

# SAFETY DATA SHEET



Pretreated and/or Painted Aluminum Extrusions

## Section 1. Identification

<b>GHS product identifier</b>	: Pretreated and/or Painted Aluminum Extrusions
<b>Product code</b>	: Not available.
<b>Other means of identification</b>	: 6XXX Series Alloys including: 6005, 6005A, 6060, 6061, 6063, 6082, 6105, 6181, 6351, 6360, 6463; Aluminum; Wrought Aluminum Products
<b>Product type</b>	: Massive metal. Not hazardous in solid form. If dust or fumes are generated during processing (e.g., brazing, cutting, grinding, sawing, and welding) hazardous chemicals could be released.

### Relevant identified uses of the substance or mixture and uses advised against

<b>Product use</b>	: Various extruded and/or fabricated aluminum parts, products and cast billet.
<b>Area of application</b>	: Various applications.

<b>Manufacturer</b>	: <b>Bonnell Aluminum, Inc.</b> 25 Bonnell Street, Newnan, GA 30263  Website: BonnellAluminum.com Telephone no.: (770) 254-2020
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<b>Emergency telephone number (with hours of operation)</b>	: Chemtrec (North America): 1-800-424-9300 (24 hours)
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## Section 2. Hazards identification

This product, under the normal conditions of use, meets the definition of an "ARTICLE".

If dust or fumes are generated during processing (e.g., brazing, cutting, grinding, sawing, and welding) hazardous chemicals could be released.

<b>OSHA/HCS status</b>	: While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), this SDS contains valuable information critical to the safe handling and proper use of the product. This SDS should be retained and available for employees and other users of this product.
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<b>Classification of the substance or mixture</b>	: Not classified.
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### GHS label elements

<b>Signal word</b>	: No signal word.
<b>Hazard statements</b>	: No known significant effects or critical hazards.
<b>Precautionary statements</b>	
<b>Prevention</b>	: P201 - Obtain special instructions before use. P280 - Wear protective gloves, protective clothing and eye or face protection. P260 - Do not breathe dust.
<b>Response</b>	: Not applicable.
<b>Storage</b>	: Not applicable.
<b>Disposal</b>	: P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.

<b>Date of issue/Date of revision</b>	: 11/16/2020	<b>Date of previous issue</b>	: No previous validation	<b>Version</b>	: 1	1/16
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## Section 2. Hazards identification

**Hazards not otherwise classified** : Danger.  
 If dust or fumes are generated during processing (e.g., brazing, cutting, grinding, sawing, and welding) hazardous chemicals could be released.  
 May cause an allergic skin reaction.  
 Suspected of causing cancer.  
 May damage fertility or the unborn child.  
 May cause harm to breast-fed children.  
 May cause damage to organs through prolonged or repeated exposure.

## Section 3. Composition/information on ingredients

**Substance/mixture** : Mixture  
**Other means of identification** : 6XXX Series Alloys including: 6005, 6005A, 6060, 6061, 6063, 6082, 6105, 6181, 6351, 6360, 6463; Aluminum; Wrought Aluminum Products

Ingredient name	Other names	%	CAS number
aluminum, non flammable solid	-	≥90	7429-90-5
magnesium, non flammable solid	-	≤5	7439-95-4
zinc	-	≤5	7440-66-6
silicon	-	≤3	7440-21-3
manganese	-	≤3	7439-96-5
copper	-	≤3	7440-50-8
chromium	-	≤1	7440-47-3
lead	-	<1	7439-92-1
titanium	-	≤0.3	7440-32-6
nickel	-	≤0.3	7440-02-0
carbon black, non respirable	-	≤0.1	1333-86-4
strontium chromate	-	≤0.1	7789-06-2

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

**There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health and hence require reporting in this section.**

## Section 4. First aid measures

This product, under the normal conditions of use, meets the definition of an "ARTICLE".

If dust or fumes are generated during processing (e.g., brazing, cutting, grinding, sawing, and welding) hazardous chemicals could be released.

### Description of necessary first aid measures

**Eye contact** : Get medical attention if any damage to the eye is caused by the metal.  
**Inhalation** : Not applicable.  
**Skin contact** : Flush contaminated skin with plenty of water. Cuts should be treated promptly and covered.  
**Ingestion** : Not applicable.

