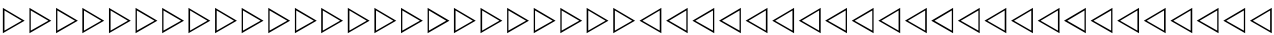


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8. EXPOSURE CONTROLS/ PERSONAL PROTECTION:

Engineering Controls: The usual precautionary measures for handling chemicals should be followed. Keep away from food, beverages and feed. Remove all soiled and contaminated clothing immediately. Wash hands before break and at the end of the work. Store all protective clothing separately. Maintain an ergonomically appropriate working environment. Wear protective equipment. Keep unprotected persons away. Avoid causing dust.

Exposure limits: Use industrial hygiene equipment to ensure that exposure does not exceed applicable national exposure limits. The limits defined under section 3 can be used as guidance. Unless noted, all values are for 8 hour time weighted average.

Biological limits: No available data

Personal protection:

Respiratory protection: Use an air purifying dust respirator when welding or brazing in a confined space, or when local exhaust or ventilation is not sufficient to keep exposure values within safe limits.

Hands protection: Wear appropriate gloves to prevent skin contact.

EN 12477: Protection gloves for welders

Requirements (EN Levels)	Type A	Type B
Abrasion (Cycles)	2 (500)	1 (100)
Cut (Factor)	1 (1.2)	1 (1.2)
Tear (Newton)	2 (25)	1 (10)
Puncture (Newton)	2 (60)	1 (20)
Burning Behaviour	3	2
Contact Heat	1	1
Convective Heat	2	-
Small Splashes	3	2
Dexterity	1 (11)	4 (6.5)

Type B gloves are recommended when high dexterity is required as for TIG welding, while type A gloves are recommended for other welding processes. The contact temp (°C) is 100 and the threshold time (seconds) >15.

Eyes protection: Welder's helmet or face shield with colour absorbing lenses. Shield and filter to provide protection from harmful UV radiation, infra red and molten metal approved to standard EN379. Filter shade to be a minimum of shade 9.

Skin protection: Heat-resistant protective clothing. Wear safety boots, apron, arm and shoulder protection. Keep protective clothing clean and dry. Clothing should be selected to suit the level, duration and purpose of the welding activity.

Class 1	
Impact of Spatter	15 Drops
Heat Transfer (radiation)	RHTI 24 ≥ 7 seconds
Process	<p>Manual welding with light formation of spatter and drops</p> <ul style="list-style-type: none"> • Gas Welding • TIG Welding • MIG Welding • Micro plasma welding • Brazing • Spot Welding • MMA Welding (with rutile-covered electrode)

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accelerates arteriosclerosis, damage to the lungs, vomiting, diarrhoea, abdominal pain and blood disorders. Excessive inhalation of zinc oxide fumes may produce symptoms known as "Zinc Shakes" which are flu-like and usually cease when the individual is removed from the source. Prolonged or repeated exposure can cause vomiting, diarrhoea, lung irritation.

12. ECOLOGICAL INFORMATION:

Toxicity: No available data.
Persistence and Degradability: No available data.
Bio accumulative Potential: No available data.
Mobility in Soil: No available data.
Other Adverse Effects: No available data.
 Do not allow undiluted product or large quantities to reach ground water, water course or sewage systems. Do not allow product to be released in the environment without proper governmental permits.

13. DISPOSAL CONSIDERATIONS:

Product: For product elimination, dispose of in accordance with EPA regulations.
Package: May be disposed in approved landfills provided local regulations are observed.

14. TRANSPORT INFORMATION:

UN-number: Not applicable
UN proper shipping name: Not applicable
Transport hazard class: Not applicable
Packing group: Not applicable
Environmental hazards: Not applicable
Special precautions for users: Not applicable

15. REGULATORY INFORMATION:

Safety, health and environment regulations/legislation specific for the substance or mixture: Read and understand the manufacturer's instructions, your employer's safety practices and the health and safety instructions on the label. Observe any federal and local regulations. Take precautions when welding and protect yourself and others.
Warning: Welding fumes and gases are hazardous to your health and may damage lungs and other organs. Use adequate ventilation. Electric shock can kill. Arc rays and sparks can injure eyes and burn skin. Wear correct hand, head, eye and body protection.
Chemical safety assessment: No
 USA: Under the OSHA Hazard Communication Standard, this product is considered hazardous. This product contains or produces a chemical known to the state of California to cause cancer and birth defects (or other reproductive harm). (California Health & Safety Code § 25249.5 et seq.) United States EPA Toxic Substance Control Act: All constituents of this product are on the TSCA inventory list or are excluded from listing.
EPCRA/SARA Title III Toxic Chemicals
 The following metallic components are listed as SARA 313 "Toxic Chemicals" and potential subject to annual SARA reporting. See Section 3 for weight percentage.

Ingredient Name	Disclosure Threshold
Silver	.01 mg/m3
Copper	1.0 mg/m3
Zinc	5.0 mg/m3

16. OTHER INFORMATION:

The information in this document is believed to be correct as of the date issued. However, no warranty is expressed to be implied regarding the accuracy or completeness of this information. This information and product are furnished on the condition

that the person receiving them shall make his own determinations as to the suitability of the product for his particular purpose and on the condition that he assumes the risk of his use thereof.

This Material Safety Data Sheet complies with the EC directives 91/155/EEC and 93/112/EEC, including modifications 2001/58/EC.

Complies with OSHA Communication Standard 29 CFR 1910.1200 and Superfund Amendments and Reauthorization Act (SARA) of 1986 Public Law 99-499

H228 – Flammable solid.
H302 – Harmful if swallowed.
H314 – Causes severe skin burns and eye damage.
H315 – Causes skin irritation.
H319 – Causes serious eye irritation.
H335 – May cause respiratory irritation.
H360 – May damage fertility or the unborn child.
H400 – Very toxic to aquatic life.
H410 – Very toxic to aquatic life with long lasting effects.

R11 – Highly flammable.
R22 – Harmful if swallowed.
R34 – Causes burns.
R36/38 – Irritating to eyes and skin.
R36/37/38 – Irritating to eyes, respiratory system and skin.
R50 – Very toxic to aquatic organisms.
R50/53 – Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R60 – May impair fertility.
R61 – May cause harm to the unborn child.

S16 – Keep away from source of ignition – No smoking.

S26 – In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S36/37/39 – Wear suitable protective clothing, gloves and eye/face protection.

S45 – In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

S53 – Avoid exposure – obtain special instructions before use.

S61 – Avoid release to the environment.

End of the document.