operations which create high vapor or dust concentrations. Wash thoroughly after handling.

7.2 Conditions for safe storage, including any incompatibilities

- : None known.

7.3 Specific end use(s)

- : Aggregate; Water filtration; Cement making

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control Parameters

<u>Exposure Limits:</u>			
<u>Chemical Name</u>	<u>Exposure Limits</u>	<u>Type</u>	<u>Notes</u>
Wüstite	5 mg/m ³ (respirable dust); 10 mg/m ³ (inhalable) (TWA) 20 mg/m ³ (inhalable) (STEL)	Austria (OEL)	None.
	5 mg/m ³ (fumes) (TWA)	Finland (OEL)	(as Fe)
	5 mg/m ³ (fumes) (TWA)	France (OEL)	(as Fe)
	10 mg/m ³ (TWA) 10 mg/m ³ (STEL)	Greece (OEL)	(as Fe)
	6 mg/m ³ (respirable dust) (TWA)	Hungary (OEL)	None.
	5 mg/m ³ (respirable dust) (TWA) 10 mg/m ³ (respirable dust) (STEL)	Poland (OEL)	(as Fe)
	1.5 mg/m ³ (TWA)	Slovak Republic (OEL)	None.
	5 mg/m ³ (dust and fume) (TWA)	Spain (OEL)	(as Fe)
	5 mg/m ³ (fumes) (TWA) 10 mg/m ³ (fumes) (STEL)	The United Kingdom (WELs)	(as Fe)
	Magnetite	5 mg/m ³ (fumes) (TWA)	Finland (OEL)
5 mg/m ³ (fumes) (TWA)		France (OEL)	(as Fe)
10 mg/m ³ (TWA) 10 mg/m ³ (STEL)		Greece (OEL)	(as Fe)
5 mg/m ³ (respirable dust) (TWA) 10 mg/m ³ (respirable dust) (STEL)		Poland (OEL)	(as Fe)
5 mg/m ³ (dust and fume) (TWA)		Spain (OEL)	(as Fe)
5 mg/m ³ (fumes) (TWA) 10 mg/m ³ (fumes) (STEL)		The United Kingdom (WELs)	(as Fe)
Forsterite	None known.	European Union (OEL)	None.
Akermanite	None known.	European Union (OEL)	None.

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Iron	5 mg/m ³ (fumes) (TWA)	Finland (OEL)	(as Fe)
	5 mg/m ³ (fumes) (TWA)	France (OEL)	(as Fe)
	5 mg/m ³ (respirable dust) (TWA) 10 mg/m ³ (respirable dust) (STEL)	Poland (OEL)	(as Fe)
	5 mg/m ³ (dust and fume) (TWA)	Spain (OEL)	(as Fe)
	5 mg/m ³ (fumes) (TWA) 10 mg/m ³ (fumes) (STEL)	The United Kingdom (WELs)	(as Fe)
Gehlenite	None known.	European Union (OEL)	None.
Manganese oxide	0.02 mg/m ³ (respirable dust) (TWA)	Finland (OEL)	(as Mn)
	1 mg/m ³ (fumes) (TWA)	France (OEL)	(as Mn)
	0.2 mg/m ³ (inhalable) (exposure factor 8); 0.02 mg/m ³ (respirable dust) (exposure factor 8) (TWA)	Germany (OEL)	(as Mn)
	0.2 mg/m ³ (inhalable); 0.05 mg/m ³ (respirable dust) (TWA)	Poland (OEL)	(as Mn)
	N/Av	Switzerland (OEL)	N/Av
	0.5 mg/m ³ (TWA) 1.5 mg/m ³ (STEL)	The United Kingdom (WELs)	(as Mn)
Franklinite	None known.	European Union (OEL)	None.

Biological Exposure Indices:

No biological exposure limits noted for the ingredient(s) .

Derived No Effect Level (DNEL):

No information available.

Predicted No Effect Concentration (PNEC):

No information available.

8.2 Exposure controls

Ventilation and engineering measures

- : Use with adequate ventilation. Apply technical measures to comply with the occupational exposure limits. Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction. The local exhaust ventilation system should be high efficiency (84%). Recommended cyclone/filter (for minimizing dust emissions) efficiency:
 - 70-90% (cyclones);
 - 50-80% (dust filters);
 - 85-95% (double stage, cassette filters)
 Process enclosure should be considered, especially in potentially dusty units. In case of insufficient ventilation wear suitable respiratory equipment.