### Most important symptoms/effects, acute and delayed

#### Potential acute health effects

**Eye contact** : Not applicable.  
**Inhalation** : Not applicable.  
**Skin contact** : No known significant effects or critical hazards.  
**Ingestion** : Not applicable.

## Section 4. First aid measures

### Over-exposure signs/symptoms

- Eye contact** : No specific data.
- Inhalation** : No specific data.
- Skin contact** : No specific data.
- Ingestion** : No specific data.

### Indication of immediate medical attention and special treatment needed, if necessary

- Notes to physician** : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
- Specific treatments** : No specific treatment.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training.

See toxicological information (Section 11)

## Section 5. Fire-fighting measures

This product, under the normal conditions of use, meets the definition of an "ARTICLE".

If dust or fumes are generated during processing (e.g., brazing, cutting, grinding, sawing, and welding) hazardous chemicals could be released.

### Extinguishing media

- Suitable extinguishing media** : Use approved Class D extinguisher or smother with dry sand, dry clay or dry ground limestone.
- Unsuitable extinguishing media** : Do not use water jet. Halogen (HCFC) extinguisher.

**Specific hazards arising from the chemical** : No specific fire or explosion hazard.

- Hazardous thermal decomposition products** : Decomposition products may include the following materials:  
 carbon dioxide  
 carbon monoxide  
 nitrogen oxides  
 metal oxide/oxides  
 Halides  
 hydrogen cyanide  
 hydrogen chloride

**Special protective actions for fire-fighters** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

**Special protective equipment for fire-fighters** : Wear MSHA/NIOSH-approved self-contained breathing apparatus or equivalent and full protective gear.

**Remark** : Solid.: Non-combustible. Not considered to be a product presenting a risk of explosion. Material in powder form, capable of creating a dust explosion. Molten material reacts violently with water and can react with aluminum, tin, zinc and their alloys to generate flammable and explosive hydrogen gas.

## Section 6. Accidental release measures

This product, under the normal conditions of use, meets the definition of an "ARTICLE".

If dust or fumes are generated during processing (e.g., brazing, cutting, grinding, sawing, and welding) hazardous chemicals could be released.

### Personal precautions, protective equipment and emergency procedures

- For non-emergency personnel** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Put on appropriate personal protective equipment.
- For emergency responders** : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

**Environmental precautions** : No specific hazard.

### Methods and materials for containment and cleaning up

- Small spill** : Restack safely. Take care with items that are sharp or heavy or hot. Aluminum does not change color or glow when hot/heated.
- Large spill** : Restack safely. Take care with items that are sharp or heavy or hot. Aluminum does not change color or glow when hot/heated. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

## Section 7. Handling and storage

This product, under the normal conditions of use, meets the definition of an "ARTICLE".

If dust or fumes are generated during processing (e.g., brazing, cutting, grinding, sawing, and welding) hazardous chemicals could be released.

### Precautions for safe handling

- Protective measures** : Put on appropriate personal protective equipment (see Section 8). Take care with items that are sharp or heavy or hot. Aluminum does not change color or glow when hot/heated.
- Advice on general occupational hygiene** : Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

**Conditions for safe storage, including any incompatibilities** : Store in accordance with local regulations. See Section 10 for incompatible materials before handling or use.

## Section 8. Exposure controls/personal protection

### Control parameters

#### Occupational exposure limits

Ingredient name	Exposure limits
aluminum, non flammable solid	<b>NIOSH REL (United States, 10/2016).</b> TWA: 5 mg/m <sup>3</sup> 10 hours. Form: Respirable fraction TWA: 10 mg/m <sup>3</sup> 10 hours. Form: Total <b>OSHA PEL (United States, 5/2018).</b> TWA: 5 mg/m <sup>3</sup> , (as Al) 8 hours. Form: Respirable fraction TWA: 15 mg/m <sup>3</sup> , (as Al) 8 hours. Form: Total dust <b>ACGIH TLV (United States, 3/2020).</b> TWA: 1 mg/m <sup>3</sup> 8 hours. Form: Respirable fraction
magnesium, non flammable solid	None.

