

**1. Identification**

Product Identifier: **Aluminum for masonry vents**

Manufacturer:

Hohmann & Barnard, Inc.  
30 Rasons Court  
Hauppauge, NY 11788  
(631) 234-0600  
www.h-b.com

Telephone Numbers

During normal business hours call: (800) 645-0616  
24-hour emergency call Chemtrec: (800) 255-3924

Recommended use: Various aluminum vent products

Recommended restrictions: None known.

**2. Hazards Identification**

**Physical hazards:** Not classified.

**Health hazards:** Acute toxicity, inhalation Category 4  
Sensitization, respiratory Category 1  
Sensitization, skin Category 1  
Carcinogenicity Category 2  
Reproductive toxicity Category 1  
Specific target organ toxicity, repeated exposure Category 1

**Environmental hazards** Not classified.

**OSHA defined hazards** Combustible dust

**Label elements**



**Signal word :** Danger

**Hazard statement:** Harmful if inhaled. May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause an allergic skin reaction. Suspected of causing cancer by inhalation. May damage fertility or the unborn child by inhalation. Causes damage to organs through prolonged or repeated exposure by inhalation. May form combustible dust concentrations in air.

**Precautionary statement:**

**Prevention** Harmful if inhaled. May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause an allergic skin reaction. Suspected of causing cancer by inhalation. May damage fertility or the unborn child by inhalation. Causes damage to organs through prolonged or repeated exposure by inhalation. May form combustible dust concentrations in air.

**Response** If inhaled: If breathing is difficult, remove person to fresh air and keep comfortable for breathing. If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician. IF ON SKIN: Wash with plenty of soap and water. If skin irritation or rash occurs: Get medical advice/attention. Wash contaminated clothing before reuse. If exposed or concerned: Get medical advice/attention.

**Storage** Store in a dry place.

**Disposal** Dispose of contents/container in accordance with local/regional/national/international regulations. Reuse or recycle material whenever possible.

**Hazard(s) not otherwise classified (HNOC):** Avoid dust formation.

**Supplemental information:** None.

**Specific hazards**

Explosion/fire hazards may be present when:

Non-combustible as supplied. Small chips, fine turnings, and dust from processing may be readily ignitable.

- Dust or fines are dispersed in air.
- Chips, dust or fines are in contact with water.
- Dust in contact with certain metal oxides (rust).
- Molten metal in contact with water/moisture or certain metal oxides (rust)

Health effects from mechanical processing (e.g., cutting, grinding): Can cause irritation of the eyes, skin and respiratory tract.

**3. Composition/Information on Ingredients**

Composition comments: Complete composition is provided below and may include some components classified as non-hazardous.

| Chemical and common names | CAS number | %        |
|---------------------------|------------|----------|
| Aluminum                  | 7429-90-5  | >88.2    |
| Silicon                   | 7440-21-3  | 0 - 11.6 |
| Zinc                      | 7440-66-6  | 0 - 6.6  |
| Nickel                    | 7440-02-0  | 0 - 6.1  |
| Copper                    | 7440-50-8  | 0 - 4.1  |
| Manganese                 | 7439-96-5  | 0 - 3.1  |
| Magnesium                 | 7439-95-4  | 0 - 3.1  |
| Chromium                  | 7440-47-3  | 0 - 0.36 |
| Vanadium                  | 7440-62-2  | 0 - 0.26 |
| Lead                      | 7439-92-1  | 0 - 0.11 |

**4. First-Aid Measures**

|  |   |
|--|---|
| Eye contact  | Dust and fumes from processing: Rinse eyes with plenty of water or saline for at least 15 minutes. Consult a physician.   |
| Skin contact                                       | Dust and fume from processing or contact with lubricant/residual oil: Wash with soap and water for at least 15 minutes. Get medical attention if irritation develops or persists.   |
| Inhalation   | Dust and fumes from processing: Remove to fresh air. Check for clear airway, breathing, and presence of pulse. If breathing is difficult, provide oxygen. Loosen any tight clothing on neck or chest. Provide cardiopulmonary resuscitation for persons without pulse or respirations. Consult a physician. |
| Ingestion  | Not likely, due to the form of the product.   |
| Most important symptoms/effects, acute and delayed | Dust and fume from processing or contact with lubricant/residual oil: Repeated or prolonged skin contact may cause skin irritation and/or dermatitis and sensitization of susceptible persons.  |

Health effects from mechanical processing (e.g., cutting, grinding):

Contains nickel. May produce an allergic reaction. Can cause irritation of the respiratory tract. Chronic exposure: Can cause reduction in the number of red blood cells (anemia), skin abnormalities (pigmentation changes), respiratory sensitization, scarring of the lungs (pulmonary fibrosis), central nervous system damage, secondary Parkinson's disease and reproductive harm.

