Material safety data sheet

ALUMINCO
ALUMINIUM BUILDING SYSTEMS

Form # MSDS 07-2015

PRODUCT / CONTACT INFORMATION

Product Name:	Aluminum Alloys
Series:	6060, 6063
CAS#:	7429-90-5
Chemical Name:	Aluminum
Chemical Formula:	Al

Company Name:	Aluminco S.A.
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About Aluminco S.A.

Today, with 33 years of experience, our company has evolved to an integrated vertical aluminium industry focusing on developing, producing and marketing branded aluminium systems for every architectural use.

The extrusion department of Aluminco is the "heart" of the factory. Our unit is fully automated equipped with the latest software and hardware.

The advanced cooling system of our extrusion pres is fully automated, constantly controls the temperature of the extruded profile through air, keeping the appropriate cooling rate for each alloy and temper. The extrusion line is also equipped with automated stacker machine with no human contact eliminating the risk of damaging the extruded profile.

Finally the aging ovens are fully automated with continuous temperature control and real time adjustment, safeguarding the optimum temper results.

ALUMINCO headquarters, are located in Inofita Viotia, Greece, at a 40.000sq.m. owned property.

INFORMATION ON ALLOYING ELEMENTS

		COMPOSITION	EXPOSURE CONTROLS	TOXICITY
CHEMICAL NAME	CAS NUMBER	% BY WEIGHT	TLV ACGIH (mg/m3)	LD_{50} ORAL
ALUMINUM (BASE METAL)	**7429-90-5**	**90-99.7**	**1.0 (Respirable)**	**Unknown**
ZINC	7440-66-6	0-8.0	2.0 (As zinc oxide-respirable)	Unknown
COPPER	7440-50-8	0-6.0	1.0 (Dust) 0.2 (Fume)	Unknown
NICKEL	7440-02-0	0-2.0	1.5 (Metal) 0.2 (Insoluble) 0.1 (Soluble)	>9,000 mg/kg Oral-Rat
MAGNESIUM	7439-95-4	0-1.5	10.0 (as Magnesium oxide)	230 mg/kg Oral-Rat
MANGANESE	7439-96-5	0-1.5	0.2 (as inorganic Mn)	9,000 mg/kg Oral-Rat
SILICON	7440-21-3	0-1.2	10.0 (Respirable) 3.0 (Respirable)	3,160 mg/kg Oral-Rat
IRON	7439-89-6	0-1.0	5.0 (Respirable)	30,000 mg/kg Oral-Rat
BISMUTH	7440-69-9	0-0.7	Not Established	10,000 mg/kg Oral-Rat
LEAD	7439-92-1	0-0.7	0.05 (Elemental)	Unknown
BORON	7440-42-8	0.06 max	Not Established	2,000 mg/kg Oral-Mouse
COBALT	7440-48-4	0-0.6	Not Established	6,171 mg/kg Oral-Rat
VANADIUM	7440-62-2	0.05 max	0.05 (as Vanadium pentoxide)	130 mg/kg Oral-Rat
TITANIUM	7440-32-6	0-0.2	10.0 (as Titanium dioxide)	Unknown

CHEMICAL & PHYSICAL PROPERTIES	
PHYSICAL STATE:	Solid
APPEARANCE:	Silver gray solid
ODOUR:	Not Applicable
ODOUR THRESHOLD:	Not Applicable
pH:	Not Applicable
MELTING POINT:	521-650°C (970-1200°F)
BOILING POINT:	2494°C (4521°F) (approx.)
FLASH POINT (°C):	N/A
EVAPORATION RATE:	Not Applicable
FLAMMIBILITY (solid, Gas):	Not flammable
UPPER FLAMMABLE LIMIT %:	Not Applicable
LOWER FLAMMABLE LIMIT %:	Not Applicable
VAPOUR PRESSURE:	Not Applicable
VAPOUR DENSITY:	Not Applicable
RELATIVE DENSITY:	2.7 (approx.)
SPECIFIC GRAVITY:	No data
SOLUBILITY:	Not soluble
PARTITION COEFFICIENT:	No data
AUTO-IGNITION TEMP (°C):	Not Applicable
DECOMPOSITION TEMP:	No data
VISCOSITY:	Not Applicable
OTHER INFORMATION:	Not Applicable

PREVENTION IN GENERAL

Aluminum and aluminum alloys are considered an "article" and not hazardous in its solid form. However, certain process such as cutting, milling, grinding, melting and welding could result in some hazardous materials being emitted. Keep in mind the following precautionary statements:

- Do not breathe dust/fume.
- Use in a well- ventilated area.
- Avoid generating dust.
- Dusts and fines from processing may be ignitable.
- Keep away from heat/sparks/open flames/hot surfaces.
- No smoking.
- Use personal protective equipment as required.
- Wash thoroughly after handling.
- Do not eat, drink or smoke when using this product.
- Obtain special instructions before use.
- Do not handle until all safety precautions have been read & understood.
- Contaminated work clothing should not be allowed out of the workplace.

