

M SDS#000066



**MATERIAL SAFETY DATA SHEET**

("Essentially Similar" to Form OSHA-174)  
**REYNOLDS METALS COMPANY** R-1087-19

<b>DATE PREPARED</b> 12/21/89	<b>REVISION DATE</b> 9/24/93	<b>MSDS #</b> 5133
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**SECTION 1 - MATERIAL IDENTIFICATION**

**MANUFACTURER:** Reynolds Metals Company  
P. O. Box 27003  
Richmond, Virginia 23261-7003

**EMERGENCY TELEPHONE NUMBER:**  
(804) 281-2265

**PRODUCT CLASS:** Alclad and Cladding Products  
**TRADE NAME:** 1XXX Series Alloys (cladding)

**MANUFACTURER'S CODE IDENTIFICATION**  
1XXX Series

**SECTION 2 - HAZARDOUS INGREDIENTS OF MATERIAL**

Hazardous Ingredients	Typical Percent	OSHA PEL			ACGIH TLV			CAS Numbers
		Respirable Gas ppm	Total Dust/Mist mg/m <sup>3</sup>	Total Dust mg/m <sup>3</sup>	Respirable Gas ppm	Total Dust/Mist mg/m <sup>3</sup>	Total Dust mg/m <sup>3</sup>	
Aluminum *	min 99.0		5	15		5	10	7429-90-5

\*On SARA Section 313 list.

**SECTION 3 - PHYSICAL DATA OF MATERIAL**

<b>BOILING POINT:</b> N/A	<b>FREEZING POINT:</b> 637-653C
<b>SPECIFIC GRAVITY:</b> 2.5-2.9	<b>SOLUBILITY IN WATER:</b> N/A
<b>VAPOR PRESSURE:</b> N/A	<b>PHYSICAL STATE:</b> Solid
<b>VAPOR DENSITY:</b> N/A	<b>pH:</b> N/A
<b>COEFFICIENT OF WATER/OIL DIST:</b> N/A	<b>EVAPORATION RATE:</b> N/A
<b>ODOR THRESHOLD:</b> N/A	<b>APPEARANCE/ODOR:</b> Odorless, silvery gray color

**SECTION 4 - FIRE AND EXPLOSION HAZARD OF MATERIAL**

**FLAMMABILITY:** YES? NO?  **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 pieces or chips, use dry sand or Class 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

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SECTION 5 - REACTIVITY DATA

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 6 - TOXICOLOGICAL PROPERTIES OF PRODUCT

ROUTE(S) OF ENTRY:

INHALATION? YES  
EYE CONTACT? YES

INGESTION? NO  
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. 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.

LD50 OF PRODUCT:

Aluminum - Not known

LC50 OF PRODUCT:

Aluminum - Not known

IRRITANCY OF PRODUCT: Mild

EXPOSURE LIMITS OF PRODUCT:

Use levels for aluminum shown in Section :

SENSITIZATION TO PRODUCT: None known

SYNERGISTIC MATERIALS: None known

CARCINOGENICITY: None known

REPRODUCTIVE EFFECTS: None known

TERATOGENICITY: None known

MUTAGENICITY: None known

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MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE:

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

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**SECTION 7 - PREVENTIVE MEASURES**

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**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 "Guidelines for Handling Molten Aluminum", #69. The Aluminum Association, 900 19th St., N.W., Suite 300, Washington, D.C. 20006.

**ENGINEERING CONTROLS:**

If ventilation is used to convey aluminum dust, generated by grinding, sawing, etc., special ventilation procedure may be necessary to avoid explosion hazards. See National Fire Protection Association codes #65 and #651 (See address in Section 5).

**LEAK AND SPILL PROCEDURE:** If remelted, see Aluminum Association publication #69 listed above.

**WASTE DISPOSAL:**

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

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

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

**SPECIAL SHIPPING INFORMATION:** None known

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**SECTION 8 - FIRST AID MEASURES**

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**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.

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**SECTION 9 - SPECIAL PRECAUTIONS AND COMMENTS****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.

**HMIS RATINGS**

Health: 0  
Flammability: 1  
Reactivity: 1

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Label No.  
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## ALCLAD AND CLADDING PRODUCTS

### 1xxx Series Alloys (Cladding)

**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.

**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 Reynolds Material Safety Data Sheet.

Ingredients	CAS Number
Aluminum	7429905



REYNOLDS METALS COMPANY  
P. O. Box 27008  
Richmond, Virginia 23261-7008

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

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