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Safety Data Sheet

1 IDENTIFICATION

Product identifier

Trade name: Aluminium Wires & Rods

Other means of identification: Metal Alloys

Product Code: 1100, 1188(d), 2319(b), 4043, 5154, 5183, 5356, 5554, 5654, 718 (4047), 10 Braze Alloy.

SDS # 0129

Recommended use and restriction on use

Recommended use: Metal Welding

Restrictions on use: No further relevant information available.

Manufacturer/Importer/Supplier/Distributor information

Importer:

NEW ZEALAND

Harris Products Group

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New Zealand 4110

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Safety Data Sheet Questions: sales@harrisnz.com

Website: <http://www.harrisproductsgroup.co.nz>

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Fire Service - Ambulance – 111

AUSTRALIA

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Safety Data Sheet Questions: sales@hgea.com.au

Website: <http://www.harrisproductsgroup.com.au>

2 HAZARD(S) IDENTIFICATION

GHS classification of the substance/mixture.

Classified according to the Globally Harmonised System of Classification and labelling of Chemicals (GHS) including Work, Health and Safety regulations, Australia.

Classification of the substance or mixture

The product is classified as non-hazardous according to the Globally Harmonized System (GHS)

EMERGENCY OVERVIEW. These products consist of odourless, solid rods, which have a metallic lustre. There are no immediate health hazards associated with these products. These products are not reactive. If involved in a fire, these products may generate irritating aluminium fumes and a variety of metal oxides. Emergency responders must wear personal protective equipment suitable for the situation to which they are responding.

| | |
|-------------------------------|-------------------------|
| GHS Classification(s) | Not classified |
| Label elements | No labelling applicable |
| Signal word | N/A |
| Unknown Acute Toxicity | Not available |

| Hazard Classification for Chemical Composition | | | |
|--|----------------|--------------|--|
| CAS | Ingredient | Proportion % | |
| 7429-90-5 | Aluminium | 87-100 | Comb. Dust Flam. Sol. 1, H228 Water-react. 2, H261 |
| 7440-47-3 | Chromium Metal | <1 | Comb. Dust |
| 7440-50-8 | Copper | <7 | Comb. Dust Aquatic Acute 1, H400 Aquatic Chronic 2, H411 |
| 1309-37-1 | Iron | <1 | |
| 7439-95-4 | Magnesium | <5 | Comb. Dust Aquatic Acute 1, H400 Aquatic Chronic 2, H411 Self-heat. 2, H252 Water-react. 2, H261 |
| 7439-96-5 | Manganese | <1 | Comb. Dust |
| 7440-21-3 | Silicon | 5-13 | Comb. Dust |
| 7440-32-6 | Titanium | <2 | |
| 7440-66-6 | Zinc | <3 | |

Storage Statement(s): Store Locked Up

Disposal Statement(s): Dispose of contents/container in accordance with relevant regulations.

Other Hazards No information provided

Additional information:

Other hazards which do not result in GHS classification:

Heat rays (infrared radiation) from flame or hot metal can injure eyes. Overexposure to brazing fumes and gases can be hazardous. Read and understand the manufacturer's instructions, Safety Data Sheets and the precautionary labels before using this product.

Hazard description:

WHMIS-symbols: Not hazardous under WHMIS.

SYMPTOMS OF OVER-EXPOSURE BY ROUTE OF EXPOSURE: During welding or brazing operations, the most significant route of over-exposure is via inhalation of fumes.

INHALATION: Inhalation of large amounts of particulates generated by these products during welding or brazing operations may be physically irritating and cause deposits of dust in nasal passages. Inhalation of dusts and fumes of Copper and Magnesium (components of these products) can cause metal fume fever. Repeated or prolonged over-exposures, via inhalation, to the dusts generated by these products may cause pulmonary fibrosis (scarring of lung tissue). Asthma-like symptoms have been reported in association with refining aluminium material and fumes from aluminium soldering.

CONTACT WITH SKIN or EYES: Contact of these products with the skin is not anticipated to be irritating. Fumes generated during welding or brazing operations can be irritating to the skin and eyes. Symptoms of skin over-exposure may include irritation and redness; prolonged or repeated skin over-exposures may lead to dermatitis. Contact with the molten wire or rods will burn contaminated skin or eyes.

SKIN ABSORPTION: Skin absorption is not known to be a significant route of over-exposure for any component of these products.

INGESTION: Not applicable.

