

# SAFETY DATA SHEET

**INNERSHIELD NR-232**

Infosafe No.: LQ512  
ISSUED Date : 09/12/2020  
ISSUED by: THE LINCOLN ELECTRIC CO.  
(AUSTRALIA) PTY. LTD.

## 1. IDENTIFICATION

### GHS Product Identifier

INNERSHIELD NR-232

### Company Name

THE LINCOLN ELECTRIC CO. (AUSTRALIA) PTY. LTD.

### Address

35 Bryant Street Padstow  
NSW AUSTRALIA

### Telephone/Fax Number

Tel: (02) 9772 7240

### Emergency phone number

1300 728 720

### Recommended use of the chemical and restrictions on use

FCAW-S (SELF-SHIELDED FLUX CORED ARC WELDING)

## 2. HAZARD IDENTIFICATION

### GHS classification of the substance/mixture

Not classified as Hazardous according to the Globally Harmonised System of Classification and Labelling of Chemicals (GHS) including Work, Health and Safety Regulations, Australia.

Not classified as Dangerous Goods according to the Australian Code for the Transport of Dangerous Goods by Road and Rail. (7th edition)

### IMPORTANT NOTE(S)

#### EXPOSURE DURING USE

As shipped, these electrodes have no known toxicological properties other than causing allergic reactions to individuals sensitive to the metal(s) contained in these welding products.

When this product is used in a welding process the following hazards are most important:

#### Heat:

Splatter, hot, or molten metals can cause burns and start fires. Welding arc and sparks can ignite combustible and flammable materials.

#### Radiation:

Arc rays can damage skin and eyes.

#### Electrical:

Electric shock can kill.

#### Fumes:

Welding can generate fumes, mists, dust, vapours and gases, including metallic oxides, carbon dioxide, carbon monoxide, nitrogen dioxide, ozone, as well as solid particles, or other constituents from the consumables, base metal, or base metal coating. The amounts and types of fumes produced vary greatly depending on the process involved and the materials being used such as: metals, solvents, flux, paint and plastics.

The health effects of exposure to fumes, dust, vapour and gases can vary. Effects can include irritation of the upper respiratory tract (nose and throat), tightness in the chest, asphyxiation, asthma, wheezing, metal fume fever, lung damage, bronchitis, cancer,

pneumonia or emphysema.

The short-term overexposure to fume and gases from welding may result in: metal fume fever, dizziness, nausea or dryness or irritant to the respiratory systems or eyes. May aggravate pre-existing respiratory problems.

The long-term overexposure to fume and gases from welding can lead to: siderosis (iron deposits in lung), central nervous system effects, bronchitis and other pulmonary effects.

Welding fumes may contain substances that are suspected of being carcinogenic.

Persons with a pacemaker should not go near welding or cutting operations until they have consulted their doctor and obtained information from the manufacturer of the device.

#### Other Information

Note: The hazard classification does not apply to the inert electrode during storage and transport. The hazard classification applies only to the electrode when it is being used for welding.

This product contains Ototoxic substances. Combination with noise exposure, even at safe levels, could still cause auditory injuries and hearing loss.

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

#### Ingredients

Name	CAS	Proportion
Iron	7439-89-6	60-<100 %
Iron oxide	1309-37-1	5-<10 %
Aluminium	7429-90-5	1-<5 %
Lithium oxide	12057-24-8	1-<5 %
Carbonic acid, dilithium salt	554-13-2	1-<5 %
Magnesium	7439-95-4	1-<5 %
Magnesium Oxide	1309-48-4	1-<5 %
Silica	7631-86-9	0.1-<1 %
Manganese	7439-96-5	0.1-<1 %
Barium Fluoride	7787-32-8	0.1-<1 %
Strontium fluoride	7783-48-4	0.1-<1 %
TITANIUM DIOXIDE	13463-67-7	0.1-<1 %
Limestone	1317-65-3	0.1-<1 %
Silicon	7440-21-3	0.1-<1 %
Manganese oxide (MnO)	1344-43-0	0.1-<1 %
Silica amorphous	7631-86-9	0.1-<1 %
Ingredients determined not to be hazardous		Balance

### 4. FIRST-AID MEASURES

#### Inhalation

Remove from dust or fume exposure. Keep at rest until recovered. If symptoms persist seek medical attention. Employ CPR (Cardiopulmonary Resuscitation technique) if the patient is not breathing. Seek immediate medical attention.