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- Respiratory protection** : Respirator must be worn if exposed to dust. The filter class for the respirator must be suitable for the maximum expected contaminant concentration (gas/vapour/aerosol/particulates) that may arise when handling the product. If this concentration is exceeded, self-contained breathing apparatus must be used.
Recommended Filter type:
dust filter-half mask P1 (efficiency 75%)
dust filter-half mask P2 (efficiency 90%)
dust filter-half mask P3 (efficiency 95%)
dust filter-full mask P1 (efficiency 75%)
- Skin protection** : Gloves are recommended. The suitability for a specific workplace should be discussed with the producers of the protective gloves. Gloves are recommended to be $\geq 90\%$ efficient. Choose body protection according to the amount and concentration of the dangerous substance at the work place.
- Eye / face protection** : Wear as appropriate: Goggles; Safety glasses with side shields
- Other protective equipment** : Ensure that eyewash stations and safety showers are close to the workstation location. Other equipment may be required depending on workplace standards.
- General hygiene considerations** : Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes and clothing. Do not breathe dust or fume. Do not eat, drink or smoke when using this product. Wash hands and face before breaks and immediately after handling the product. Wash contaminated clothing before reuse.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

- Appearance** : Black solid. (Ash)
- Odour** : No odour.
- Odour threshold** : None.
- pH** : No information available.
- Flash point** : None.
- Flashpoint (Method)** : Not applicable.
- Lower flammable limit (% by vol.)** : None.
- Upper flammable limit (% by vol.)** : None.
- Flammability (solid, gas)** : The product is not flammable.
- Auto-ignition temperature** : None.
- Decomposition temperature** : No information available.
- Oxidizing properties** : None known.
- Explosive properties** : Not explosive
- Initial boiling point and boiling range** : $> 1000^{\circ}\text{C}$ (1830°F)
- Melting/Freezing point** : $> 1000^{\circ}\text{C}$ (1830°F)
- Relative density** : 1.44
- Solubility in water** : insoluble
- Other solubility(ies)** : No information available.
- Vapour pressure** : No information available.
- Vapour density** : No information available.

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Partition coefficient: n-octanol/water

: No information available.

Viscosity

: Not applicable.

Evaporation rate (BuAe = 1)

: No information available.

9.2 Other Information

Volatiles (% by weight) : No information available.

Volatile organic Compounds (VOC's)

: No information available.

Other physical/chemical comments

: No additional information.

SECTION 10. STABILITY AND REACTIVITY

10.1 Reactivity : Not normally reactive.

10.2 Chemical stability : Stable under normal conditions.

10.3 Possibility of hazardous reactions

: Hazardous polymerization does not occur.

10.4 Conditions to avoid : Do not use in unventilated areas without proper protection. Refer to protective measures listed in sections 7 and 8.

10.5 Incompatible materials

: None known.

10.6 Hazardous decomposition products

: None known.

In the event of fire the following can be released: Metal oxides

SECTION 11. TOXICOLOGICAL INFORMATION

11.1 Information on Toxicological effects:

Acute toxicity : According to the classification criteria of the European Union, this product is not considered as being an acutely toxic chemical.

Skin corrosion/Irritation : According to the classification criteria of the European Union, this product is not considered as being a skin corrosive or irritant.

Serious eye damage/irritation

: According to the classification criteria of the European Union, the product is not considered as being an eye irritant.

Respiratory or skin sensitisation

: According to the classification criteria of the European Union, this product is not considered as being an allergic respiratory sensitiser.
According to the classification criteria of the European Union, this product is not considered as being an allergic skin sensitiser.

Germ cell mutagenicity : Contains no ingredient listed as a mutagen.

Carcinogenicity : Contains no ingredient listed as a carcinogen.

Reproductive toxicity : Contains no ingredient listed as toxic to reproduction.

STOT-single exposure : According to the classification criteria of the European Union, this product is not expected to cause target organ toxicity through a single exposure.

STOT-repeated exposure : According to the classification criteria of the European Union, this product is not expected to cause target organ toxicity through repeated exposures.

Aspiration hazard : According to the classification criteria of the European Union, this product is not considered as being an aspiration hazard to humans.

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Toxicological data : No data is available on the product itself.

See below for individual ingredient acute toxicity data.

