Material Safety Data Sheet

1. Product and Company Identification

Material Name	Aluminum Sheet Coil – Bare and Coated
Chemical Formula	Mixture
Product Use	Various fabricated aluminum parts and products
Synonym(s)	Alloys Series 3XXX, 5XXX
Manufacturer Information	Jupiter Aluminum Corporation 1745 165th Street Hammond, IN 46320 Environmental, Health & Safety 1-219-933-2752 General Information 1-219-932-3322 Jupiter Coil Coating 205 East Carey Street Fairland, IN 46126

2. Hazards Identification

Emergency Overview

Solid. Bare or coated coil. Various colors. Odorless. Non-combustible as supplied.

Explosion/fire hazards may be present when:

- Dust or fines are dispersed in air,
- Chips, fines or dust are in contact with water,
- Dust and fines are in contact with certain metal oxides (e.g., rust, copper oxide),
- Molten metal in contact with water/moisture.

Dust and fumes from processing can cause irritation of the eyes, skin and upper respiratory tract.

Potential Health Effects

Eyes

Dust and/or fume from processing can cause irritation.

Skin

Dust and/or fume from processing can cause irritation.

Inhalation

Dust and/or fume from processing can cause irritation of the upper respiratory tract. Chronic overexposure can cause pulmonary fibrosis (scaring of the lungs), central nervous system damage, secondary Parkinson's disease and reproductive harm to males.

Other health effects from welding, melting or other elevated temperature processing can cause nausea, fever, chills shortness of breath and malaise (metal fume fever) or the accumulation of fluid on the lungs (pulmonary edema). Long term, chronic overexposure can cause asthma or other diseases of the lungs and respiratory system.

Combustion of the coating can generate hydrogen chloride, hydrogen fluoride and other by-products of combustion. Short term overexposure can cause sever irritation of the respiratory system...

Carcinogenicity and Reproductive Hazard	Product as shipped does not present any cancer or reproductive hazards.
Medical Conditions Aggravated by Exposure to Product	Dust and fume from processing may affect those with pre-existing respiratory system disease's or skin rashes.

3.Composition / Information on Ingredients

Composition

Aluminum alloys are comprised of various combinations of the elements shown. Complete composition may include some components classified as non-hazardous.

Components Aluminum Alloys	CAS Number	% by Weight
Aluminum	7429-90-5	> 82 %
Magnesium	1309-48A	< 1.5 %
Manganese	7439-96-5	< 1.5%
Iron	1309-37-1	< 1.0%
Silicon	7440-21-3	< 1.0 %
Chromium	7440-47-3	< 0.5 %
Copper	7440-50-8	< 0.5 %
Zinc	7440-66-6	< 0.5 %

Coatings

Coatings	Various	0% to 10%

Additional Information

Coatings may include vinyl, epoxy, polyester, siliconized polyester, acrylic, polyurethane or lubricating oils.

Aluminum coil is produced from 100% post-consumer aluminum scrap.

4. First Aid Measures

Eye Contact	Flush eyes with cold tap water or a saline eye wash solution for at least 15 minutes. Contact a physician if symptoms persist.
Skin Contact	Wash with soap and water for at least 15 minutes. Seek medical attention if irritation develops of persists.
Inhalation	Remove to fresh air. Check for clear airway, breathing and presence of pulse. If person is not breathing immediately call 911 and begin CPR if qualified.
Ingestion	Not Applicable

5. Fire Fighting Measures

Flammable/Combustible Properties	This product does not present fire or explosion hazards as shipped. Small chips, fine turnings and dust from processing may be readily ignitable.
Fire/Explosion Hazards	May be a potential explosion hazard if a suspension of fine aluminum dust is present in the air. Finley divided metals may have enough surface oxide to produce thermite reactions.
Extinguishing Media	Use Class D extinguishing agents on fines, dust or molten metal. Do not sue water of halogenated extinguishing media. Fire fighters should wear NIOSH approved, positive pressure, SCBA and full protective clothing.

6. Accidental Release Measures

Spill or Leak Procedure	Collect scrap for recycling.

7. Handling and Storage

Handling Precautions

Keep material dry. Avoid generating dust. Avoid contact with sharp edges or heated metal. Hot aluminum does not necessarily glow red. For more information on the handling and storage of aluminum contact The Aluminum Association, 1525 Wilson Boulevard, Suite 600, Arlington, Virginia 2220, www.aluminum.org. It has a number of publications, including:

- Guidelines for Handling Molten Aluminum
- Guidelines for Handling Aluminum Fines Generated During Various Aluminum Fabricating Operations

8. Exposure Controls / Personal Protection

Component	CAS Number	OSHA - PEL (mg/m^3)	ACGIH - TLV (mg/m^3)
Aluminum	7429-90-5	15 (total dust) 5 (total dust– respirable)	10 (oxide fume) 5 (dust and fume)
Magnesium	1309-48A	15 (oxide fume)	10 (oxide fume)
Manganese	7439-96-5	5 (dust/fume)	5 (dust) 1 (fume)
Iron	1309-37-1	10 (fume)	5 (fume)
Silicon	7440-21-3	15 (total dust) 5 (total dust– respirable)	10 (total dust)
Chromium	7440-47-3	1.0 Chrome Metal	0.5 (dust)
Copper	7440-50-8	0.1 (fume) 1.0 (dust)	0.2 (fume) 1.0 (dust)
Zinc	7440-66-6	15 (total dust) 5 (total dust– respirable)	10 (oxide fume) 5 (dust and fume)

Personal Protective Equipment

Eye and Face	Wear safety glasses with side shields.
Skin Protection	Wear appropriate gloves to avoid skin injury.
Respiratory Protection	If necessary, use NIOSH-Approved respiratory protection.
	Wear all other appropriate PPE as required by site specific program.