INJECTION: Though not a likely route of occupational exposure for these products, injection (via punctures or lacerations in the skin) may cause local reddening, tissue swelling, and discomfort.

HEALTH EFFECTS OR RISKS FROM EXPOSURE: An Explanation in Lay Terms. Symptoms associated with over-exposure to these products and the fumes generated during welding or brazing operations are as follows:

ACUTE: Inhalation of large amounts of particulates generated by these products during metal processing operations may be physically irritating and cause deposits of dust in nasal passages. Inhalation of dusts and

fumes of Copper and Magnesium (components of these products) can cause metal fume fever. Contact with the molten material will burn contaminated skin or eyes.

CHRONIC: Chronic skin over-exposure to the fumes of these products during welding or brazing operations may produce dermatitis (red, inflamed skin). Repeated or prolonged over-exposures, via inhalation, to the dusts generated by these products may cause pulmonary fibrosis (scarring of lung tissue). Asthma-like symptoms have been reported in association with refining aluminium material and fumes from aluminium soldering.

TARGET ORGANS: For fumes: ACUTE: Skin, eyes, respiratory system. CHRONIC: Skin, respiratory system, pancreas and liver.

3 Composition/information on ingredients

Chemical characterization: Mixtures

Description: Mixture: consisting of the following components.

| NOMINAL COMPOSITION WEIGHT % BARE ROD or WIRE | | | | | | | | | |
|--|----------------------|---|--|---|--|-----------------------------|--|-----------------------|--|
| TRADE NAME | Si | Fe | Cu | Mn | Mg | Cr | Zn | Ti | Al |
| CHEMICAL NAME & CAS # | Silicon 7440-2103 | Iron (exposure limits are for iron oxide dust and fumes [Fe ₂ O ₃] as Fe 1309-37-1 | Copper (exposure limits are for copper fume, as Cu and dusts & mists, as Cu) 7440-50-8 | Manganese (exposure limits are for Manganese, elemental inorganic compounds, & fume as manganese) 7439-96-5 | Magnesium (exposure limits are for magnesium oxide fume) 7439-95-4 | Chromium Metal 7440-47-3 | Zinc (exposure limits given are for Zinc oxide, fume & dust) 7440-66-6 | Titanium 7440-32-6 | Aluminium (exposure limits are for aluminium, metal dust and aluminium, welding fume as aluminium) 7429-90-5 |
| 1100 | a | a | 0.05-0.20 | 0.05 | | | 0.10 | | 99.0 min. |
| 1188(d) | 0.06 | 0.06 | 0.005 | 0.01 | 0.01 | | 0.03 | 0.01 | 99.88 min. |
| 2319(b) | 0.20 | 0.30 | 5.80-6.80 | 0.20-0.40 | 0.02 | | 0.10 | 0.10-0.20 | rem. |
| 4043 | 4.5-6.0 | 0.80 | 0.30 | 0.05 | 0.05 | | 0.10 | 0.20 | rem. |
| 5154 | 0.25 | 0.40 | 0.10 | 0.10 | 3.10-3.90 | 0.15-0.35 | 0.20 | 0.20 | rem. |
| 5183 | 0.40 | 0.40 | 0.10 | 0.50-1.0 | 4.30-5.20 | 0.05-0.25 | 0.25 | 0.15 | rem. |
| 5356 | 0.25 | 0.40 | 0.10 | 0.05-0.20 | 4.50-5.50 | 0.05-0.20 | 0.10 | 0.06-0.20 | rem. |
| 5554 | 0.25 | 0.40 | 0.10 | 0.50-1.0 | 2.40-3.0 | 0.05-0.20 | 0.25 | 0.05-0.20 | rem. |
| 5556 | 0.25 | 0.40 | 0.10 | 0.05-1.0 | 4.70-5.50 | 0.05-0.20 | 0.25 | 0.05-0.20 | rem. |
| 5654 | c | c | 0.05 | 0.01 | 3.10-3.90 | 0.15-0.35 | 0.20 | 0.05-0.15 | rem. |
| 718 (4047) | 11.0-13.0 | 0.80 | 0.30 | 0.15 | 0.10 | | 0.20 | | rem. |
| 10 BRAZE ALLOY | 13.0 | 0.80 | 4.7 | 5.5 | 1.0 | 0.25 | 0.25 | | > 85 |
| Single Figures are Maximum a: Si + Fe = 0.95 max. b: Vanadium: 0.05-0.15, Zirconium 0.10-0.25 d: Vanadium 0.05 max., Gallium 0.03 max. c: Si + Fe = 0.45 max. | | | | | | | | | |

NOTE: Fumes may be generated during the use of these products. To appropriately assess inhalation hazards, one recommended way to determine the composition and quantity of fumes and gases to which workers are exposed is to take an air sample in the workers breathing zone.

