

Material Safety Data Sheet

("Essentially Similar" to Form OSHA-174)

DATE PREPARED

04/01/99

REVISION DATE

09/01/04

MSDS #

03

SECTION 1 – CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT CLASS: Wrought Aluminum Alloy
TRADE NAME: 3XXX Series Alloys

MANUFACTURER'S CODE IDENTIFICATION

3XXX Series; AA108; AA135; AA169; AA173;
AA190; AA203; AA211; AA220; AA236; AA240;
AA245; AA52; AA189; AA241; AA243; AA267;
AA271; AA272; AA276; AA278; AA281; AA310;
AA314; AA315;
AA338; AA355; AA356; AA359; AA363; AA381

SECTION 2 – COMPOSITION / INFORMATION ON INGREDIENTS

Hazardous Ingredients	Typical Percent	OSHA PEL			ACGIH TLV			CAS Numbers
		Gas ppm	Respirable Dust/Mist mg/m ³	Total Dust mg/m ³	Gas ppm	Respirable Dust/Mist mg/m ³	Total Dust mg/m ³	
Aluminum **	min 95.0		5	15		5	10	7429-90-5
Silicon	max 1.8		5	15			10	7440-21-3
Manganese **	max 1.8		5C*			1	5	7439-96-5
Magnesium	max 1.4		5	15		10		7439-95-4
Chromium **	max 0.4			1			0.5	7440-47-3

* "C" indicates ceiling value
** On SARA Section 313 list.

SECTION 3 – HAZARDS IDENTIFICATION

HMIS RATINGS: Health: 1
Flammability: 1
Reactivity: 1

SECTION 4 – FIRST AID MEASURES

SKIN: For minor burns, apply cold water. For severe burns, seek immediate medical attention.

EYE: Immediately flush with water for 15 minutes. Seek medical attention if irritation persists.

INHALATION: Remove to fresh air.

INGESTION: None necessary.

SECTION 5 – FIRE FIGHTING MEASURES

FLAMMABILITY: YES? NO? X WHAT CONDITIONS? N/A

FLASH POINT (Method Used): N/A
UEL: N/A
LEL: N/A

MEANS OF EXTINCTION:

This product is non-combustible in bulk form. For fires involving aluminum fines or chips, use dry sand or Class D extinguishing agents approved for this use. **DO NOT USE** water or other liquids, foam, or halogenated extinguishing agents.

SPECIAL PROCEDURES:

Suspended aluminum dust, allowed to accumulate in a confined area, may be explosive. If remelted, moisture present in cavities or on external surfaces may cause an explosion.

AUTO IGNITION TEMPERATURE:	N/A	HAZARDOUS COMBUSTION PRODUCTS:	None known
SENSITIVITY TO IMPACT:	None known	SENSITIVITY TO STATIC DISCHARGE:	None known

ND = NOT DETERMINED N/A = NOT APPLICABLE

SECTION 6 – ACCIDENTAL RELEASE MEASURES

If molten, contain the flow by using sand or alumina as a dam. Do not attempt to halt the flow of metal with shovels or handtools.

LEAK AND SPILL PROCEDURE: If remelted, see **Aluminum Association publication #69 "Guidelines for Handling Molten Aluminum"**. The Aluminum Association, 900 19th St., N.W., Suite 300, Washington, D.C. 20006.

SECTION 7 – HANDLING AND STORAGE

HANDLING PROCEDURES AND EQUIPMENT: See **Aluminum Association publications, #69 listed above.**

STORAGE REQUIREMENTS: If remelted, make certain no water or moisture is present in cavities or on external surfaces.

SECTION 8 – EXPOSURE CONTROLS / PERSONAL PROTECTION

ENGINEERING CONTROLS:

If ventilation is used to convey aluminum dust, generated by grinding, sawing, etc., special ventilation procedures may be necessary to avoid explosion hazards. See **National Fire Protection Association codes #65 and #651** (See address in Section 10).

PERSONAL PROTECTIVE EQUIPMENT:

GLOVES: As needed.

EYEWEAR: Safety glasses, goggles, face shield, or welding helmet, etc., as needed.

RESPIRATORY: Use NIOSH/MSHA-approved respirator for dusts/fume/mist, if TLVs or PELs are exceeded.

FOOTWEAR: Safety shoes, as needed.

CLOTHING: Appropriate welding protective equipment. If remelted, see **Aluminum Association publication, #69 listed above.**

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

BOILING POINT:	N/A	MELTING POINT:	623-651 C
SPECIFIC GRAVITY:	2.5-2.9	SOLUBILITY IN WATER:	N/A
VAPOR PRESSURE:	N/A	PHYSICAL STATE:	Solid
VAPOR DENSITY:	N/A	pH:	N/A
COEFFICIENT OF WATER/OIL DIST:	N/A	EVAPORATION RATE:	N/A
ODOR THRESHOLD:	N/A	APPEARANCE/ODOR:	Odorless, silvery gray color

SECTION 10 – CHEMICAL STABILITY AND REACTIVITY INFORMATION

CHEMICAL STABILITY: Stable

REACTIVITY AND UNDER WHAT CONDITIONS:

If remelted, moisture present in cavities or on external surfaces may cause an explosion. Bulk aluminum dust when damp may heat spontaneously.

