

012131

MATERIAL SAFETY DATA SHEET

Aluminum Sheet & Foil

Source

Metal Foils, LLC
38376 Apollo Parkway
Willoughby, OH 44094

Effective Date

January 1, 2002

Section I - Material Identification

Trade Name (common name or synonym) - Aluminum Sheet/Foil
Chemical Name - Aluminum alloys Formula - Al

Section II - Ingredients, Components, Exposure Limits

Chemical	CAS #	Percent By Weight	ACGIH (mg/m ³)	OSHA PEL (mg/m ³)
Aluminum (Al)	7429-90-5	*	10.0 (metal dust) 5.0 (fumes)	-----
Copper (Cu)	7440-50-8	*	0.2 (fumes)	0.1 (fumes)
Iron (Fe)	7439-89-6	*	5.0 (oxide fumes)	10.0 (oxide fumes)
Magnesium (Mg)	7439-95-4	*	10.0 (oxide fumes)	15.0 (oxide fumes)
Manganese (Mn)	7439-96-5	*	5.0 (dust & compounds) 1.0 (fumes)	5.0 (fumes) [ceiling]
Silicon (Si)	7440-21-3	*	10.0 (total dust)	-----
Zinc (Zn)	7440-66-6	*	5.0 (oxide fumes)	5.0 (oxide fumes)

Remarks: STEL for Mn is 5 mg/m³ (fumes) and PEL shown is ceiling. STEL for Zn is 10 mg/m³ (fumes).

* Concentrations of these ingredients in different alloys will vary in accordance with customer specifications and industry standards. None of these ingredients are presently listed in NTP, IARC or OSHA as being carcinogens or potential carcinogens.

Section III - Physical Data

Material is at normal conditions:

___ liquid ☒ solid ___ other

Acidity/Alkalinity: N/A

Vapor Pressure (mm Hg): N/A

Melting/Freeze Point: 1165 - 1220 Degrees Fahrenheit

Solubility in water: Insoluble

Boiling Point: N/A

Appearance/Odor: Silvery metallic/ Odorless

Specific Gravity (water = 1): 2.70 - 2.73

Vapor Density (air = 1): N/A

Evaporation Rate (butyl acetate = 1): N/A

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Section IV - Fire and Explosion Information

Flash Point: N/A

Flammable Limits: Lower - N/A; Upper - N/A

Extinguishing Media: Non-flammable in solid form.

Special Fire Fighting Procedures: Avoid the use of water in fighting fires near molten aluminum.

Unusual Fire & Explosion Hazards: No hazard in the solid state. Dust/chips from grinding/machining may react with water to produce explosive hydrogen gas or dust clouds at levels greater than 0.04 oz./cu. ft. and may be ignited by a spark. Molten aluminum may explode on contact with water and may react violently with rust and other metal oxides (e.g. copper, iron, & lead).

Section V - Health Hazard Data

Possible routes of exposure

Inhalation: Not likely unless machined, welded, or re-melted. Then fumes may cause irritation to nose and throat.

Ingestion: Not likely.

Skin Contact & Absorption: Absorption is unlikely, but skin contact with hot aluminum could cause burns. Sharp edges can cause lacerations. Note: solid aluminum does not change color during heating.

Eyes: Fumes may irritate.

Acute and Chronic Effects on Health: Other than lacerations, scratches, burns, eye irritation, no lasting effects on health are known.

Emergency Medical Procedures:

- 1) Eye Contact: Flush with running water, obtain medical attention if irritation persists. Remove to fresh air if fumes cause irritation.
- 2) Lacerations/cuts: Use standard first aid procedures for cuts and scratches. Seek medical attention if required.
- 3) Burns: If burns are suffered from touching hot or molten aluminum, use standard first aid procedures for burns and seek medical attention.

Section VI - Reactivity

Stability: Stable

Conditions to avoid: See Section V - Fire and Explosion.

Incompatibility (materials to avoid): Strong alkalis, strong acids, halogens, oxidizing agents, and certain halogenated hydrocarbons.

Hazardous Decomposition Products: Hydrogen - released for aluminum dust or chips when the aluminum contacts acids, alkalis, or water.

Hazardous Polymerization: Will not occur.

Conditions to avoid: Heating aluminum scrap bales or coils which have been wet through exposure to water.

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Section VII - Environmental

Spill or Leak Procedures: N/A

Waste Disposal Method: Re-melt clean dry scrap. If necessary to dispose of, act in accordance with all applicable Federal, State, and local waste regulations.

Chemicals contained which are regulated under Section 313 of SARA Title III and 40 CFR 372 in amounts equal to or exceeding: 1.) 0.1 % for substances meeting OSHA definition of a carcinogen, or 2.) 1.0 % for all other 313 listed ingredients are as follows:

Alloy	313 listed Chemical	CAS #	Percent By Weight
1100	Aluminum	7429-90-5	99.00 minimum
1145	Aluminum	7429-90-5	99.45 minimum
3003	Aluminum	7429-90-5	96.0 - 99.0
	Manganese	7439-96-5	1.0 - 1.5

Section VIII - Personal Protective Equipment

Appropriate protective equipment is required when melting, casting, machining, sawing, welding, or other processing of aluminum alloys. The nature of the processing will determine what equipment is necessary. In handling aluminum sheet, protective gloves are recommended to avoid cuts. Eye protection is recommended to keep foreign objects (edges, chips, dust, etc.) from getting in the eyes. Foot protection is recommended to prevent injury to the feet from heavy coils. Dust/mist respirators are suggested when machining or grinding aluminum. Welder's helmet and gloves are recommended when welding aluminum.

Section IX - Additional Comments and Information

The welding of aluminum alloys may generate carbon dioxide, carbon monoxide, ozone, and nitrogen oxides. Therefore, ensure adequate ventilation including powered exhaust if necessary to remove fumes from the work area. Water and other forms of contamination in aluminum are known to cause explosions in melting operations. Avoid storing aluminum sheet and aluminum foil in wet areas or those areas with high humidity to prevent corrosion and, in the vicinity of alkalis, acids, halogens, oxidizing agents, and certain halogenated hydrocarbons, to prevent chemical attack. Aluminum sheet and aluminum foil do not change color when heated, so do not touch metal suspected of being hot.

The information in this MSDS is given in good faith from thought to be reliable sources, however, no warranty, expressed or implied, can be made.