



Safety Data Sheet (SDS)

1- Substance Identification / Chemical Mixture / Producer

Product: Aluminium Ingot 50 Lb and 1000 Lb

SDS No: 001

Uses: In the Aluminium Industry for the Production of Parts and Aluminium Products

Address: Almahdi Aluminium Corporation
Km 18 Shaheed Rajaei Port Road, Bandar Abbas, Iran
P.O Box: 79145-3441
Tel: 076 33 595100 – 10 Fax: 076 33 595111
Website: www.almahdi.ir
Email: info@almahdi.ir

2- Risk Identification

It is safe in form of Ingot.

Emergency Hazards:

In case of contact of the molten Aluminium with water or cooled material it will cause spraying molten.

Hygiene Hazards:

Eye: Fumes & Dust raises from melting process may cause eye irritation.

Skin: Fumes & Dust raises from melting process may cause skin irritation.

Inhalation: Fumes & Dust raises from melting process may cause breathe irritation.

Body: Can cause burns in spraying molten.

3- Composition or Information of Ingredients Forming

Component name	Identification	Labelling/classification	Contents
Aluminium (metal)	CAS no.: 7429-90-5 EC no.: 231-072-3		99 – 99.94 %
Silicon	CAS no.: 7440-21-3 EC no.: 231-130-8		0 – 0.25 %
Iron	CAS no.: 7439-89-6 EC no.: 231-096-4		0 – 0.85 %

Column Headings

CAS no. = Chemical Abstracts Service; EU (Einecs or Elincs number) =European inventory of Existing Commercial Chemical Substances; Ingredient name = Name as specified in the substance list (substances that are not included in the substance list must be translated, if possible). Contents given in; %, %wt/wt, %vol/wt, %vol/vol, mg/m³, ppb, ppm, weight%, vol%

HH/HF/HE

T+ = Very toxic, T = Toxic, C = Corrosive, Xn = Harmful, Xi = Irritating, E = Explosive, O = Oxidizing, F+ = Extremely flammable, F = Very flammable, N = Environmental hazard

Component comments

Other impurities usually < 0.3 %.

4- First Aid

General:

Normally not relevant for ingots.

Inhalation:

In case of discomfort, move to ventilated area. If necessary, seek medical advice

Skin contact:

In case of contact with hot or molten metal, flush with plenty of water. If severe, seek medical advice.

Eye contact:

If particles or dust got in the eyes, flush with plenty of water. Seek medical advice if discomfort persists

5- Fire Fighting Measures

Aluminium Ingot has no risk of fire.

Suitable extinguishing media:

The molten Aluminium is under Type D of Fire classes and for fire extinguishing which containing molten dry chemical powder should be used.

Unsuitable extinguishing media:

Never use water to extinguish fires on material includes molten or around molten.

Fire and Explosion Hazards: In shape of ingots, the product is not flammable and has no risk of explosion. Fine dust from the product may be ignited and represent a risk of explosion. Burning dust from this product will produce noxious smoke containing metal oxides.

6- Accidental Release (Publication)

If molten Aluminium spill, first try to surround the molten using soil.

All consumer tools such as spades, shovels and etc. that may contact with the molten must be preheated. Then let the split molten cooled and eventually re-melt (recycle) it.

7- Handling and Storage

Precautions for Safe Handling:

- Aluminium ingot is heavy with sharp edges, handle with care.
- Cold and hot Ingot are visually distinguishable, avoid to put them together. Use safety signs.

Conditions for safe storage and including any incompatibilities:

- In order to harness 500 kg Ingots during handling and transport on truck, have a maximum of two Ingots placed over each other, harness with the lashing wire.

- Because of the imbalance of 500 kg Ingots during storage, avoid the accumulation of more than six Ingots on other.
- Keep away from Ingots during handling operations.
- 25 kg Ingots must be completely inhibited by belts before moving.
- Because of the Ingot contacts with water, snow or materials such as oil and grease when transporting or storing, before re-melting ingots, first eliminate the pollutions.
- Before charging the ingots into the furnace for re-melting, preheat them.

8- Exposure Controls / Personal Protection

Based on ACGIH

Material	CAS No.	Type of Limit	Value
High-Purity Grade Aluminium	7429-90-5	TWA	1 mg/m ³

Engineering Control: Use appropriate exhaust ventilation system for fumes capture in the re-melting furnace.

Personal Protection Equipment:

Eye and Face Protection: Use safety glasses or shields during molten Aluminium works.

Hand Protection: Use anti-cutting gloves for Aluminium ingot handling and Heat-resistant gloves during molten works.

Respiratory Protection: Use respiratory protection suitable for fumes during re-melting.

Body Protection: Use fire retardant protective clothing during molten works.

Foot Protection: Use steel-toed safety shoes for Aluminium ingot handling. Use Heat-resistant and splash safety shoes during molten works.

Head Protection: Use suitable safety helmet.



9- Physical and Chemical Properties

Appearance (Physical state): Solid

Colour: Silver

Odour: Odorless

Melting Point: 660 °C (1,220 °F)

Density: 2/7 g/cm³

10- Stability and Reactivity

Aluminium Ingot is stable in normal conditions.

Materials to Avoid:

Strong acids or bases. Molten aluminium may explode when getting in contact with water. When in form of particles, aluminium may explode in presence of halogenated acids, halogenated solvents, bromates, iodates or ammonium nitrate. Aluminium particles in contact with copper, lead or iron oxides can react violently and exothermic provided a source of ignition or intense heat.

Hazardous Decomposition Products:

Flammable hydrogen gas may be released when in contact with strong acids or bases.

Stability: Massive metal is stable and non-reactive under normal condition of use, storage and transport.

11- Toxicological

Aluminium Ingot is safe under normal conditions.

General: A dust free product does not imply any health risk. Cutting, welding, grinding etc. will generate dust, smoke or particles containing the components of this product. Heating above the melting point will produce metal vapours that can be oxidized to toxic metal oxides, or the vapour might condensate to aerosol containing respirable particles. Inhalation of metal aerosols and fumes might imply a health risk.

Contact with hot metal can give severe burns.

Classification: According to ACGIH Aluminium classified in A4 category.

12- Ecological Information (Environmental)

There is no negative impact ecologically for Aluminium Ingot.

13- Disposal and Destruction

All debris and wasted Aluminium Ingots is recyclable and re-meltable. Any disposal should be done in accordance with regional environmental regulations.

14- Transport Information

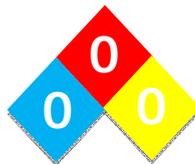
There is no risk classification for Aluminium Ingot by the United Nations (Not regulated). So the product name or number in the SDS can be used for shipping and customs documents.

15- Regulations

No special rules and regulations have been imposed to Aluminium.

16- Other Information

NFPA 704



SDS No.: 001

Date of Edition: 29.01.2017

Revision No.: 00

Editor: HSE Dept. of Almahdi Aluminium Corporation