FIRST AID MEASURES

EYE CONTACT:	SKIN CONTACT:	INHALATION:	INGESTION:
DUST ACTS AS A FOREIGN BODY. FLUSH EYES WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES. *SEEK MEDICAL ATTENTION IF EYE IRRITATION PERSISTS.*	MAINTAIN GOOD PERSONAL HYGIENE. WASH AFFECTED AREA WITH MILD SOAP AND WATER. *SEEK MEDICAL ATTENTION IF SKIN IRRITATION PERSISTS.*	REMOVE TO FRESH AIR. CHECK FOR CLEAR AIRWAY, BREATHING AND PRESENCE OF PULSE. *IF NECESSARY ADMINISTER CPR. CONSULT A PHYSICIAN IMMEDIATELY.*	RARE IN INDUSTRY. DUST MAY IRRITATE MOUTH AND GASTROINTESTINAL TRACT. *IF INGESTED, SEEK MEDICAL ATTENTION PROMPTLY.*

MOST IMPORTANT SYMPTOMS/EFFECTS, ACUTE AND DELAYED:
Aluminum and aluminum alloys as sold and shipped is not likely to present an acute or chronic health effects.
However, during processing (cutting, milling, grinding, melting or welding) emitted byproducts may cause irritations, difficulty in breathing, coughing or wheezing. May cause allergic skin reactions.

INDICATION OF IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED, IF NECESSARY:
Notes to physician: May cause sensitization by skin contact or inhalation. Treat symptomatically.

FIRE FIGHTING MEASURES

SUITABLE EXTINGUISHING MEDIA:	SPECIFIC HAZARDS ARISING FROM MATERIAL:	HAZARDOUS COMBUSTION PRODUCTS:	SPECIAL PROTECTIVE EQUIPMENT AND PRECAUTIONS FOR FIRE FIGHTERS:
Non-flammable. Not applicable for solid product. Use Class D extinguishing agents or sand on fires involving dusts or chips. Use extinguishers appropriate for surrounding materials. Do NOT use water on molten metal. Do NOT use halogenated extinguishing agents on chips or fines.	Dusts from grinding operation may burn if they are ignited. Dust, powder and fumes are flammable when exposed to flame or by chemical reaction with oxidizing agents. Aluminum chips, dust and fines in contact with water can generate flammable hydrogen gas.	At temperatures above the melting point, fumes containing aluminum oxides and smaller amounts of other alloying elements may be liberated. If heated to very high temperatures, copper and zinc fumes may evolve.	Firefighters should wear self-contained NIOSH-approved breathing apparatus and full protective clothing.

EXPLOSION DATA:	SENSITIVITY TO MECHANICAL IMPACT:	SENSITIVITY TO STATIC DISCHARGE:
Molten metal in contact with water may be explosive.	NONE	N/A

ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES:	ENVIRONMENTAL PRECAUTIONS:	METHODS AND MATERIALS FOR CONTAINMENT AND CLEANING UP:
Not applicable to aluminum in solid state. Avoid dust formation. Ensure adequate ventilation. Clean-up personnel should be protected against contact with eyes and skin protection.	Not applicable to aluminum in solid state. Do not flush into surface water or sanitary sewer system.	Solid metal does not pose any problems. Dust spills should be cleaned up avoiding dust generation. Wash down with water if in contact with acids. Avoid inhalation of dusts. Collect scrap aluminum for recycling.

HANDLING AND STORAGE

PRECAUTIONS FOR SAFE HANDLING:	CONDITIONS FOR SAFE STORAGE:
Not applicable to aluminum in solid state. Operations with the potential for generating high concentrations of airborne particulates should be evaluated and controlled as necessary. Practice good housekeeping. Avoid generating dusts. Avoid breathing metal fumes and/or dust. Avoid contact with sharp edges or heated metal. Hot and cold aluminum are not visually different. Hot aluminum does not always glow red. Eating, drinking or smoking should not be allowed in areas where this alloy is processed, handled or stored.	Other than incompatibles, no special storage conditions for aluminum in solid state.
	INCOMPATIBLE PRODUCTS:
	Store away from strong acids, alkalis and oxidizers. Store away from halogenated compounds. Product should be kept dry to prevent corrosion.

STABILITY AND REACTIVITY

REACTIVITY:	CHEMICAL STABILITY:	POSSIBILITY OF HAZARDOUS REACTIONS:
Not determined for product in solid form.	Yes. Aluminum and its alloys are stable under normal storage and handling conditions.	Hazardous polymerization cannot occur. Chips, fines, dust and molten aluminum is considerably more reactive than the metal itself.

CONDITIONS TO AVOID:	INCOMPATIBLE MATERIALS:	HAZARDOUS DECOMPOSITION PRODUCTS:
Water: slowly generates flammable hydrogen gas. Acids & alkalis: reacts to generate flammable hydrogen gas and heat. Oxidizers: violent reaction with considerable heat generation. Note: generation rate is greatly increased with smaller particles (i.e. fines and dust).. Avoid dust formation. Molten metal can react violently with water or moisture.	Yes, incompatible with strong acids, alkalis and oxidizers. Acetylene.	None. Products other than fire or explosion – does not decompose. Toxic metal oxides, COx & NOx may be produced during a fire involving aluminum and its alloys.

DISPOSAL CONSIDERATIONS

WASTE DISPOSAL:	GENERAL INFORMATION:
Aluminum scrap should be recycled whenever possible.	Dispose of in accordance with applicable federal, provincial/state or local regulations.

DISCLAIMER

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