#### Ingestion

Not considered a potential route of exposure for intact product, when used as intended. Ingestion may occur when food or drinks are in contact with metal fume or powder and during hand-to-mouth activities such as drinking, eating and smoking, etc. If ingested, do not induce vomiting. Wash out mouth thoroughly with water. If symptoms develop seek medical attention.

#### Skin

Wash hands after contact with material. In the event of severe arc radiation exposure seek immediate medical attention.

**Eye contact**

If dust in eyes, hold eyelids apart and flush the eyes continuously with running water. Continue flushing for several minutes until all contaminants are washed out completely. If symptoms develop and persist seek medical attention. In the event of severe arc radiation exposure seek immediate medical attention.

**First Aid Facilities**

Eyewash and normal washroom facilities.

**Advice to Doctor**

Treat symptomatically.

**Other Information**

In addition to standard training, first-aid responders in welding situations should know about the symptoms of electric shock, arc flash and the consequences of exposure to heated coatings on metals.

For advice in an emergency, contact a Poisons Information Centre (Phone Australia 131 126) or a doctor at once.

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**5. FIRE-FIGHTING MEASURES**

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**Suitable Extinguishing Media**

Use appropriate fire extinguisher for surrounding environment.

**Hazards from Combustion Products**

Under fire conditions this product may emit toxic and/or irritating fumes and gases including oxides of iron, Manganese, carbon monoxide and carbon dioxide etc.

**Specific Hazards Arising From The Chemical**

Non-flammable solid. Welding arcs and sparks can ignite combustible materials.

**Decomposition Temperature**

Not available

**Precautions in connection with Fire**

Fire fighters should wear full protective clothing and self-contained breathing apparatus (SCBA) operated in positive pressure mode. Fight fire from safe location.

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**6. ACCIDENTAL RELEASE MEASURES**

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**Emergency Procedures**

If airborne dust/fume(s) are present, use adequate engineering controls. Wear appropriate personal protective equipment and clothing to prevent exposure. Collect the material immediately and place into a suitable labelled container. Dispose of waste according to the applicable local and national regulations. If contamination of sewers or waterways occurs inform the local water and waste management authorities in accordance with local regulations.

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**7. HANDLING AND STORAGE**

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**Precautions for Safe Handling**

Ensure that the product is undamaged and in its original packaging. Ensure correct lifting posture when handling packages that are heavier than 15 kgs. Limit handling and movement of the product and unnecessary personal contact. When handling, do not eat drink or smoke and wash hands with a suitable hand sanitizer when finished.

**Conditions for safe storage, including any incompatibilities**

Store the product in its original sealed package or container in a cool, dry, low humidity environment and in compliance with any local or national regulations. Ensure that the original product labels and warning labels are intact and clearly visible. Do not store with incompatible materials and ensure that the product is protected from physical damage while in storage.

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**8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

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**Occupational exposure limit values**

No exposure value assigned for this material. However, the available exposure limits for ingredients and their fumes are listed below:

Iron oxide fume

TWA: 5 mg/m<sup>3</sup>

Aluminium (metal dust)

TWA: 10 mg/m<sup>3</sup>

Aluminium (fume)

TWA: 5 mg/m<sup>3</sup>

Aluminium oxide

TWA: 10 mg/m<sup>3</sup>

Magnesium oxide (fume)

TWA: 10 mg/m<sup>3</sup>

Manganese(as Mn)

TWA :1mg/m<sup>3</sup>(dust/fume), STEL 3mg/m<sup>3</sup>(fume)

Barium, soluble compounds (as Ba)

TWA: 0.5 mg/m<sup>3</sup>

Fluorides (as F)

TWA: 2.5 mg/m<sup>3</sup>

Titanium Dioxide

TWA: 10 mg/m<sup>3</sup>

Limestone

TWA: 10 mg/m<sup>3</sup>

Silicon

TWA: 10 mg/m<sup>3</sup>

Silica (amorphous)

TWA: 2 mg/m<sup>3</sup> (Fumed silica)

Welding fumes (not otherwise classified)

TWA: 5 mg/m<sup>3</sup>

TWA (Time Weighted Average): The average airborne concentration of a particular substance when calculated over a normal eight-hour working day, for a five-day week.