<u>Chemical name</u>	<u>LC₅₀ (4hr)</u> <u>inh, rat</u>	<u>LD₅₀</u>	
		<u>(Oral, rat)</u>	<u>(Rabbit, dermal)</u>
Wüstite	No information available.	> 10 000 mg/kg	No information available.
Magnetite	No information available.	> 5000 mg/kg	No information available.
Forsterite	No information available.	No information available.	No information available.
Akermanite	No information available.	No information available.	No information available.
Iron	No information available.	98 600 mg/kg	No information available.
Gehlenite	No information available.	No information available.	No information available.
Manganese oxide	> 5.35 mg/L (dust) (No mortality)	> 2000 mg/kg (No mortality)	No information available.
Franklinite	No information available.	No information available.	No information available.

Routes of exposure : Inhalation; Skin contact; Eye contact; Ingestion

Effects of acute exposure : *Inhalation*: May cause irritation of the mucous membranes. Inhalation of dust may cause shortness of breath, tightness of the chest, a sore throat and cough.

Skin contact: No adverse effects due to skin contact are expected.

Eye contact: Dust contact with the eyes can lead to mechanical irritation. Symptoms may include stinging and tearing.

Ingestion: Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

Potential Chronic Health Effects

: Pneumoconiosis, or "dusty lung" disease, may result from chronic exposure to any dust. Repeated or prolonged inhalation of fine dusts may cause an increase in mucous production.

Other important hazards : None known or reported by the manufacturer.

SECTION 12. ECOLOGICAL INFORMATION

12.1 Toxicity : No data is available on the product itself.

The following tables list individual ingredient ecotoxicity data for fish, daphnia and algae.

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Ecotoxicity data:

<u>Ingredients</u>	CAS No	Toxicity to Fish		
		LC50 / 96h	NOEC / 21 day	M Factor
Wüstite	1345-25-1	> 50 000, < 100 000 mg/L (Zebra fish) (Read-across)	No information available.	None.
Magnetite	1317-61-9	No information available.	No information available.	None.
Forsterite	15118-03-3	No information available.	No information available.	None.
Akermanite	14567-90-9	No information available.	No information available.	None.
Iron	7439-89-6	> 10 000 mg/L (Zebra fish)	No information available.	None.
Gehlenite	1302-56-3	No information available.	No information available.	None.
Manganese oxide	1344-43-0	> 100 mg/L (Rainbow trout)	No information available.	None.
Franklinite	12063-19-3	No information available.	No information available.	None.

<u>Ingredients</u>	CAS No	Toxicity to Daphnia		
		EC50 / 48h	NOEC / 21 day	M Factor
Wüstite	1345-25-1	> 100 mg/L (Daphnia magna) (Read-across)	No information available.	None.
Magnetite	1317-61-9	No information available.	No information available.	None.
Forsterite	15118-03-3	No information available.	No information available.	None.
Akermanite	14567-90-9	No information available.	No information available.	None.
Iron	7439-89-6	> 100 mg/L (Daphnia magna)	5.9 mg/L	None.
Gehlenite	1302-56-3	No information available.	No information available.	None.
Manganese oxide	1344-43-0	> 100 mg/L (Daphnia magna)	No information available.	None.
Franklinite	12063-19-3	No information available.	No information available.	None.

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<u>Ingredients</u>	CAS No	Toxicity to Algae		
		EC50 / 96h or 72h	NOEC / 96h or 72h	M Factor
Wüstite	1345-25-1	No information available.	No information available.	None.
Magnetite	1317-61-9	No information available.	No information available.	None.
Forsterite	15118-03-3	No information available.	No information available.	None.
Akermanite	14567-90-9	No information available.	No information available.	None.
Iron	7439-89-6	No information available.	No information available.	None.
Gehlenite	1302-56-3	No information available.	No information available.	None.
Manganese oxide	1344-43-0	> 100 mg/L/72hr (Green algae)	32 mg/L/72hr	None.
Franklinite	12063-19-3	No information available.	No information available.	None.

12.2 Persistence and degradability

: Biodegradation is not applicable to metals/inorganic substances.

12.3 Bioaccumulation potential

: No data is available on the product itself.

12.4 Mobility in soil

: No data is available on the product itself.

12.5 Results of PBT and vPvB assessment

: This mixture contains no substance(s) above reportable levels which are considered to be persistent, bioaccumulating nor toxic (PBT), or very persistent and very bioaccumulating (vPvB).

