MATERIAL SAFETY DATA SHEET

#318, V2.0, 15/07/2009

ALUMINIUM ALLOY EXTRUSIONS

SECTION 1. - Product and Company Identification

Product Name: Aluminium Alloy Extrusions

Synonyms, Trade Names: All aluminium alloys in the 1xxx – 7xxx series excluding those containing lead (2011 and 6262)

Applications: Engineering

Supplier: [redacted] **Aluminium Extrusions Co.,Ltd.**
[redacted]GUANGDONG,CHINA

Business/Emergency Telephone: 86-75[redacted]

Facsimile: 86-75[redacted]

Appearance and Odour: Silver grey metallic solid, odourless

SECTION 2. - Composition/Information on Ingredients

CAS #	Base Metal	Percent
7429-90-5	Aluminium	80 – 99.7%
	Alloying Elements	
7440-50-8	Copper	<10%
7439-95-4	Magnesium	<10%
7440-66-6	Zinc	<10%
7439-89-6	Iron	<2%
7439-96-5	Manganese	<2%
7440-21-3	Silicon	<14%
7440-31-5	Tin	<2%
7440-02-0	Nickel	<2%
7440-47-3	Chromium	<0.5%

For more detailed chemical composition, refer to the certificate of analysis, available on request.

SECTION 3. - Hazards Identification

- Not regarded as a health hazard under current legislation as supplied.
- Water/humidity on metal that is added to a melting furnace can cause violent explosions. Preheat material and keep dry prior to charging into a furnace.

SECTION 4. - First Aid Measures

Inhalation: Not considered to be a health hazard as supplied. However, if dust or hot vapour is inhaled, move the exposed person to a well ventilated area, rinse nose and mouth with water and provide rest and warmth. If discomfort persists, consult a physician.

Ingestion: Not relevant

Skin Contact: Not considered to be a health hazard as supplied. However, if hot metal comes into contact with skin, remove the affected person from source of contamination and rinse the skin with plenty of cold water. If burn is severe, consult a physician.

Eye Contact: Dust in the Eyes – remove any contact lenses and flush eyes thoroughly with water, taking care to rinse under eyelids. Continue flushing for at least 15 minutes. If discomfort persists, consult a physician.

SECTION 5. - Fire Fighting Measures

Extinguishing Media: Not a fire hazard unless in particulate form. Suspensions of aluminium dust in air may pose a severe explosion hazard. A potential for explosion exists for a mixture of fine and coarse particles if at least 15 – 20% of the material is finer than 44 microns (325 mesh). Buffing and polishing generate finer material than grinding, sawing and cutting. In case of aluminium fires, use a class D dry powder extinguisher. Do NOT use water or halogenated extinguishing media.

Hazardous Combustion Products: Not relevant

SECTION 6. - Accidental Release Procedures

- Recycle. Aluminium in the form of fine particulates may be reactive; its hazardous characteristics should be determined prior to disposal.

SECTION 7. - Handling and Storage

Handling Precautions: Because of the risk of explosion, aluminium alloy scrap must be thoroughly dried prior to remelting.
Hot aluminium does not exhibit any warning colour change. Exercise great caution since the metal may be hot. Use standard techniques to check metal temperature prior to handling.
Possibility of sharp edges – use protective gloves.

Storage Conditions: Store in dry conditions away from any of the chemicals listed in Section 10

SECTION 8. - Exposure Controls and Personal Protection

- Ventilation must be capable of removing finely divided metallic dust generated by grinding, sawing, etc., in order to eliminate explosion hazards.
- Dust concentration in ventilation ducts must be maintained below the lower explosive limit of 40g/m^3. Use an approved respirator where concentrations exceed exposure limits.
- The use of primary protective equipment is necessary when handling hot metal.