STEL (Short Term Exposure Limit): The average airborne concentration over a 15 minute period which should not be exceeded at any time during a normal eight-hour workday.

CA1A: Known to have carcinogenic potential for humans.

CA2: Suspected human carcinogen.

'Sen' Notice: The substance may cause sensitization by skin contact or by inhalation.

Source: Safe Work Australia

#### **Biological Limit Values**

Name: Fluorides

Determinant: Fluorides

Specimen: Urine

Value: 2 mg/L

Sampling time: Prior to Shift

Determinant: Fluorides

Specimen: Urine

Value: 3 mg/L

Sampling time: End of shift

Source: American Conference of Industrial Hygienists (ACGIH)

### **Other Exposure Information**

Determine the composition and quantity of fumes and gases to which workers are exposed by taking an air sample from inside the welder's helmet if worn or in the worker's breathing zone. Improve ventilation if exposures are not below limits. See ANSI/AWS F1.1, F1.2, F1.4, and F1.5, available from the Welding Technology Institute of Australia, PO Box 6165, Silverwater, NSW 2128.

### **Appropriate Engineering Controls**

Ensure sufficient ventilation to keep airborne concentrations below exposure limits and as low as practicable. The atmosphere should be regularly checked to ensure safe working conditions are maintained. Where natural ventilation is inadequate, a local exhaust ventilation system, drawing fumes/dusts away from workers' breathing zone, is required.

### **Respiratory Protection**

If engineering controls are not effective in controlling airborne exposure then respiratory protective equipment should be used such as an approved cartridge respirator or air supplied respirator. Final choice of appropriate breathing protection is dependent upon actual airborne concentrations and the type of breathing protection required will vary according to individual circumstances. Expert advice may be required to make this decision. Reference should be made to Australian Standards AS/NZS 1715, Selection, Use and maintenance of Respiratory Protective Devices; and AS/NZS 1716, Respiratory Protective Devices.

### **Eye Protection**

Use flash goggles or face shield with filter lens shade 12 or darker to avoid accidental arc radiation exposure. Final choice of appropriate eye/face protection will vary according to individual circumstances i.e. methods of handling or engineering controls and according to risk assessments undertaken.

Eye protection should conform with Australian/New Zealand Standard AS/NZS 1338: (series) Filters for eye protectors, AS/NZS 1338.1: Filters for eye protectors - Filters for protection against radiation generated in welding and allied operations, AS/NZS 1336: Recommended practices for occupational eye protection and AS/NZS 1337 (series): Eye protectors for industrial applications.

### **Hand Protection**

Wear gloves specifically made for welding purposes. Gloves should be fire resistant and protect exposed skin on the hands and wrists.

Final choice of appropriate gloves will vary according to individual circumstances i.e. methods of handling or according to risk assessments undertaken. Reference should be made to AS/NZS 2161.1: Occupational protective gloves - Selection, use and maintenance.

### **Personal Protective Equipment**

Welders should wear protective clothing and eye protection appropriate to electric arc welding. Under certain conditions, welding slag can detach and fly off. Those in close proximity to welds should protect themselves from flying slag.

### **Footwear**

Foot protection should be non-slip and heat and fire resistant. Avoid using foot protection that has the potential to capture hot sparks and metal debris, for example in laces or in open style shoes.

For further information refer to: AS/NZS 2210: (series) Occupational protective footwear and AS/NZS 2210.1: Safety, protective and occupational footwear - Guide to selection, care and use.

### **Body Protection**

Wear approved body protection during arc welding which helps to prevent injury from UV radiation, sparks and electrical shock. This may include arm protectors, an apron, a hat, shoulder protection, as well as dark substantial clothing. It is advisable that a local supplier of personal protective clothing is consulted regarding the choice of material.