12.6 Other Adverse Environmental effects

: No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

SECTION 13. DISPOSAL CONSIDERATIONS

13.1 Waste Treatment Methods:

Handling for Disposal : Handle in accordance with good industrial hygiene and safety practice. Refer to protective measures listed in sections 7 and 8.

Methods of Disposal : Dispose of in accordance with the European Directives on waste and hazardous waste. Waste must be classified and labelled prior to recycling or disposal. According to the European Waste Catalogue, Waste Codes are not product specific, but application specific. Waste codes should be assigned by the user based on the application for which the product was used.

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SECTION 14. TRANSPORTATION INFORMATION

<i>Regulatory Information</i>	14.1 UN Number	14.2 UN proper shipping name	14.3 Transport hazard class(es)	14.4 Packing Group	Label
ADR/RID	None.	Not regulated	Not regulated	None	
EU ADR/RID Classification Code	Not applicable.				
EU ADR / RID Hazard Identification Number	Not applicable.				
ADR/RID Additional information	Not classified as dangerous for conveyance in the meaning of the regulations for the transport of dangerous goods by road and rail.				
ICAO/IATA	None.	Not regulated.	Not regulated	None	
ICAO/IATA Additional information	None.				
IMDG	None.	Not regulated.	Not regulated	None	
IMDG Additional information	None.				

14.5 Environmental hazards : This product does not meet the criteria for an environmentally hazardous mixture, according to the IMDG Code. See ECOLOGICAL INFORMATION, Section 12.

14.6 Special precautions for user

: Avoid and control operations which create dust.

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

: This information is not available.

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SECTION 15. REGULATORY INFORMATION

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

- : Classification according to Regulation (EC) No. 1272/2008 on the classification of hazardous substances and mixtures.

Authorisations

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

None of the components are specifically listed.

Restrictions on use

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

None of the components are specifically listed.

Directive 2012/18/EU (Seveso III) on the control of major-accident hazards involving dangerous substances:

None.

Directive 98/24/EC on the protection of the health and safety of workers from risks related to chemical agents at work:

Manganese oxide (CAS # 1344-43-0)

Directive 94/33/EC on the protection of young people at work:

Manganese oxide (CAS # 1344-43-0)

This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006, as amended [including Regulation (EU) 2015/830].

Follow national regulation for work with chemical agents.

German legislation on water endangering substances VwVwS - Water contaminating class (Germany): 2 (self classified)

15.2 Chemical safety assessment

- : A chemical safety assessment has not been carried out by the Manufacturer of this product.

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SECTION 16. OTHER INFORMATION

- Legend** : ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road
CAS: Chemical Abstract Services
EC: European Community
EC50: Effective Concentration 50%
EN: European Standard
HSDB: Hazardous Substances Data Bank
IATA: International Air Transport Association
IBC: Intermediate Bulk Container
ICAO: International Civil Aviation Organisation
IMDG: International Maritime Dangerous Goods
Inh: Inhalation
LC: Lethal Concentration
LD: Lethal Dose
NOEC: No observable effect concentration
OECD: Organisation for Economic Co-operation and Development
OEL: National occupational exposure limits
RID: Regulations concerning the International Carriage of Dangerous Goods by Rail
RTECS: Registry of Toxic Effects of Chemical Substances
SDS: Safety Data Sheet
STEL: Short Term Exposure Limit
TWA: Time Weighted Average
WEL: Workplace Exposure Limit
- Information Source** : 1. Material Safety Data Sheet from manufacturer.
2. Canadian Centre for Occupational Health and Safety, CCInfoWeb Databases, 2018 (Chempendium, RTECs, HSDB, INCHEM).
3. European Chemicals Agency, Classification Legislation, 2018.
4. OECD - The Global Portal to Information on Chemical Substances - eChemPortal, 2018.
- Preparation Date (dd/mm/yyyy)** : 01/12/2017
- Reviewed Date SDS (dd/mm/yyyy)** : 16/02/2018
- Revision No.** : 2
- Revision Information** : All sections modified.
- H-Phrases (Full text)** : H372 - Causes damage to organs (a,b,c) through prolonged or repeated exposure.
H373 - May cause damage to organs (a,b,c) through prolonged or repeated exposure.
- Other special considerations for handling** : Provide adequate information, instruction and training for operators.

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SAFETY DATA SHEET

This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006, as amended.

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