Additional information:

For the listed ingredient(s), the identity and exact percentage(s) are being withheld as a trade secret.

Composition comments:

The term "Dangerous Components" should be interpreted as a term defined in Hazard Communication standards and does not necessarily imply the existence of a hazard. The product may contain additional nonhazardous ingredients or may form additional compounds under the condition of use. Refer to Sections 2 and 8 for more information.

4 First-aid measures

Description of first aid measures

General information: EMERGENCY OVERVIEW. These products consist of odourless, solid rods, which have a metallic lustre. There are no immediate health hazards associated with these products. These products are not reactive. If involved in a fire, these products may generate irritating aluminium fumes and a variety of metal oxides. Emergency responders must wear personal protective equipment suitable for the situation to which they are responding.

Victims of chemical exposure must be taken for medical attention. Rescuers should be taken for medical attention, if necessary. Take a copy of label and SDS to health professional with victim.

SKIN EXPOSURE: If fumes generated by welding or brazing operations involving these products contaminate the skin, begin decontamination with running water. If molten material contaminates the skin, immediately begin decontamination with cold, running water. Minimum flushing is for 15 minutes. Victim must seek medical attention if any adverse reaction occurs.

EYE EXPOSURE: If fumes generated by welding or brazing operations involving these products enter the eyes, open victim's eyes while under gently running water. Use sufficient force to open eyelids. Have victim "roll" eyes. Minimum flushing is for 15 minutes. Victim must seek medical attention.

INHALATION: If fumes generated by welding or brazing operations involving these products are inhaled, remove victim to fresh air. If necessary, use artificial respiration to support vital functions.

INGESTION: If swallowed call physician immediately! Do not induce vomiting unless directed by medical personnel. Rinse mouth with water if person is conscious. Never give fluids or induce vomiting if person is unconscious, having convulsions, or not breathing.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: Skin, respiratory disorders, pancreas and liver disorders may be aggravated by prolonged over-exposures to the dusts or fumes generated by these products.

RECOMMENDATIONS TO PHYSICIANS: Treat symptoms and eliminate overexposure.

5 Fire-fighting measures

Extinguishing media

Water spray, Halon, Dry Chemical, Carbon Dioxide, Foam or any ABC class.

Special hazards arising from the substance or mixture

None – not flammable.

Unusual fire and explosion hazards: When involved in a fire, this material may decompose and produce irritating fumes containing aluminium compounds and metal oxides. The molten material can present a significant thermal hazard to firefighters. Aluminium (a component of these products) can react with many alcohols or sodium hydroxide and produce flammable hydrogen gas.

Additional information:

Read and understand the Work Safe Australia Code of Practice on Welding Processes and "Standard for Fire Prevention During Welding, Cutting and Other Hot Work" before using this product. Section 274 of the Work Health and Safety Act (the WHS Act.)

6 Accidental release measures

Personal precautions, protective equipment and emergency procedures

These products are solid metal rods, with no spill or leak hazards.

Environmental precautions:

Avoid discharge into drains, water courses or onto the ground.

Methods and material for containment and cleaning up:

These products are solid metal rods, with no spill or leak hazards.

Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

7 Handling and storage

Handling:

Precautions for safe handling

Do not eat or drink while handling these products. Use ventilation and other engineering controls to minimize potential exposure to these products. All employees who handle this material should be trained to handle it safely. Use in a properly ventilated location. Avoid breathing fumes of these products during welding or

brazing operations. Read and understand the manufacturer's instruction and the precautionary label on the product. See the Australian Standard - AS 1674.1 – 1997 – Reconfirmed 2016. Safety in Welding and Allied Processes Australia.

