



# Material Safety Data Sheet

("Essentially Similar" to Form OSHA-174)

DATE PREPARED 04/01/99	REVISION DATE 09/01/04	MSDS # 07
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## SECTION 1 – CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

MANUFACTURER: Wise Alloys LLC  
4805 Second Street  
Muscle Shoals, AL 35661

TELEPHONE NUMBERS:  
EMERGENCY: (256) 386-6203  
NON-EMERGENCY: (256) 386-6822

PRODUCT CLASS: Wrought Aluminum Alloy  
TRADE NAME: 7XXX Series Alloys

MANUFACTURER'S CODE IDENTIFICATION  
7XXX Series; AA219; AA242; AA33; AA226; AA254;  
AA277; AA308; AA319; AA320; AA328; AA366

## SECTION 2 – COMPOSITION / INFORMATION ON INGREDIENTS

Hazardous Ingredients	Typical Percent	OSHA PEL			ACGIH TLV			CAS Numbers
		Gas ppm	Respirable Dust/Mist mg/m <sup>3</sup>	Total Dust mg/m <sup>3</sup>	Gas ppm	Respirable Dust/Mist mg/m <sup>3</sup>	Total Dust mg/m <sup>3</sup>	
Aluminum **	min 84.0		5	15		5	10	7429-90-5
Copper **	max 2.6		0.1	1		0.2	1	7440-50-8
Manganese **	max 1.5		5C*			1	5	7439-96-5
Magnesium	max 3.7		5	15		10		7439-95-4
Chromium **	max 0.35			1			0.5	7440-47-3
Zinc **	max 8.7		5	15		5	10	7440-66-6

\* "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:**

These alloys must be stress relieved prior to any sawing or cutting to avoid cracking. 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:	461-640 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, that alloy components should not present a health risk. Inhalation of excess zinc fumes may cause irritation of the respiratory tract and metal fume fever. Symptoms of metal fume fever include chills, fever, nausea, chest tightness, or metallic taste. 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
Copper	-ipr-mus 3.5mg/kg
Manganese	-orl-rat 9000mg/kg
Magnesium	-Not known
Chromium	-Not known
Zinc	-Not known

**LC50 OF PRODUCT:**

Aluminum	-Not known
Copper	-Not known
Manganese	-Not known
Magnesium	-Not known
Chromium	-Not known
Zinc	-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, Asthma, and Wilson's Disease.

**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**

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SECTION 15 – REGULATORY INFORMATION

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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.**

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SECTION 16 – OTHER INFORMATION

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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. 07**

**WROUGHT  
ALUMINUM PRODUCTS**

**7xxx 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.

<b><u>Ingredients</u></b>	<b><u>CAS Number</u></b>
Aluminum	7429905
Copper	7440508
Manganese	7439965
Magnesium	7439954
Chromium	7440473
Zinc	7440666

WISE ALLOYS LLC  
4805 Second Street  
Muscle Shoals, AL 35661

*This label is required by the OSHA Hazard Communication Standard*