INCOMPATIBILITY TO OTHER SUBSTANCES: YES

For aluminum fines: water, some acids, alkalis, and halogenated compounds. See NFPA#491M for specific incompatible materials. National Fire Protection Association, Batterymarch Park, Quincy, MA 02269.

HAZARDOUS DECOMPOSITION PRODUCTS:

Finely divided aluminum reacts with water, some acids, and alkalis to produce hydrogen gas. Aluminum in contact with halogenated compounds can produce violent reactions and/or explosions.

SECTION 11 – TOXICOLOGICAL INFORMATION

ROUTE(S) OF ENTRY:	INHALATION?	YES	INGESTION?	NO
	EYE CONTACT?	YES	SKIN ABSORPTION?	NO

EFFECTS OF ACUTE EXPOSURE:

Aluminum is considered a nuisance particulate. Welding or machining aluminum may generate dusts and fumes which may cause eye, nose, and throat irritation. Generally, if exposures for aluminum oxide are kept below the exposure limit, the alloy components should not present a health risk. Ozone may be emitted as a by-product during welding or plasma arc cutting. Exposure to ozone may produce irritation to eyes, nose, and throat. Welding and/or plasma arc cutting of aluminum alloys generates ultraviolet radiation which can cause skin burns or welders flash to unprotected skin and eyes.

EFFECTS OF CHRONIC EXPOSURE:

Prolonged exposure to ozone may result in nausea, headache, and pulmonary damage. Chromium and certain of its compounds are classified as carcinogens in the latest Annual Report on Carcinogens as published by the National Toxicology Program (NTP) and by the International Agency for Research on Cancer (IARC).

LD50 OF PRODUCT:

Aluminum	-Not known
Silicon	-orl-rat 3160 mg/kg
Manganese	-orl-rat 9000mg/kg
Magnesium	-Not known
Chromium	-Not known

LC50 OF PRODUCT:

Aluminum	-Not known
Silicon	-Not known
Manganese	-Not known
Magnesium	-Not known
Chromium	-Not known

IRRITANCY OF PRODUCT: Mild

EXPOSURE LIMITS OF PRODUCT:
Use levels for aluminum shown in Section 2.

SENSITIZATION TO PRODUCT: None known

SYNERGISTIC MATERIALS: None known

CARCINOGENICITY: NTP, IARC, ACGIH

REPRODUCTIVE EFFECTS: None known

TERATOGENICITY: None known

MUTAGENICITY: None known

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE:

Pre-existing upper respiratory and lung diseases such as, but not limited to, Bronchitis, Emphysema, and Asthma.

SECTION 12 – ECOLOGICAL INFORMATION

None available.

SECTION 13 – DISPOSAL INFORMATION

WASTE DISPOSAL:

For disposal of this material as a waste, act in accordance with all applicable federal, state, and local waste management regulations.

SECTION 14 – TRANSPORTATION INFORMATION

SPECIAL SHIPPING INFORMATION: None known

SECTION 15 – REGULATORY INFORMATION

SARA

This product contains a chemical or chemicals subject to the reporting requirements of **Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR 372.**

SECTION 16 – OTHER INFORMATION

All statements, technical information and recommendations contained herein are based on tests and data which this Company believes to be currently reliable, but the accuracy or completeness thereof is not guaranteed and no warranty of any kind is made with respect thereto. This information is not intended as a license to operate under or a recommendation to practice or infringe any patent of this Company or others covering any process, composition of matter or use. Since the Company shall have no control of the use of the product described herein, the Company assumes no liability for loss or damage incurred from the proper or improper use of such product.

PRODUCT LABEL

Label No. 03

WROUGHT
ALUMINUM PRODUCTS

3xxx Series Alloys

WARNING: This product is not a physical or health hazard in bulk form. Welding or machining aluminum may generate dusts and fumes which may cause eye, nose, and throat irritation. Ozone may be emitted as a by-product during welding or plasma arc cutting. Prolonged exposure to ozone may result in nausea, headache, and lung damage. Suspended aluminum dust, allowed to accumulate in a confined area, may be explosive. Chromium is listed by the International Agency for Research on cancer and the National Toxicology Program as a carcinogen.

Molten Metal can explode -- If remelted, make certain no water or moisture is present in cavities or on external surfaces.

For further information, refer to Wise Alloys LLC Material Safety Data Sheet.

<u>Ingredients</u>	<u>CAS Number</u>
Aluminum	7429-90-5
Silicon	7440-21-3
Manganese	7439-96-5
Magnesium	7439-95-4
Chromium	7440-47-3

This label is required by the OSHA Hazard Communication Standard