Conditions for safe storage, including any incompatibilities

Storage:

Store packages in a cool, dry location. Storage in an atmosphere that is wet, moist, or highly humid may lead to corrosion of these products. Store away from incompatible materials (see Section 10, Stability and Reactivity). **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

Control parameters

Exposure Guidelines:

Refer to the Safe Environments risk management document – Welding Fume -

<http://www.safeenvironments.com.au/welding-fume/> The exposure standard refers to the publication by Work Safe Australia “Workplace Exposure Standard for Airborne Contaminants” with the Date of Effect being 22 December 2011. Work Safe Australia note that “exposure standards do not represent a fine dividing line between a healthy and unhealthy work environment. Natural biological variation and the range of individual susceptibilities mean that a small number of people might experience adverse health effects below the exposure standard.

| Hazard Classification for Chemical Composition | | | | | |
|--|----------------------------------|---------|-----------------------|----------|------------------------|
| CAS | Ingredient | TWA ppm | TWA mg/m ³ | STEL ppm | STEL mg/m ³ |
| 7429-90-5 | Aluminium Dust Aluminium Fume | | 10 5 | | |
| 7440-47-3 | Chromium Metal | | 0.5 | | |
| 7440-50-8 | Copper Dust Copper Fume | | 1 0.2 | | |
| 1309-37-1 | Iron Fume | | 5 | | |
| 7439-95-4 | Magnesium | | | | |
| 7439-96-5 | Manganese Fume | | 1 | | |
| 7440-21-3 | Silicon | | 10 | | |
| 7440-32-6 | Titanium | | | | |
| 7440-66-6 | Zinc Dust Zinc Fume | | 10 5 | | 10 |

Reference: ACGIH Biological Exposure Indices

Refer to Worksafe Australia for standards:

http://www.safeworkaustralia.gov.au/sites/SWA/about/Publications/Documents/639/Workplace_Exposure_Standards_for_Airborne_Contaminants.pdf

Exposure controls

Personal protective equipment:

General protective and hygienic measures:

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

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Ensure that eyewash stations and safety showers are proximal to the work-station location.

Engineering controls: No further relevant information available.

Ventilation

Avoid inhalation. Use in well ventilated areas. Where an inhalation risk exists, mechanical extraction ventilation is recommended. Maintain vapour levels below the recommended exposure standard.

Breathing equipment:

Where an inhalation risk exists, wear a Class P2 (Metal fume) respirator. If using product in a confined area, wear an Air-line respirator.

Protection of hands:

Wear welding gloves for routine industrial use.

Eye protection:

Wear safety glasses with side shields (or goggles). When these products are used for welding, it is recommended that safety glasses, goggles, or face-shield with filter lens of appropriate shade number (per ANSI Z49.1-1988, "Safety in Welding and Cutting") be worn.

Body protection: Protective work clothing



9 Physical and chemical properties

Information on basic physical and chemical properties: The following information is for elemental aluminium.

General Information

| PRODUCT | | | |
|---|---------------------------------|--|----------------|
| Appearance - Product | Solid Rods with metallic lustre | Physical State - Product | Solid |
| Odour - Product | Odourless | Odour Threshold | Not Available |
| ELEMENTAL ALUMINIUM. | | | |
| Flammability | Not Available | Flash Point | Not Available |
| pH | Not Applicable | Auto Igniting | Not Available |
| Melting point/range | 660 ^o C | Solubility water | Insoluble |
| Vapour Pressure, mmHg@1284 ^o C | 1 | | |
| Vapour Density | Not applicable | Density at 20 ^o C (68 ^o F) | Not Applicable |
| Boiling Point & boiling range | 2494 ^o C | Evaporation Rate | Not Available |
| Freezing/Melting Point | 660 ^o C | Specific Gravity @200C (water = 1) | Not Available |

10 Stability and reactivity

Stability: Stable.

Decomposition Products: Aluminium compounds and metal oxides.

NOTE: The composition and quality of welding fumes and gases are dependent upon the metal being welded, the process, the procedure, and the electrodes used. Other conditions that could also influence the composition and quantity of fumes and gases to which workers may be exposed include the following: any

coatings on metal being welded (e.g. paint, plating, or galvanizing), the number of welders and the volume of the work area, the quality of ventilation, the position of the welder's head with respect to the fume plume, and the presence of other contaminants in the atmosphere. When the electrode is consumed, the fume and gas decomposition products generated are different in percent and form from the ingredients listed in Section 2 (Composition and Information on Ingredients). Fume and gas decomposition products, and not the ingredients in the electrode, are important. Concentration of the given fume or gas component may decrease or increase by many times the original concentration. New compounds in the electrode may form.