Avoid clothing that has the potential to capture hot sparks and metals, for example in pockets or other folds. Clothing should be made of natural fibres.

For further information refer to: AS/NZS 4502: (series) Methods for evaluating clothing for protection against heat and fire.

### **Electric Shock**

Electric shock may result in serious burns or death by electrocution. Special attention should be paid to the condition of the electrical connections, cable and electrode holder insulation and the presence of humid, damp and wet environments.

Before welding be familiar with the emergency procedures should a person suffer an electric shock. Inspect the condition of the welding equipment including, the proper operation of power switches, that connections and terminals are tight and properly insulated and ensure the insulation on power and welding cables is in good condition. Ensure that circuit protection components such as fuses, circuit breakers and residual current devices (RSD) are in place and operating correctly. Where manual arc welding power supplies have a voltage reduction device (VRD) fitted ensure that it is turned on. Use fully insulated electrode holders. Prevent electrode holders coming in contact with conductive surfaces connected to welding machine earth causing unexpected arcing. Do not connect or change welding cables before switching off the power at the mains.

During welding, electrodes or welding wires should not be handled with bare hands and the electrode holder is not be held under the armpit. Where practical, stand, lie or sit on non-conducting material while welding. In humid conditions minimise wet clothing by allowing time to dry during breaks, change clothing and gloves frequently. Minimise perspiration by using a fan or an air fed

welding mask.

### **Welding Arc Radiation**

The welding arc emits intense UV radiation that can cause eye irritation and burns to exposed skin. UV rays may travel significant distances and reflect from white and shiny surfaces. Both the welding operator, workers in the work place and passers-by need to adopt the appropriate personal protective equipment (PPE).

### **Fumes and Gases**

Fumes and gases generated from the welding process can be dangerous. The level of fume generated will vary depending on the welding process and the welding parameters used. In addition gases such as helium, argon, and carbon dioxide can displace oxygen in the air and lead to suffocation, particularly when welding in confined spaces. Carbon monoxide gas can form posing another asphyxiation hazard.

Workers should position themselves to avoid breathing welding fumes and gases and adopt ventilation, natural or forced fresh air movement, to reduce exposure to fume and gas emissions to acceptable levels. Portable welding helmet mounted air fed ventilation systems can be used to remove fumes and gases from the welder's breathing zone. Keep fume hoods, fume extractor guns and vacuum nozzles as close as possible to the fume source to minimise emission levels in the surrounding work area. Working outdoors or in open spaces does not guarantee adequate ventilation. Respiration protection may be required if work practices and ventilation do not reduce the emissions to safe levels. Alternatively consider using a lower fume generating welding consumable or welding process.

### **Fire and Explosions**

Do not weld on containers which have held combustible or flammable materials unless procedures for the safe welding and cutting of such containers are carefully followed. Remove flammable materials from welding area or shield from sparks and heat. Keep a fire extinguisher in the welding area. Wear flame resistant clothing and headgear. Purge all traces of flammable or combustible materials from drums, vessels and tanks which are to be welded prior to welding, and preferably filled with an inert substance such as nitrogen gas or water. Use fire resistant barriers to prevent welding sparks accidentally reaching flammable and combustible materials. Check work areas are well ventilated to prevent accumulation of flammable vapours.

### **Hearing Protection**

Ear plugs or ear muffs may be required to minimise the risks of noise. For further information refer to: AS/NZS 1270: Acoustics - Hearing protectors and AS/NZS 1269.3: Occupational noise management – Hearing protector program.

### **Screens**

Avoid exposure to the rays of an arc during electric welding operations. Opaque or appropriate translucent screens can be used to protect the health and safety of people within the vicinity of welding. For further information refer to: AS/NZS 3957: Light-transmitting screens and curtains for welding operations.

### **General Welding Safety Precautions**

Read and understand the manufacturer's instructions and the precautionary label on the product. According to Safe Work Australia Welding Processes Code of Practice refer to Health and Safety in Welding WTIA Technical Note No.7 for more details on precautions such as ventilation, respiratory protection and protective clothing.