## Section 8. Exposure controls/personal protection

<p>zinc silicon</p>	<p>None. <b>NIOSH REL (United States, 10/2016).</b> TWA: 5 mg/m<sup>3</sup> 10 hours. Form: Respirable fraction TWA: 10 mg/m<sup>3</sup> 10 hours. Form: Total</p>
<p>manganese</p>	<p><b>OSHA PEL (United States, 5/2018).</b> TWA: 5 mg/m<sup>3</sup> 8 hours. Form: Respirable fraction TWA: 15 mg/m<sup>3</sup> 8 hours. Form: Total dust</p> <p><b>NIOSH REL (United States, 10/2016).</b> TWA: 1 mg/m<sup>3</sup>, (as Mn) 10 hours. Form: Fume STEL: 3 mg/m<sup>3</sup>, (as Mn) 15 minutes. Form: Fume</p> <p><b>OSHA PEL (United States, 5/2018).</b> CEIL: 5 mg/m<sup>3</sup>, (as Mn) Form: Fume</p> <p><b>ACGIH TLV (United States, 3/2020).</b> TWA: 0.1 mg/m<sup>3</sup>, (as Mn) 8 hours. Form: Inhalable fraction TWA: 0.02 mg/m<sup>3</sup>, (as Mn) 8 hours. Form: Respirable fraction</p>
<p>copper</p>	<p><b>ACGIH TLV (United States, 3/2020).</b> TWA: 1 mg/m<sup>3</sup>, (as Cu) 8 hours. Form: Dust and mist TWA: 0.2 mg/m<sup>3</sup> 8 hours. Form: Fume</p> <p><b>NIOSH REL (United States, 10/2016).</b> TWA: 1 mg/m<sup>3</sup>, (as Cu) 10 hours. Form: Dusts and Mists</p> <p><b>OSHA PEL (United States, 5/2018).</b> TWA: 1 mg/m<sup>3</sup> 8 hours. Form: Dusts and Mists TWA: 0.1 mg/m<sup>3</sup> 8 hours. Form: Fume</p>
<p>chromium</p>	<p><b>NIOSH REL (United States, 10/2016).</b> TWA: 0.5 mg/m<sup>3</sup> 8 hours.</p> <p><b>ACGIH TLV (United States, 3/2020).</b> TWA: 0.5 mg/m<sup>3</sup>, (measured as Cr) 8 hours. Form: Inhalable fraction</p> <p><b>OSHA PEL (United States, 5/2018).</b> TWA: 1 mg/m<sup>3</sup>, (as Cr) 8 hours.</p>
<p>lead</p>	<p><b>ACGIH TLV (United States, 3/2020).</b> TWA: 0.05 mg/m<sup>3</sup>, (as Pb) 8 hours.</p> <p><b>NIOSH REL (United States, 10/2016).</b> TWA: 0.05 mg/m<sup>3</sup> 8 hours.</p> <p><b>OSHA PEL (United States, 5/2018).</b> TWA: 50 µg/m<sup>3</sup>, (as Pb) 8 hours.</p>
<p>titanium nickel</p>	<p>None.</p> <p><b>ACGIH TLV (United States, 3/2020).</b> TWA: 1.5 mg/m<sup>3</sup> 8 hours. Form: Inhalable fraction</p> <p><b>NIOSH REL (United States, 10/2016).</b> TWA: 0.015 mg/m<sup>3</sup>, (as Ni) 10 hours.</p> <p><b>OSHA PEL (United States, 5/2018).</b> TWA: 1 mg/m<sup>3</sup>, (as Ni) 8 hours.</p>
<p>carbon black, non respirable</p>	<p><b>ACGIH TLV (United States, 3/2020).</b> TWA: 3 mg/m<sup>3</sup> 8 hours. Form: Inhalable fraction</p> <p><b>NIOSH REL (United States, 10/2016).</b> TWA: 3.5 mg/m<sup>3</sup> 10 hours. TWA: 0.1 mg of PAHs/cm<sup>3</sup> 10 hours.</p> <p><b>OSHA PEL (United States, 5/2018).</b> TWA: 3.5 mg/m<sup>3</sup> 8 hours.</p>
<p>strontium chromate</p>	<p><b>ACGIH TLV (United States, 3/2020).</b> TWA: 0.0005 mg/m<sup>3</sup>, (measured as Cr) 8 hours.</p>

## Section 8. Exposure controls/personal protection

**OSHA PEL Z2 (United States, 2/2013).**  
 CEIL: 1 mg/10m<sup>3</sup>  
**NIOSH REL (United States, 10/2016).**  
 TWA: 0.0002 mg/m<sup>3</sup> 8 hours.  
**OSHA PEL (United States, 5/2018).**  
 TWA: 0.005 mg/m<sup>3</sup>, (as Cr) 8 hours.

