

Supplier	Brunswick Steel		
Address	125 Bismarck St, Winnipeg, MB R2C 2Z2		
Phone	(204) 224-1472	T.F. 1-800-493-8898	
Fax	(204) 222-3479	brunswicksteel.com	

Material Safety Data Sheet

Section 1

Product Identification & Use

Material Name	ALUMINUM ALLOYS (Series 1,2,3,5,6,7 thousand)		
Address	Includes all sheet products, plate, strip, bar, slab, ingot, and tubular products		
WHMIS Class	D2A, D2B	Material Use	Manufacture of Articles

Section 2

Hazardous Ingredients (OF=oxide fumes/DF=dust and fume/TD=Ti dioxide)

ELEMENT	C.A.S.#	% weight	OSHA PEL (mg/m)	TLV (mg/m ³)
Aluminum	7429-90-5	90-99.7	N/A	10.0 OF/5.0 DF
Chromium	7440-47-3	<0.01-0.4	1.0 chrome metal	0.2 fume, 0.1 dust
Metal Copper	7440-50-8	<0.05-6.0	0.1 fume 1.0 dust	0.2 fume 1.0 dust
Iron	1309-37-1	<0.35-1.0	10 OF	5 OF
Magnesium	1309-48A	<0.03A.9	15 OF	10 OF
Manganese	7439-96-5	<0.02-1.5	5c dust 5c fume	5c dust 1 fume
Silicon	7440-21-3	<0.25-0.2	N/A	10 total dust
Titanium	7440-32-6	<0.02-0.2	15 TD	10 TD
Zinc	1314-13-2	<0.05-6.1	15 OF	10 dust 5 fume
Bismuth	7440-69-9	<0.40-0.7	N/A	N/A
Boron	7440A2-8	.06 max	15 oxide fume	10 oxide fume
Lead	7439-92-1	<0.40-0.7	0.05 DF	0.15 DF
Vanadium	7440-62-2	0.05 max	0.05c dust, 0.1c fume	0.05 dust & 0.05 fume

NOTE: Aluminum alloys will be comprised of various combinations of the elements shown above. In addition, other alloying elements may be present in minute quantities. No permissible exposure limits (PEL) or threshold limit values (TLV) exist for aluminum alloys. Values shown are applicable to component elements.

Section 3

Physical Data

Physical State: Solid	Odour: N/A	Evaporation Rate: N/A	Boiling Point: N/A
Vapour Pressure: N/A	Vapour Density: N/A	Freezing Point: N/A	Coefficient Water/Oil Distribution: N/A
PH: N/A	Odour Threshold: N/A	Appearance: silver grey	Specific Gravity: H ₂ O=1 (approx. 2.5-2.9)

Section 4

Fire & Explosion Data

Means of extinction: Dry Powder or Sand

***NOTE:** do not use water or Halogen on molten Aluminum Flash

Section 5

Reactivity Data

Not Applicable

Chemical Stability: yes

Incompatibility to Other Substances: yes

Reactivity & Under What Condition: Sodium Hydroxide & Halogen ACIDS in contact with Aluminum may generate explosive Hydrogen Mixtures.

Section 5 (Cont'd)**Reactivity Data (Cont'd)**

Hazardous Decomposition Products: extreme heat may produce toxic or irritating airborne particulate, including Alloy Oxide.

Section 6**Toxicological Properties of Material**

- **Route of Entry:** Prolonged skin contact with coated products may cause skin irritation in sensitive individuals. Inhalation of alloy particulate or elemental oxide fumes generated during welding, burning, grinding or machining may pose acute or chronic effects.
- **Acute Exposure:** Inhalation of overexposure may cause metal fume fever characterised by fever and chills (flu like symptoms) appears to 6 hours after exposure with no known long term effects.
- **Chronic Exposure:** Chronic inhalation of alloy fume may cause a benign pneumoconiosis (siderosis) with few or no symptoms. Chronic inhalation of fumes may affect the digestive system, nervous system, respiratory system, muscles and joints.

Sensitisation to Product: Unknown

Synergistic Materials: Unknown

Reproductive Effects: No known effect

Teratogenicity: No known effect

Mutagenicity: No known effect

Carcinogenicity of Material: IARC lists Hexavalent Chromium compounds under its group 1 category.

Confirmed Human Carcinogen

NOTE: welding fume may also contain contaminants from fluxes or welding consumables.

Section 7**Preventive Measures**

Personal Protective Equipment: Dependent upon process being performed on material. Each operation must be addressed for suitable equipment and or engineering controls.

Gloves: Leather faced/ cut protection

Eyes: Safety glasses or face shield as appropriate

Footwear: Safety shoes/ boots where req'd

Other: Barrier cream may be used when handling

Respiratory: Approved respiratory protection where applicable.

Engineering Controls (eg. Ventilation, enclosures): General or local exhaust ventilation during welding.

Leak and Spill Procedures: N/A

Water Disposal: N/A

Storage Requirements: Keep stored material dry to prevent corrosion.

Special Shipping Information: N/A

Section 8**First-Aid Measures**

Skin: Wash affected area with soap and water. Seek medical attention if irritation persists.

Eye: For irritation from any coating material flush eyes with plenty of water. Seek medical attention if irritation persists.

Inhalation: For overexposure to metal fumes remove to fresh air. Seek medical attention for adverse symptoms.

Ingestion: N/A

Section 9**Preparation Date of MSDS**

Prepared by: Brunswick Steel

Phone Number: 1-800-493-8898

Date: **February 2016**

The information contained is based on the data considered accurate, however, no warranty is expressed or implied regarding the accuracy of these data or the results obtained from the use thereof.