

ALUMINUM METAL – SAFETY DATA SHEET

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1. PRODUCT IDENTIFICATION

Importer / Supplier / Distributor:

Unified Alloys

8835 – 50th Avenue
Edmonton, Alberta CANADA
T6E 5H4





Emergency Phone #: (780) 468-5656 (on-call service)

The conditions or methods of handling, storage, use, and disposal of the product are beyond our control and may be beyond knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage, or expense arising out of or in any way connected with the handling, storage, use, or disposal of the product.

NOTE: This product contains no other hazardous ingredients requiring disclosure under current regulations.

2. HAZARD IDENTIFICATION

Classification: Aluminum and its alloys are considered as non- hazardous in its soiled form. However, certain process such as cutting, milling, grinding and welding could result in some hazardous material being emitted.

SYMBOLS	HAZARD	HAZARD STATEMENTS
	Carcinogenicity Respiratory sensitizer Toxics to reproduction	May cause cancer May cause allergy or asthma symptoms or breathing difficulties if inhaled May cause genetic effects.
	Skin Sensitizer repeated exposure	May cause skin allergies prolonged exposure may damage internal organs
	Acute toxic to aquatic life Chronic to Aquatic life	Toxic to aquatic life with long lasting effects. Chronic to Aquatic life if exposure is prolonged.
	Fire & explosion (if in dust form)	Flammability (category -1 under GHS classification)

Label Element: No labeling is applicable

Other hazards: According to OSHA hazard communication, this product is classified as Non hazardous material.

3. COMPOSITION INFORMATION ON INGREDIENTS

Component (*)	CAS Number	% Weight	OSHA PEL (mg/ms)	ACGIH TLV (mg/ms)
Base Metal: Aluminum (Al)	7429-90-5	90 - 99.7	10.0 dust / 5.0 respirable	1.0 respirable
Alloying Elements				
Chromium (Cr)	7440-47-3	<0.01 - 0.4	0.5 metal	0.01 insoluble
Copper (Cu)	7440-50-8	<0.06 - 6.0	0.1 fume / 1.0 dust	0.2 fume / 1.0 dust
Iron (Fe)	1309-37-7	<0.35 - 1.0	5.0 (oxide fume)	5.0 respirable
Magnesium (Mg)	1309-48-4	<0.03 - 4.0	10.0 total particulate (oxide)	10.0 total particulate (oxide)
Manganese (Mn)	7439-96-5	<0.02 - 1.5	0.2 fume or dust	0.02 respirable
Silicon (Si)	7440-21-3	<0.25 - 1.2	10.0 dust / 5.0 respirable	Not established
Titanium (Ti)	13463-67-7	<0.02 - 0.2	See PNOR	10.0 (dioxide)
Zinc (Zn)	1314-13-2	<0.05 - 6.1	10.0 dust / 5.0 respirable (oxide)	2.0 respirable (oxide)
Bismuth (Bi)	7440-69-9	<0.40 - 0.7	Not established	Not established
Boron (B)	7440-42-8	0.06 max	Not established	Not established

Lead (Pb)	7439-92-1	<0.40 - 0.7	0.05	0.05
Vanadium (V)	1314-62-1	0.05 max	Not established	0.05

NOTE: This product contains no other hazardous ingredients requiring disclosure under current regulations.

4. FIRST-AID MEASURES

Inhalation: Move to fresh air. If condition continues, consult a physician.

Ingestion: Rare in industry. If significant amount of metal is ingested, consult a physician.

Eyes: Flush thoroughly with water to remove particulate; obtain medical attention.

Skin Contact: Remove particles by washing thoroughly with soap and water. Seek medical attention if condition persists.

Notes: Respiratory disorders may be aggravated by exposure to metallic and/or organic/inorganic coating dusts or fumes. Consult a Physician if condition persists.

Do not induce vomiting or give liquids to an unconscious person.

5. FIRE AND EXPLOSION HAZARD

1. Conditions of Flammability: Steel products (Aluminum Metal) does not present fire or explosion hazards under normal conditions. Fine metal particles such as those produced in grinding or sawing can burn. High concentrations of metal filings may present an explosion hazard.

2. Means of extinction: For molten metal use dry powder or sand. Do NOT use water on molten metals.

3. Flashpoint and method of determination: N/A (under normal conditions)

4/5. Upper and Lower Flammable Limit: N/A (under normal conditions)

6. Auto-ignition temperature: N/A (under normal conditions)

7. Hazardous Combustion Products: N/A (under normal conditions)

8. Explosion Data: sensitivity to mechanical impact: N/A (under normal conditions)

9. Explosion Data: sensitivity to static discharge: N/A (under normal conditions)

6. ACCIDENTAL RELEASE MEASURES

Leak and Spill Procedures: Not applicable to soiled state, no effect on Environment and Human lives. Solid metal does not pose any problems. Dust spills should be cleaned up avoiding dust generation. Collect and recycle to process. Wash down with water if in contact with acids.

7. HANDLING AND STORAGE

Storage Requirements: Store away from corrosive chemicals.

Special Shipping Information: N/A

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Personal Protective Equipment: Dependent upon processes being performed on material. Each operator must be addressed for suitable equipment.

Gloves: Protective gloves should be worn during welding, burning or handling operations.

Clothing: As required. Dependent on the operations and local welding codes.

Respiratory: NIOSH / MSHA approved dust and fume respirator should be used to avoid excessive inhalation of particles when exposure exceeds TLV's.