### **Other Information**

The available exposure limits for gases/fumes that may be formed during welding are listed below:

#### **Ozone**

TWA: 0.1ppm, 0.2mg/m<sup>3</sup> peak

#### **Nitrogen dioxide**

TWA: 3 ppm, 5.6 mg/m<sup>3</sup>

STEL: 5 ppm, 9.4 mg/m<sup>3</sup>

#### **Carbon dioxide**

TWA: 5000 ppm/12500 ppm(in coal mines), 9000 mg/m<sup>3</sup>/22500 mg/m<sup>3</sup>

STEL: 30,000 ppm, 54,000 mg/m<sup>3</sup>

#### **Carbon monoxide**

TWA: 30 ppm, 34 mg/m<sup>3</sup>

#### **Iron oxide fume (as Fe)**

TWA :5 mg/m<sup>3</sup>

TWA (Time Weighted Average): The average airborne concentration of a particular substance when calculated over a normal eight-

hour working day, for a five-day week.

STEL (Short Term Exposure Limit): The average airborne concentration over a 15 minute period which should not be exceeded at any time during a normal eight-hour workday.

Source: Safe Work Australia

## 9. PHYSICAL AND CHEMICAL PROPERTIES

Properties	Description	Properties	Description
Form	Welding Electrode	Appearance	Cored welding wire
Colour	Not available	Odour	Not available
Decomposition Temperature	Not available	Melting Point	Not available
Boiling Point	Not available	Solubility in Water	Not available
Specific Gravity	Not available	pH	Not available
Vapour Pressure	Not available	Vapour Density (Air=1)	Not available
Evaporation Rate	Not available	Odour Threshold	Not available
Viscosity	Not available	Partition Coefficient: n-octanol/water	Not available
Flash Point	Not applicable	Flammability	Not flammable
Auto-Ignition Temperature	Not available	Explosion Limit - Upper	Not available
Explosion Limit - Lower	Not available		

## 10. STABILITY AND REACTIVITY

### Reactivity

Reacts with incompatibles.

### Chemical Stability

Stable under normal conditions of storage and handling.

### Conditions to Avoid

Avoid heat or contamination.

### Incompatible materials

Strong acids, strong oxidizing substances. Strong bases.

### Hazardous Decomposition Products

Welding fumes and gases cannot be classified simply. The composition and quantity of both are dependent upon the metal being welded, the process, procedure and electrodes used.

Other conditions which also influence the composition and quantity of the fumes and gases to which workers may be exposed include: coatings on the metal being welded (such as paint, plating or galvanising), the number of welders and the volume of the worker area, the quality, and amount of ventilation, the position of the welder's head with respect to the fume plume, as well as the presence of contaminants in the atmosphere (such as chlorinated hydrocarbon vapours from cleaning and degreasing activities).

When the electrode is consumed, the fume and gas decomposition products generated are different in percent and form from the ingredients listed in Section 3. Decomposition products of normal operation include those originating from the volatilization, reaction, or oxidation of the materials shown in Section 3, plus those from the base metal and coating, etc., as noted above. Reasonably expected oxides of iron, manganese and other metals present in the welding consumable or base metal. Hexavalent chromium compounds may be in the welding or brazing fume of consumables or base metals which contain chromium. Gaseous and particulate fluoride may be in the fume of consumables or flux materials which contain fluoride. Gaseous reaction products may include carbon monoxide and carbon dioxide. Ozone and nitrogen oxides may be formed by the radiation from the arc associated with welding.

**Possibility of hazardous reactions**

None under normal conditions.

**Hazardous Polymerization**

Will not occur.

## 11. TOXICOLOGICAL INFORMATION

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**Toxicology Information**

No toxicity data available for this material. Available data for ingredients and products formed during use is given below:

**Acute Toxicity - Oral**

Barium fluoride

LD50 (rat): 250mg/kg

Iron

LD50 (rat): 98.6g/kg

Limestone

LD50 (rat): 6450mg/kg

Lithium carbonate

LD50 (rat): 525mg/kg

Fluorides (as F)

LD50 (rat): 4,250mg/kg

**Acute Toxicity - Inhalation**

Carbon dioxide

LCL0 (human, 5 min): 90,000ppm

Carbon monoxide

LC50(rat): 1300mg/l/4h

Nitrogen dioxide

LC50(rat): 88ppm/4h

Ozone

LCL0 (human, 30 min): 50ppm

Aluminium and/or aluminium alloys (as Al)

LC50 (rat): 7.6 mg/l/1h

**Ingestion**

Ingestion is unlikely due to the form of the product. Ingestion of food or drink contaminated by welding fume(s) may irritate the gastric tract causing nausea and vomiting.