**Appropriate engineering controls** : No special ventilation requirements.

**Environmental exposure controls** : Not applicable.

### Individual protection measures

**Hygiene measures** : Wash thoroughly after handling.

**Eye/face protection** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

### Skin protection

**Hand protection** : Use strong, cut-resistant gloves suitable for handling metals.

**Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

**Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

**Respiratory protection** : Not applicable.

## Section 9. Physical and chemical properties

### Appearance

**Physical state** : Solid. [Various]

**Color** : Gray. / Silver. / Various (Based on paint pigment specified by customer.)

**Odor** : Odorless.

**Odor threshold** : Not available.

**pH** : Not applicable.

**Melting point** : 593 to 704°C (1099.4 to 1299.2°F)

**Boiling point** : Not available.

**Flash point** : Not applicable.

**Evaporation rate** : Not applicable.

**Flammability (solid, gas)** : Not available.

**Lower and upper explosive (flammable) limits** : Not applicable.

**Vapor pressure** : Not applicable.

**Vapor density** : Not applicable.

**Relative density** : 2.5 to 2.9 [Water = 1]

**Density** : 2.69 to 2.74 g/cm<sup>3</sup>

## Section 9. Physical and chemical properties

<b>Solubility</b>	: Insoluble in the following materials: cold water and hot water.
<b>Partition coefficient: n-octanol/water</b>	: Not available.
<b>Auto-ignition temperature</b>	: Not available.
<b>Decomposition temperature</b>	: Not available.
<b>SADT</b>	: Not available.
<b>Viscosity</b>	: Not applicable.
<b>Flow time (ISO 2431)</b>	: Not applicable.

## Section 10. Stability and reactivity

<b>Reactivity</b>	: No specific test data related to reactivity available for this product or its ingredients.
<b>Chemical stability</b>	: The product is stable.
<b>Possibility of hazardous reactions</b>	: Under normal conditions of storage and use, hazardous reactions will not occur. Under normal conditions of storage and use, hazardous polymerization will not occur.
<b>Conditions to avoid</b>	: Avoid dust generation.
<b>Incompatible materials</b>	: Molten aluminum is reactive with water. Aluminum particles are reactive or incompatible with water, humidity, strong alkalis, strong acids, halogenated acids and strong oxidizing materials.
<b>Hazardous decomposition products</b>	: Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## Section 11. Toxicological information

### Information on toxicological effects

#### Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
silicon	LD50 Oral	Rat	3160 mg/kg	-
manganese	LC50 Inhalation Dusts and mists	Rat	5.14 mg/l	4 hours
	LD50 Oral	Rat	9 g/kg	-
copper	LC50 Inhalation Dusts and mists	Rat - Male, Female	>5.11 mg/l	4 hours
lead	LC50 Inhalation Dusts and mists	Rat - Male, Female	>5.05 mg/l	4 hours
	LD50 Dermal	Rat - Male, Female	>2000 mg/kg	-
	LD50 Oral	Rat - Male, Female	>2000 mg/kg	-
carbon black, non respirable	LC50 Inhalation Dusts and mists	Rat	6.75 mg/l	4 hours
	LD50 Dermal	Rabbit	>3 g/kg	-
	LD50 Oral	Rat	>15400 mg/kg	-
strontium chromate	LD50 Oral	Rat	811 mg/kg	-

#### Irritation/Corrosion

## Section 11. Toxicological information

Product/ingredient name	Result	Species	Score	Exposure	Observation
silicon manganese	Eyes - Mild irritant	Rabbit	-	3 mg	-
	Eyes - Mild irritant	Rabbit	-	24 hours 500 mg	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 mg	-

### Sensitization

Not available.