Decomposition products of normal operations include not only those originating from volatilization, reaction, or oxidation of the product's components but also those from base metals and any coating (as noted previously). The best method to determine the actual composition of generated fumes and gases is to take an air sample from inside the welder's helmet if worn or in breathing zone. For additional information, refer to the American Welding Society Publication, "Fumes and Gases in the Welding Environment".

Materials with which substance is incompatible: Strong acids, strong bases, strong oxidizers, metal oxides, alcohols, halogenated hydrocarbons, halogens.

Hazardous polymerization: Will not occur.

Conditions to avoid: Avoid uncontrolled exposure to extreme temperatures and incompatible materials.

11 Toxicological information

Information on toxicological effects:

Toxicity data: Presented below are toxicological data available for the components of these products present in concentration greater than 1%.

| CAS | Name | Oral Toxicity LD50 | Intravenous Toxicity LD50 | Inhalation Toxicity LD50 |
|-----------|-----------|--------------------|---------------------------|--------------------------|
| 7429-90-5 | Aluminium | N/A | | |
| 7440-50-8 | Copper | 0.12mg/kg Human | 3.5mg/kg Mouse | |
| 7439-96-5 | Manganese | 9 mg/kg Rat | | |
| 7440-21-3 | Silicon | 3160 gm/kg Rat | | |
| 7440-32-6 | Titanium | N/A | | |
| 7440-66-6 | Zinc | 388 mg/kg Duck | | |

Mutagenicity: These products are not reported to produce mutagenic effects in humans.

Embryo toxicity: These products are not reported to produce embryotoxic effects in humans.

Teratogenicity: These products are not reported to cause teratogenic effects in humans. Clinical studies on test animals exposed to relatively high doses of the Copper component of some of these products indicate teratogenic effects. **Reproductive Toxicity:** These products are not reported to cause reproductive effects in humans. Clinical studies on test animals exposed to relatively high doses of the Copper and Titanium components of some of these products indicate adverse reproductive effects.

12 Ecological information

These products are not expected to cause adverse effects on aquatic life.

Ecological data: Presented below are ecological data available for the components of these products present in concentration greater than 1%.

| CAS | Name | Result LC50 | Species | Exposure |
|-----------|----------------------|----------------------------------|----------------------------|----------------------------------|
| 7429-90-5 | Aluminium Metal dust | 2.6 mg/L | Daphnia Magna | 24 hour |
| 7440-50-8 | Copper Dust | 58 mg/L | Fish | 96 Hours |
| 7439-96-5 | Manganese | >3.6mg/L > 1.6mg/L 2.8mg/L | Fish Crustacea Algae | 96 Hours 48 Hours 48 Hours |
| 7440-21-3 | Silicon | N/A | | |
| 7440-32-6 | Titanium | N/A | | |
| 7440-66-6 | Zinc | 0.00272mg/L 0.04mg/L | Fish Crustacea | 96 Hours 48 Hours |

Environmental stability: The components of these products occur naturally in the environment and are expected to persist in the environment for an extended period of time. Components of these products will react with water and air to form a variety of stable metal oxides.

Effect of material on plants or animals: The components of these products occur naturally in the environment and are essential for plant and animal life.

13 Disposal considerations

Waste treatment methods

Recommendation:

Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Dispose of contents/container in accordance with local/regional/national/international regulations.

Uncleaned packagings: Empty containers should be taken to an approved waste handling site for recycling or disposal.

Recommendation: Disposal must be made according to official regulations.

14 Transport Information

This product is not classed as hazardous.

| | |
|--|-----------------|
| UN-Number DOT, ADR, ADN, IMDG, IATA | Not Regulated |
| UN proper shipping name DOT, ADR, ADN, IMDG, IATA | Not Regulated |
| Transport hazard class(es) DOT, ADR, ADN, IMDG, IATA Class | Not Regulated |
| Packing group DOT, ADR, IMDG, IATA | Not Regulated |
| Environmental hazards: Marine pollutant: | No |
| Special precautions for user | Not applicable. |
| Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code | Not applicable. |
| UN "Model Regulation": | Not regulated. |

15 Regulatory information

Product Name: Aluminium Wires & Rods

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

Poison Schedule:

Classified as a Schedule 6 (S6) Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP).

Classifications:

Safework Australia criteria is based on the Globally Harmonised System (GHS) of Classification and Labelling of Chemicals.

The classifications and phrases listed below are based on the Approved Criteria for Classifying Hazardous Substances [NOHSC: 1008(2004)].