Exposure Limits:

Substance	Long Term Exposure Limit (8 hour TWA ref period) mg.m^3	Short Term Exposure Limit (15 min. ref period) mg.m^3
Aluminium metal and oxides, respirable dust	4	-
Aluminium metal and oxides, total inhalable dust	10	-
Chromium	0.5	-
Copper, dusts & mists	1	2
Copper, fume	0.2	-
Magnesium oxide, fume & respirable dust	4	10
Manganese, fume	1	-
Nickel	0.1	-
Silicon, respirable dust	4	-
Silicon, total inhalable dust	10	-
Zinc oxide, fume	5	10

Protection: Use protective gloves. If dust is generated, use tight-fitting goggles and dust masks. If the level of nuisance dust exceeds 10mg/m^3, use respirators. Provide sufficient ventilation for operations causing dust formation.

SECTION 9. - Physical and Chemical Properties

Appearance:	Metallic
Colour:	Silver grey
pH:	not applicable
Boiling Point:	not applicable
Melting Point:	480–660°C
Vapour Pressure:	not applicable
Vapour Density (Air = 1):	not applicable
Evaporation Rate:	not applicable
Relative Density (Air = 1):	>2.5-2.9
Water Solubility:	not applicable
Odour:	Odourless
Flashpoint:	not applicable
Autoignition Temperature:	not applicable
Lower Flammable Limit:	not applicable
Higher Flammable Limit:	not applicable
Explosive Properties:	not applicable
NFPA Fire Code:	0

Oxidising Properties: not applicable
Partition Coefficient (n-octanol/water): not applicable

SECTION 10. - Stability and Reactivity

Stability: Stable

Conditions to avoid: In the form of particles, aluminium may explode when mixed with halogenated acids, halogenated solvents ,bromates, iodates or ammonium nitrate. Aluminium particles on contact with copper, lead or iron oxides can react vigorously with release of heat if there is a source of ignition or intense heat.

Hazardous Decomposition: Aluminium, particularly in the form of particles, reacts with halogenated acids, water and caustic alkalis producing flammable hydrogen gas.

SECTION 11. - Toxicological Information

	Inhalation	Ingestion	Eye Contact	Skin Contact	Skin Absorption
Routes of Exposure:	Yes	No	Yes	Yes	No
Acute Effects:	• Solid aluminium does not present an inhalation hazard. • Aluminium & silicon dusts generated during use are considered nuisance particles. • High concentrations of freshly-formed fumes of copper, magnesium, manganese or zinc oxides can produce symptoms of metal fume fever. • High concentrations of copper dust can cause irritation of the upper respiratory tract.	Not applicable	Irritation through mechanical abrasion	Contact with hot metal can cause burns	Not applicable

Chronic Effects:

Ingestion and Inhalation High concentrations of manganese dust can affect the central nervous system (apathy, drowsiness, weakness and other symptoms resembling Parkinson's disease).

Medical Conditions Aggravated By Exposure: Not determined

Carcinogenicity/Mutagenicity/ Reproductive Toxicity: Certain alloys of this series may contain chromium or nickel.

SECTION 12. - Ecological Information

- Aluminium and its alloys under solid form do not present any hazard for the environment because metals are not biologically available

SECTION 13. - Disposal Considerations

- Recycle using appropriate precautions. Aluminium in the particulate form may be reactive, and its hazardous characteristics should be determined prior to disposal.
- Dispose of waste in accordance with the Environmental Protection (Duty of Care) Regulations

SECTION 14. - Transport Information

- This product is not classified as dangerous under the transport regulations for road, rail, sea or air

SECTION 15. - Regulatory Information

EC Classification:

Warning Symbol: None
Warning Word: None
Risk Phrases: None
Safety Phrases: None

SECTION 16. - Other Information

Revision:	Second edition
Summary of changes:	None(for review)
References:	As indicated in the text above plus: COSHH – Control of Substances Hazardous to Health Regulations CHIP – Chemicals (Hazard Information and Packaging) Regulations

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