### Conclusion/Summary

**Skin** : Dust : May cause sensitization by skin contact.

### Mutagenicity

**Conclusion/Summary** : Not available.

### Carcinogenicity

**Conclusion/Summary** : Contains material which can cause cancer.  
Dust (prolonged exposure): Can cause cancer.

### Classification

Product/ingredient name	OSHA	IARC	NTP
chromium	-	3	-
lead	-	2B	Reasonably anticipated to be a human carcinogen.
nickel	-	2B	Reasonably anticipated to be a human carcinogen.
strontium chromate	+	1	Known to be a human carcinogen.

### Reproductive toxicity

**Conclusion/Summary** : Contains material which can impair fertility.  
Dust (prolonged exposure): Possible risk of impaired fertility.

### Teratogenicity

**Conclusion/Summary** : Not available.

### Specific target organ toxicity (single exposure)

Not available.

### Specific target organ toxicity (repeated exposure)

Name	Category	Route of exposure	Target organs
manganese	Category 2	-	central nervous system (CNS), lungs
lead	Category 1	oral, inhalation	blood system, kidneys, nervous system
nickel	Category 1	inhalation	respiratory tract
strontium chromate	Category 2	-	kidneys, respiratory tract

### Aspiration hazard

Not available.

**Information on the likely routes of exposure** : Not available.

### Potential acute health effects



## Section 11. Toxicological information

- Eye contact** : Not applicable.
- Inhalation** : Not applicable.
- Skin contact** : No known significant effects or critical hazards.
- Ingestion** : Not applicable.

### Symptoms related to the physical, chemical and toxicological characteristics

- Eye contact** : No specific data.
- Inhalation** : No specific data.
- Skin contact** : No specific data.
- Ingestion** : No specific data.

### Delayed and immediate effects and also chronic effects from short and long term exposure

#### Short term exposure

- Potential immediate effects** : Not available.
- Potential delayed effects** : Not available.

#### Long term exposure

- Potential immediate effects** : Not available.
- Potential delayed effects** : Not available.

#### Potential chronic health effects

- Conclusion/Summary** : Contains material that may cause target organ damage, based on animal data. Dust : May cause damage to organs through prolonged or repeated exposure.
- General** : No known significant effects or critical hazards.
- Carcinogenicity** : No known significant effects or critical hazards.
- Mutagenicity** : No known significant effects or critical hazards.
- Reproductive toxicity** : No known significant effects or critical hazards.

### Numerical measures of toxicity

#### Acute toxicity estimates

Product/ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapors) (mg/l)	Inhalation (dusts and mists) (mg/l)
Pretreated and/or Painted Aluminum Extrusions	8116.2	N/A	N/A	N/A	N/A
silicon	3160	N/A	N/A	N/A	N/A
manganese	9000	N/A	N/A	N/A	5.14
lead	2500	2500	N/A	N/A	N/A
carbon black, non respirable	N/A	2500	N/A	N/A	6.75
strontium chromate	811	N/A	N/A	N/A	N/A