**Inhalation**

Short-term (acute) overexposure to welding fumes may result in: metal fume fever, dizziness, nausea and dryness or irritation of nose, throat, or eyes. May aggravate pre-existing respiratory problems (eg. asthma, emphysema). Long-term overexposure to welding fumes can lead to siderosis (iron deposits in lung), central nervous system effects, bronchitis and other pulmonary effects.

**Skin**

Skin contact may cause irritation resulting in redness and itching. Arc rays can burn skin. Skin cancer has been reported.

**Eye**

Eye contact may cause irritation and result in mild abrasion. Arc rays from arc welding can injure eyes. Eye disorders may be caused by exposure to intense UV and infra-red radiation while welding. Exposure to the eyes causes 'arc eye' or 'welders' flash' which is a painful inflammation of the cornea. The cornea can repair itself in one to two days, however, if the cornea becomes infected it may lead to some loss of vision.

**Respiratory sensitisation**

Not expected to be a respiratory sensitiser.



**Skin Sensitisation**

Not expected to be a skin sensitiser.

**Germ cell mutagenicity**

Not considered to be a mutagenic hazard.

**Carcinogenicity**

Not considered to be a carcinogenic hazard.

Ultraviolet radiation (wavelengths 100-400 nm, encompassing UVA, UVB, and UVC) is listed as a Group 1: Carcinogenic to humans according to International Agency for Research on Cancer (IARC).

\*Volume 100D concluded that there is sufficient evidence for ocular melanoma in welders; #Volume 118 concluded that ultraviolet emissions from welding are carcinogenic to humans (Group 1). There is sufficient evidence in humans for the carcinogenicity of ultraviolet emissions from welding).

Nickel compounds and welding fumes are listed as a Group 1: Carcinogenic to humans according to International Agency for Research on Cancer (IARC).

Titanium dioxide and Nickel (metallic and alloys) are listed as Group 2B: Possibly carcinogenic to humans according to International Agency for Research on Cancer (IARC).

Silica (amorphous), Fluorides and Iron Oxide are listed as a Group 3: Not classifiable as to carcinogenicity to humans according to International Agency for Research on Cancer (IARC).

**Reproductive Toxicity**

Not considered to be toxic to reproduction.

**STOT-single exposure**

Not expected to cause toxicity to a specific target organ.

**STOT-repeated exposure**

Not expected to cause toxicity to a specific target organ.

**Aspiration Hazard**

Not expected to be an aspiration hazard.

**Other Information**

Source and Health Effects of Welding Fumes:

Aluminium fume is a respiratory irritant.

Carbon monoxide is formed in the arc and is absorbed readily into the bloodstream, causing headaches, dizziness or muscular weakness, as well as ototoxicity which produces a risk of hearing loss. High concentrations may result in unconsciousness and death.

Fluoride fume causes irritation of the eyes, nose and throat. Long-term exposures may result in bone and joint problems. Chronic effects also include excess fluid in the lungs.

Nitrogen oxides are formed in the arc and may cause eye, nose and throat irritation in low concentrations. Abnormal fluid in the lung and other serious effects can occur at higher concentrations. Chronic effects include lung problems such as emphysema. Oxygen deficiency if welding in confined spaces, and air displacement by shielding gas may cause dizziness, mental confusion, asphyxiation and death.

Ozone formed in the welding arc during open arc welding processes include: Manual Metal Arc Welding (MMAW), Flux Cored Arc Welding (FCAW), Metal Inert Gas (MIG) and Tungsten Inert Gas (TIG) processes. This may cause acute effects such as fluid in the lungs. Very low concentrations (e.g., one part per million) cause headaches and dryness of the eyes. Chronic effects include significant changes in lung function.