Refer to the Australian Inventory of Chemical Substances – AICS at <https://www.nicnas.gov.au/chemicals-on-AICS#main>

Poison schedule: Classified as a Schedule 6 (S6) Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP). <https://www.legislation.gov.au/Details/F2016L01638>

Classifications: Safework Australia criteria is based on the Globally Harmonised System (GHS) of Classification and Labelling of Chemicals.

The classifications and phrases listed below are based on the Approved Criteria for Classifying Hazardous Substances [NOHSC: 1008(2004)].

16 Other information

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.

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

Workplace exposure standards for airborne contaminants, Safe work, Australia

American Conference of Industrial Hygienists (ACGIH)

Globally Harmonised System of classification and labelling of chemicals.

WELDING (1): Due to the diversity of welding techniques, processes, materials used, nature of the surface being welded and the presence of contaminants, the fumes & gases associated with welding will vary in composition and quantity. When assessing a welding process, the toxic fumes generated may not only be associated with the parent metal, filler wire or electrode. The welding/cutting arc may generate nitrogen oxides, carbon monoxide & other gases, whilst UV radiation emitted from some arcs generates ozone. Ozone may irritate mucous membranes and cause pulmonary oedema & haemorrhage. Shielding gases (e.g. carbon dioxide and inert gases i.e. argon and helium) in high concentrations, in confined spaces, may reduce oxygen in the atmosphere to dangerous levels, resulting in possible asphyxiation.

WELDING (2): In addition to complying with individual exposure standards for specific contaminants, where current manual welding processes are used, the fume concentration inside the welder's helmet should not exceed 5 mg/m³ (unless otherwise classified) when collected in accordance with Australian Standard AS 3853.1: Fume from welding and allied processes - Guide to methods for the sampling and analysis of particulate matter and AS 3853.2: Fume from welding and allied processes - Guide to methods for the sampling and analysis of gases. Airway irritation and metal fume fever are the most common acute effects from welding fumes. Reported to cause reduced sperm quality in welders.

WELDING (3): Other gases and fumes associated with welding processes include: Inert shielding gases (e.g. argon, carbon dioxide, helium) which may reduce the atmospheric oxygen content in poorly ventilated areas. UV-radiation and Infra-Red radiation may decompose chlorinated degreasing agents to form highly toxic and irritating phosgene gas. This may occur if a metal has been degreased but inadequately dried or when vapours from a nearby degreasing bath enter the welding zone.

WELDING (4): Welding fumes may contain a wide variety of chemical contaminants, including oxides and salts of metals and other compounds which may be generated from electrodes, filler wire, flux materials and from the welded material (e.g. painted surfaces). Welding stainless-steel and its alloys generates nickel and chromium (VI) compounds. Welding fumes are retained in the lungs. Sparingly soluble compounds may be released slowly from the lungs. Welding fume is classified as possibly carcinogenic to humans (IARC Group 2B).

PERSONAL PROTECTIVE EQUIPMENT GUIDELINES:

The recommendation for protective equipment contained within this report is provided as a guide only. Factors such as method of application, working environment, quantity used, product concentration and the availability of engineering controls should be considered before final selection of personal protective equipment is made.

Disclaimer:

We urge each end user and recipient of this SDS to study it carefully. If necessary, consult an industrial hygienist or other expert to understand this information and safeguard the environment and protect workers from potential hazards associated with the handling or use of this product.

Harris Products Group cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for use, handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. The information in the sheet was written based on the best knowledge and experience currently available.

WARNING: PRODUCT COMPONENTS PRESENT HEALTH AND SAFETY HAZARDS. READ AND UNDERSTAND THIS MATERIAL SAFETY DATA SHEET (M.S.DS.). ALSO, FOLLOW YOUR EMPLOYER'S SAFETY PRACTICES.

The information contained herein relates only to the specific product. If the product is combined with other materials, all component properties must be considered. **BE SURE TO CONSULT THE LATEST VERSION OF THE MSDS. MATERIAL SAFETY DATA SHEETS ARE AVAILABLE FROM HARRIS PRODUCTS GROUP** Harris Products Group, HGE PTY LTD, Brisbane | Melbourne | Perth | New Zealand, 14 Queensland Rd, Darra, QLD 4076, Phone: (07) 3375 3670 | Fax: (07) 3375 3620, Email: sales@hgea.com.au, www.harrisproductsgroup.com.au,

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[End of SDS]