## Section 12. Ecological information

### Toxicity

Product/ingredient name	Result	Species	Exposure
aluminum, non flammable solid	Acute LC50 38000 µg/l Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 120 µg/l Fresh water	Fish - Oncorhynchus mykiss - Embryo	96 hours
zinc	Chronic NOEC 9 mg/l Fresh water	Aquatic plants - Ceratophyllum demersum	3 days
	Acute EC50 0.005 mg/l	Algae - Pseudokirchneriella subcapitata	72 hours
	Acute EC50 10000 µg/l Fresh water	Aquatic plants - Lemna minor	4 days
	Acute IC50 65 µg/l Marine water	Algae - Nitzschia closterium - Exponential growth phase	4 days
	Acute LC50 65 µg/l Fresh water	Crustaceans - Ceriodaphnia dubia - Neonate	48 hours
	Acute LC50 68 µg/l Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 12.21 µg/l Marine water	Fish - Periophthalmus waltoni - Adult	96 hours
	Chronic EC10 27.3 µg/l Fresh water	Algae - Pseudokirchneriella subcapitata - Exponential growth phase	72 hours
	Chronic EC10 59.2 µg/l Fresh water	Daphnia - Daphnia magna	21 days
	Chronic NOEC 9 mg/l Fresh water	Aquatic plants - Ceratophyllum demersum	3 days
manganese	Chronic NOEC 178 µg/l Marine water	Crustaceans - Palaemon elegans	21 days
	Chronic NOEC 2.6 µg/l Fresh water	Fish - Cyprinus carpio	4 weeks
	Acute EC50 31000 µg/l Fresh water	Aquatic plants - Lemna minor	4 days
	Acute LC50 29000 µg/l Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 28 mg/l Fresh water	Fish - Pimephales promelas	96 hours
	Chronic NOEC 1.7 mg/l Fresh water	Daphnia - Water Flea - Ceriodaphnia dubia	8 days
copper	Acute EC50 1100 µg/l Fresh water	Aquatic plants - Lemna minor	4 days
	Acute EC50 2.1 µg/l Fresh water	Daphnia - Daphnia longispina - Juvenile (Fledgling, Hatchling, Weanling)	48 hours
	Acute IC50 13 µg/l Fresh water	Algae - Pseudokirchneriella subcapitata - Exponential growth phase	72 hours
	Acute IC50 5.4 mg/l Marine water	Aquatic plants - Plantae - Exponential growth phase	72 hours
	Acute LC50 0.072 µg/l Marine water	Crustaceans - Amphipoda - Adult	48 hours
	Acute LC50 7.56 µg/l Marine water	Fish - Periophthalmus waltoni - Adult	96 hours
	Chronic NOEC 2.5 µg/l Marine water	Algae - Nitzschia closterium - Exponential growth phase	72 hours
	Chronic NOEC 7 mg/l Fresh water	Aquatic plants - Ceratophyllum demersum	3 days
	Chronic NOEC 0.02 mg/l Fresh water	Crustaceans - Cambarus bartonii - Mature	21 days
	Chronic NOEC 2 µg/l Fresh water	Daphnia - Daphnia magna	21 days
Chronic NOEC 0.8 µg/l Fresh water	Fish - Oreochromis niloticus - Juvenile (Fledgling, Hatchling, Weanling)	6 weeks	
chromium	Acute EC50 0.2 ppm Marine water	Algae - Bacillariophyta	72 hours
	Acute EC50 5 ppm Marine water	Algae - Macrocyctis pyrifera - Young	4 days

## Section 12. Ecological information

lead	Acute EC50 35000 µg/l Fresh water Acute LC50 45 µg/l Fresh water	Aquatic plants - Lemna minor Crustaceans - Ceriodaphnia reticulata	4 days 48 hours
	Acute LC50 22 µg/l Fresh water Acute LC50 13.9 ppm Fresh water Chronic NOEC 50 mg/l Marine water Chronic NOEC 0.19 µg/l Fresh water Acute EC50 105 ppb Marine water	Daphnia - Daphnia magna Fish - Anguilla rostrata Algae - Glenodinium halli Fish - Cyprinus carpio Algae - Chaetoceros sp. - Exponential growth phase Algae - Ulva pertusa	48 hours 96 hours 72 hours 4 weeks 72 hours 96 hours
nickel	Acute EC50 0.489 mg/l Marine water Acute EC50 8000 µg/l Fresh water Acute LC50 530 µg/l Fresh water	Aquatic plants - Lemna minor Crustaceans - Ceriodaphnia reticulata Daphnia - Daphnia magna Fish - Cyprinus carpio - Juvenile (Fledgling, Hatchling, Weanling)	4 days 48 hours 48 hours 96 hours
	Acute LC50 0.594 mg/l Fresh water Acute LC50 0.44 ppm Fresh water  Chronic NOEC 0.25 mg/l Marine water Chronic NOEC 0.03 µg/l Fresh water Acute EC50 2 ppm Marine water	Algae - Ulva pertusa Fish - Cyprinus carpio Algae - Macrocystis pyrifera - Young Aquatic plants - Lemna minor Daphnia - Daphnia magna Crustaceans - Americamysis bahia - Juvenile (Fledgling, Hatchling, Weanling)	96 hours 4 weeks 4 days 4 days 48 hours 48 hours
carbon black, non respirable	Acute EC50 450 µg/l Fresh water Acute EC50 1000 µg/l Marine water Acute IC50 0.31 mg/l Marine water	Fish - Heteropneustes fossilis Algae - Glenodinium halli Fish - Cyprinus carpio Algae	96 hours 72 hours 4 weeks 72 hours
	Acute LC50 47.5 ng/L Fresh water Chronic NOEC 100 mg/l Marine water Chronic NOEC 3.5 µg/l Fresh water Acute EC50 >10000 mg/l Fresh water Acute NOEC >10000 mg/l Fresh water	Algae	72 hours

**Conclusion/Summary** : Not available.

### Persistence and degradability

Not available.