Overexposure to manganese fumes may affect the brain and central nervous system, resulting in poor coordination, difficulty in speaking and arm or leg tremor. This condition can be irreversible. Manganese fumes can cause "Metal Fume Fever". Chronic effects may include central nervous system problems as well as ototoxicity which may result in hearing loss.

Manganese fumes can cause "Metal Fume Fever". Chronic effects may include central nervous system problems as well as ototoxicity which may result in hearing loss.

Iron oxides will be produced in all iron or steel welding processes which can result in siderosis. Siderosis is a benign form of lung disease caused by particles deposited in the lungs. Acute symptoms include irritation of the nose and lungs. Tends to clear up when exposure stops.

Nickel fume causes irritation of the eyes, nose and throat. Increased cancer risk has been noted in occupations other than welding. Also associated with dermatitis and lung problems.

Aluminium fume is a respiratory irritant.

This product contains Ototoxic substances. Combination with noise exposure, even at safe levels, could still cause auditory injuries and hearing loss.

## 12. ECOLOGICAL INFORMATION

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### **Ecotoxicity**

No ecological data available for this material. Available data for ingredients is given below:

### **Persistence and degradability**

Not available

### **Mobility**

Not available

### **Bioaccumulative Potential**

Not available

### **Other Adverse Effects**

Not available

### **Environmental Protection**

Prevent this material entering waterways, drains and sewers.

### **Acute Toxicity - Fish**

Aluminium and/or aluminium alloys

LC50 (Grass carp (*Ctenopharyngodon idella*)): 0.21-0.31mg/l/96h

### **Acute Toxicity - Daphnia**

Manganese

EC50(Water flea (*Daphnia magna*)): 40 mg/l/48h

## 13. DISPOSAL CONSIDERATIONS

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### **Disposal considerations**

The disposal of the spilled or waste material must be done in accordance with applicable local and national regulations.

## 14. TRANSPORT INFORMATION

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### **Transport Information**

Road and Rail Transport (ADG Code):

Not classified as Dangerous Goods according to the Australian Code for the Transport of Dangerous Goods by Road and Rail (ADG Code) (7th edition).

Marine Transport (IMO/IMDG):

Not classified as Dangerous Goods by the criteria of the International Maritime Dangerous Goods Code (IMDG Code) for transport by sea.

Air Transport (ICAO/IATA):

Not classified as Dangerous Goods by the criteria of the International Air Transport Association (IATA) Dangerous Goods Regulations for transport by air.

### **U.N. Number**

None Allocated

**UN proper shipping name**

None Allocated

**Transport hazard class(es)**

None Allocated

**IMDG Marine pollutant**

No

**Transport in Bulk**

Not available

**Special Precautions for User**

Not available

## 15. REGULATORY INFORMATION

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**Regulatory information**

Not classified as Hazardous according to the Globally Harmonised System of Classification and Labelling of Chemicals (GHS) including Work, Health and Safety Regulations, Australia.

Classified as a Scheduled Poison according to the Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP).

**Poisons Schedule**

S6

## 16. OTHER INFORMATION

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**Date of preparation or last revision of SDS**

SDS Reviewed: December 2020 Supersedes: November 2015

**References**

Preparation of Safety Data Sheets for Hazardous Chemicals Code of Practice.

Standard for the Uniform Scheduling of Medicines and Poisons.

Australian Code for the Transport of Dangerous Goods by Road & Rail.

Model Work Health and Safety Regulations, Schedule 10: Prohibited carcinogens, restricted carcinogens and restricted hazardous chemicals.

Workplace exposure standards for airborne contaminants.

Adopted biological exposure determinants, American Conference of Industrial Hygienists (ACGIH).

Globally Harmonised System of Classification and Labelling of Chemicals.

Welding Processes Code of Practice.

OSHA Fact Sheet - Controlling Hazardous Fume and Gases during Welding.

Code of Practice: Managing Noise and Preventing Hearing Loss at Work.

**Contact Person/Point**

(02) 9772 7240

## END OF SDS

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