9. Physical and Chemical Properties

Form	Solid. Bare or coated coil.
Appearance	Bare – Silvery gray. Painted – Various colors.
Boiling Point	4,478°F (estimated)
Melting Point	1,200°F
Vapor Pressure	Not Applicable
Evaporation Rate	Not Applicable
Density (Water = 1)	2.5 – 2.9
Flashpoint	Not Applicable
Flammability Limits	Not Applicable
Water Solubility	Not Applicable

10. Chemical Stability and Reactivity Information

Chemical Stability	Stable under normal conditions of use, storage and transportation as shipped.
Conditions to Avoid	Chips, fines, dust and molten metal are considerably more reactive with the following: Water: Slowly generates hydrogen gas and heat. Molten metal can react violently/explosively with water or moisture, especially when water is entrapped. Heat: Oxidizes at a rate dependent upon temperature and particle size. Strong Oxidizers: Violent reaction with considerable heat generation. Can react explosively with nitrates when heated or molten. Halogenated Compounds: Many halogenated hydrocarbons, including halogenated fire extinguishing agents can react violently with finely divided or molten aluminum. Iron Oxide and other metal oxides: A violent thermite reaction generating considerable heat can occur. Reaction with aluminum fines and dust requires only a weak ignition source for initiation. Molten aluminum can react violently with iron oxide without external ignition source.
Hazardous Decomposition Products	Combustion of the coating can generate Carbon Monoxide, Carbon Dioxide, Hydrogen Chloride, Chlorinated Hydrocarbons, Hydrogen Fluoride and partially oxidized hydrocarbons.
Hazardous Polymerization	Will not occur.

11. Toxicological Information

Carcinogenicity	No information available for this product as shipped. Certain Chromium compounds are classified by the national Toxicology Program as: A1 – Confirmed Human Carcinogen, this product ins not know to contain any of those specific compounds.
Health Effects Associated with Ingredients	Aluminum dust/fines and fumes are generally considered to be biologically inert. Manganese dust or fumes under conditions of chronic overexposure can cause inflammation of the lung tissue, scarring of the lungs, central nervous system damage, Secondary Parkinson's Disease and reproductive harm to males. Silicon (inert dust) under conditions of chronic overexposure can chronic bronchitis and narrowing of the airways. Chromium dust and fumes can cause irritation of eyes, skin and respiratory tract. Aluminum fumes generated during welding or melting present low health risk. Welding or plasma arc cutting of aluminum alloys can generate ozone. Ozone

can cause irritation of the eyes, nose and upper respiratory tract. Combustion of the coating can generate Carbon Monoxide, Carbon Dioxide, Hydrogen Chloride, Chlorinated Hydrocarbons, Hydrogen Fluoride and partially oxidized hydrocarbons.

12. Ecological Information

Aluminum and its alloys in the solid form, such as coils, ingots or sow, do not present any hazard to the environment. Aluminum can be fully recycled.

13. Disposal Considerations

Reuse or recycle material whenever possible. If reuse or recycle is not possible, disposal must be in accordance with local, state and federal regulations.

14. Transport Information

This product, as shipped, is not regulated by the US Department of Transportation as a hazardous material.

15. Regulatory Information

CERCLA/SARA – Hazardous Substances and Reportable Quantities

Chromium (7740-47-3)	5,000 pound final RQ (No reporting of releases of this hazardous substance is required if the diameter of the pieces of the solid metal is larger than 100 micrometers.

CERCLA/SARA –Section 313 – Emissions Reporting

Aluminum (7429-90-5)	1.0 % de minimis concentration (dust or fume only)
Chromium (7440-47-3)	1.0 % de minimis concentration
Manganese (7439-96-5)	1.0 % de minimis concentration

SARA –Section 311/312 – Physical and Health Hazard Categories

Immediate Health Hazard	Yes, if particulate/fumes generated during processing
Delayed Health Hazard	Yes, if particulate/fumes generated during processing
Fire hazard	No
Sudden Release of Pressure	No
Reactive	Yes, if molten.

Other Regulations

The following components are listed on one or more of the following states hazardous substances lists

Component	CAS Number	CA	MA	MN	NJ	PA
Aluminum	7429-90-5	Yes	Yes	Yes	Yes	Yes
Chromium	7440-47-3	Yes	Yes	Yes	Yes	Yes
Manganese	7439-96-5	Yes	Yes	No	Yes	Yes

Component Inventory Listing

Component	CAS Number	TSCA - US	DSL - Canada	EINECS	AICS - Australia	MITI - Japan
Aluminum	7429-90-5	Yes	Yes	Yes	Yes	No

MITI Inventory does not specifically list pure metals. However, the class of compounds for each of these metals is listed.

16. Other Information

MSDS History	Original – January 1992 Revised – July 29, 2009	Supersedes – January 1992
Prepared by:	EHS Director – Jupiter Aluminum Corporation	