### Bioaccumulative potential

Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
silicon	57 to 77	-	high

### Mobility in soil

**Soil/water partition coefficient (K<sub>oc</sub>)** : Not available.

**Other adverse effects** : No known significant effects or critical hazards.

## Section 13. Disposal considerations

This product, under the normal conditions of use, meets the definition of an "ARTICLE".

If dust or fumes are generated during processing (e.g., brazing, cutting, grinding, sawing, and welding) hazardous chemicals could be released.

**Disposal methods** : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Reuse or recycle material whenever possible. If reuse or recycling is not possible, disposal must be made in accordance with local and governmental regulations.

## Section 14. Transport information

	DOT Classification	IMDG	IATA
UN number	Not regulated.	Not regulated.	Not regulated.
UN proper shipping name	-	-	-
Transport hazard class(es)	-	-	-
Packing group	-	-	-
Environmental hazards	No.	No.	No.

### Additional information

**DOT Classification** : **Reportable quantity** 2500 lbs / 1135 kg. Package sizes shipped in quantities less than the product reportable quantity are not subject to the RQ (reportable quantity) transportation requirements.  
**Remarks** Not Applicable when shipped as massive solid metal.

**Special precautions for user** : Not Applicable when shipped as massive solid metal.

**Transport in bulk according to IMO instruments** : Not available.

## Section 15. Regulatory information

**U.S. Federal regulations** : **TSCA 6 proposed risk management:** lead  
**TSCA 6 final risk management:** strontium chromate  
**TSCA 8(a) CDR Exempt/Partial exemption:** Not determined  
**United States inventory (TSCA 8b):** All components are active or exempted.  
**Clean Water Act (CWA) 307:** zinc; copper; chromium; lead; nickel; strontium chromate  
**Clean Water Act (CWA) 311:** strontium chromate

## Section 15. Regulatory information

**Clean Air Act Section 112** : Listed

**(b) Hazardous Air Pollutants (HAPs)**

**Clean Air Act Section 602 Class I Substances** : Not listed

**Clean Air Act Section 602 Class II Substances** : Not listed

**DEA List I Chemicals (Precursor Chemicals)** : Not listed

**DEA List II Chemicals (Essential Chemicals)** : Not listed

**SARA 302/304**

**Composition/information on ingredients**

No products were found.

**SARA 304 RQ** : Not applicable.

**SARA 311/312**

**Classification** : Not applicable.

**Composition/information on ingredients**

Name	%	Classification
magnesium, non flammable solid	≤5	SUBSTANCES AND MIXTURES, WHICH IN CONTACT WITH WATER, EMIT FLAMMABLE GASES - Category 3
silicon	≤3	FLAMMABLE SOLIDS - Category 2
manganese	≤3	EYE IRRITATION - Category 2B FLAMMABLE SOLIDS - Category 2 EYE IRRITATION - Category 2B TOXIC TO REPRODUCTION - Category 2 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2
copper	≤3	COMBUSTIBLE DUSTS
lead	<1	CARCINOGENICITY - Category 2 TOXIC TO REPRODUCTION - Category 1A TOXIC TO REPRODUCTION - Effects on or via lactation SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 1
titanium	≤0.3	FLAMMABLE SOLIDS - Category 1
nickel	≤0.3	SKIN SENSITIZATION - Category 1 CARCINOGENICITY - Category 2 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 1
strontium chromate	≤0.1	ACUTE TOXICITY (oral) - Category 4 SKIN SENSITIZATION - Category 1 CARCINOGENICITY - Category 1B SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2