Footwear: CSA Z195-02 Steel Toed, safety shoes.

Eye: safety glasses, goggles or face shield should be worn as required by exposure.

Other: With molten metals, use full body cover clothing, including gloves, eyewear and footwear suitably treated to prevent burns

Engineering Controls: Engineering controls required if incase welding, milling, cutting and grinding work is performed. (e.g. ventilation, enclosures, specify) Depending on type of process performed a specific equipment and PPE's are required to perform the job safely.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical and Chemical Properties

Physical State	Solid
Odor	NA
Evaporation Rate	NA
Boiling Point	NA
Melting Point	900-1200 Degree Celsius
PH	NA
Solubility in Water	NA
Vapor Pressure	NA
Density	8.94

Appearance	Silver Grey
Volatility	NA
Odor threshold	NA
Specific gravity	(H2O=1): 2.5-2.9
Freezing Point	NA

10. STABILITY AND REACTIVITY

Chemical Stability: STABLE (under normal conditions of use and storage)

Conditions of Reactivity: HYDROGEN GAS. Avoid storage or potential contact with oxidizing agents.

Hazardous Decomposition Products: Aluminum products under normal conditions are stable during use, storage and transportation. Halogen acids and sodium hydroxide in contact with aluminum may generate explosive mixtures of hydrogen. Finely divided aluminum, such as small chips and fines will form explosive mixtures in air. It also will form explosive mixtures in air in the presence of bromates, iodates, or ammonium nitrate. Strong oxidizers cause violent reactions with considerable heat generation.

Incompatibilities: Reacts with strong acids to form hydrogen gas.

Possibility of hazardous Reactions: Hazardous polymerization cannot occur.

Reactivity: This product is not reactive as supplied.

11. TOXICOLOGICAL PROPERTIES

Effects of Acute Exposure to Material:

In standard operations, including melting, cutting and grinding, aluminum alloys present a low health risk by inhalation and are usually considered a nuisance dust.

Effects of Acute Chronic Exposure to Material:

Welding and plasma cutting of alloys high in Aluminum (2000 and 7000 series) may present the potential for overexposure to Aluminum fumes which can result in upper respiratory tract irritation, nausea and metal fume fever. Overexposure to lead fumes over an extended period of time can result in such toxic effects as central nervous system disturbances, renal changes, peripheral neuropathy, gastrointestinal disturbances, anemia, and chromosomal changes. The welding of aluminum alloys may generate carbon monoxide, ozone, nitrogen oxides, infrared radiation, and ultraviolet radiation.

Route of Entry:

Prolonged skin contact with coated steel may cause skin irritation in sensitive individuals. Inhalation of metal particulate or elemental oxide fumes generated during welding, burning, grinding or machining may pose acute or chronic health effects.

Irritancy of Material: N/A

Sensitization to Material: N/A

Mutagenicity of Material: N/A

Reproductive Effects: N/A

Teratogenicity of Material: N/A

Synergistic Materials: N/A

Carcinogenicity of Material: N/A

IARC lists certain hexavalent chromium compounds under its group 1 category - "Confirmed Human Carcinogen."

IARC lists nickel and certain nickel compounds under its group 2A category - "Suspected Human Carcinogen."

NOTE: Iron containing welding fumes has an exposure limit of 5 mg/m³ (ACGIH – TLV's 1988-89). Welding fumes may also contain contaminants from fluxes or welding consumables.

12. ECOLOGICAL INFORMATION

Eco-toxicity: No data available for Aluminum and its alloys in their natural solid state.

Presence of Degradability: NO data available

Bioaccumulation Potential: NO data available

Mobility in soil: NO data available

Other adverse effects: None known.

13. DISPOSAL CONSIDERATION

Waste Disposal: Recover Aluminum for recycling. Follow applicable regulations. Dispose of in compliance with local regulations.

14. TRANSPORT INFORMATION

General Shipping Information: Material not regulated for shipping.

Un Number: NA

Hazard Class: NA

Special Shipping Information: N/A

15. REGULATORY INFORMATION

Domestic Substances List: the components of this material are on the federal DSL inventory.

Other Canadian Regulations: NA

WHMIS: Class D2, materials causing Reactive flammable or other Toxic effects when other processes are performed (Welding, cutting and grinding)

16. OTHER INFORMATION

Prepared By: UnifiedAlloy

Telephone: (780) 468-5656

Note: Contact Supplier (Quality Department) for additional information

Preparation Date: December / 20 / 2018

IMPORTANT! Read this SDS before use or disposal of this product. Pass along the information to employees and any other persons who could be exposed to the product to be sure that they are aware of the information before use or other exposure. This SDS has been prepared in accordance with the Globally Harmonized System of Chemical and Labeling of Chemicals (GHS) Fifth Edition and the OSHA Hazard Communication Standard [29 CFR 1910.1200]. The SDS information is based on sources believed to be reliable. Available data, safety standards, and government regulations are subject to change and the conditions of handling and use, or misuse are beyond our control, Unified Alloys makes no warranty, either expressed or implied, with respect to the completeness or continuing accuracy of the information contained herein and disclaims all liability for reliance thereon. Additional information may be necessary or helpful for specific conditions and circumstances of use. It is the user's responsibility to determine the suitability of this product and to evaluate risks and exercise appropriate precautions for protection of employees and others prior to use.