**SARA 313**

## Section 15. Regulatory information

	Product name	CAS number	%
<b>Form R - Reporting requirements</b>	aluminum, non flammable solid	7429-90-5	≥90
	zinc	7440-66-6	≤5
	manganese	7439-96-5	≤3
	copper	7440-50-8	≤3
	lead	7439-92-1	<1
	nickel	7440-02-0	≤0.3
<b>Supplier notification</b>	aluminum, non flammable solid	7429-90-5	≥90
	zinc	7440-66-6	≤5
	manganese	7439-96-5	≤3
	copper	7440-50-8	≤3
	lead	7439-92-1	<1
	nickel	7440-02-0	≤0.3

SARA 313 notifications must not be detached from the SDS and any copying and redistribution of the SDS shall include copying and redistribution of the notice attached to copies of the SDS subsequently redistributed.

### State regulations

- Massachusetts** : The following components are listed: ALUMINUM; MAGNESIUM; ZINC; SILICON DUST; MANGANESE; COPPER
- New York** : The following components are listed: Zinc; Copper; Lead; Nickel
- New Jersey** : The following components are listed: ALUMINUM; MAGNESIUM; ZINC; SILICON; MANGANESE; COPPER; LEAD; NICKEL
- Pennsylvania** : The following components are listed: ALUMINUM; MAGNESIUM; ZINC COMPOUNDS; SILICON; MANGANESE COMPOUNDS; COPPER FUME; LEAD COMPOUNDS; NICKEL CATALYST

### California Prop. 65

**⚠ WARNING:** This product can expose you to chemicals including Lead and Chromium (hexavalent compounds), which are known to the State of California to cause cancer and birth defects or other reproductive harm. This product can expose you to chemicals including Nickel and Carbon black, which are known to the State of California to cause cancer. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

Ingredient name	No significant risk level	Maximum acceptable dosage level
Lead	Yes.	Yes.
Nickel	-	-
Carbon black	-	-
Chromium (hexavalent compounds)	Yes.	Yes.

### International regulations

#### Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

#### Montreal Protocol

Not listed.

#### Stockholm Convention on Persistent Organic Pollutants

Not listed.

#### Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

#### UNECE Aarhus Protocol on POPs and Heavy Metals

## Section 15. Regulatory information

Ingredient name	List name	Status
Lead (Pb)	Heavy metals - Annex 1	Listed

## Section 16. Other information

### Hazardous Material Information System (U.S.A.)

Health	/	0
Flammability		1
Physical hazards		0

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings and the associated label are not required on SDSs or products leaving a facility under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered trademark and service mark of the American Coatings Association, Inc.

The customer is responsible for determining the PPE code for this material. For more information on HMIS® Personal Protective Equipment (PPE) codes, consult the HMIS® Implementation Manual.

### National Fire Protection Association (U.S.A.)



### Procedure used to derive the classification

Classification	Justification
Not classified.	

### History

- Date of issue/Date of revision** : 11/16/2020
- Date of previous issue** : No previous validation
- Version** : 1
- Prepared by** : Sphera Solutions
- Key to abbreviations** :
  - ATE = Acute Toxicity Estimate
  - AMP = Acceptable maximum peak above the acceptable ceiling concentration for an 8-hr shift
  - BCF = Bioconcentration Factor
  - GHS = Globally Harmonized System of Classification and Labelling of Chemicals
  - IATA = International Air Transport Association
  - IBC = Intermediate Bulk Container
  - IMDG = International Maritime Dangerous Goods
  - LogPow = logarithm of the octanol/water partition coefficient
  - MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
  - N/A = Not available
  - UN = United Nations
- References** :
  - HCS (U.S.A.)- Hazard Communication Standard
  - International transport regulations

Indicates information that has changed from previously issued version.

**Date of issue/Date of revision** : 11/16/2020    **Date of previous issue** : No previous validation    **Version** : 1    15/16

## Section 16. Other information

### Notice to reader

Reasonable care has been taken in the preparation of this information, but the manufacturer makes no warranty of merchantability or any other warranty, expressed or implied, with respect to this information. The manufacturer makes no representations and assumes no liability for any direct, incidental or consequential damages resulting from its use. Disclaimer: Supplier gives no warranty of merchantability or of fitness for a particular purpose. Any product purchased is sold on the assumption the purchaser will make his own tests to determine the quality and suitability of the product.