Additional health effects from elevated temperature processing (e.g., welding, melting): Can cause metal fume fever (nausea, chills, fever, shortness of breath and malaise), the accumulation of fluid in the lungs (pulmonary edema) and reduced ability of the blood to carry oxygen (methemoglobin). Chronic exposure: Can cause respiratory sensitization and lung cancer.

See Section 11 of the SDS for additional information on health hazards. If breathing is difficult, give oxygen. Symptoms may be delayed.

General information If exposed or concerned: Get medical advice/attention.

**5. Fire-fighting measures**

Suitable extinguishing media:

Use Class D extinguishing agents on dust or molten metal

Use coarse water spray on chips and turning

Apply extinguishing media carefully to avoid creating airborne dust

Unsuitable extinguishing media:

DO NOT USE halogenated extinguishing agents on small chips/dust

DO NOT USE water in fighting fires around molten metal

Special Fire Fighting Procedures: IN SHEET, OR COIL FORM, MATERIAL DOES NOT BURN. IN POWDER OR CHIP FORM, USE DRY POWDER OR SAND. DO NOT USE WATER OR HALOGEN EXTINGUISHING AGENT.

Unusual fire and explosion hazards:

WATER, OXIDIZERS AND MANY OTHER CHEMICALS REACT EXPLOSIVELY IN CONTACT WITH MOLTEN ALUMINUM. FINE CHIPS, TURNINGS, AND DUSTS IN AIR MAY EXPLODE IF IGNITION SOURCE IS PRESENT.

**6. Accidental release measures**

Personal precautions, protective equipment and emergency procedures:

Avoid generating dust. Avoid contact with sharp edges or heated metal. Avoid inhalation of fumes from molten product. Molten,

heated and cold aluminum look alike; do not touch unless you know it is cold. Use personal protection recommended in Section 8 of the SDS.

**Evacuation procedures:**

Keep unnecessary personnel away.

**Methods and materials for containment and cleaning up:**

Collect scrap for recycling.

If molten: Use dry sand to contain the flow of material.. All tooling (e.g., shovels or hand tools) and containers which come in contact with molten metal must be preheated or specially coated, rust free and approved for such use. Allow the spill to cool before remelting as scrap.

**Environmental precautions:**

Collect spillage.

## 7. Handling and storage

**Handling** Keep material dry. Avoid generating dust. Avoid contact with sharp edges or heated metal. Hot and cold aluminum are not visually different. Hot aluminum does not necessarily glow red. Use personal protection recommended in Section 8 of the SDS.8. Exposure controls/personal protection

**Storage** Store in a dry place. Keep dry.

## 8. Exposure controls/personal protection

**Occupational exposure limits**

U.S. - OSHA

| Components                | Type    | Value      | Form                 |
|---------------------------|---------|------------|----------------------|
| Aluminum (CAS 7429-90-5)  | TWA     | 5 mg/m3    | Respirable fraction  |
| Chromium (CAS 7440-47-3)  | TWA     | 1 mg/m3    |                      |
| Copper (CAS 7440-50-8)    | TWA     | 1 mg/m3    | Dust and mist.       |
|                           |         | 0.1 mg/m3  | Fume.                |
| Lead (CAS 7439-92-1)      | TWA     | 0.05 mg/m3 | (as Pb)              |
| Manganese (CAS 7439-96-5) | Ceiling | 5 mg/m3    | Fume                 |
| Nickel (CAS 7440-02-0)    | TWA     | 1 mg/m3    |                      |
| Silicon (CAS 7440-21-3)   | TWA     | 5 mg/m3    | Respirable fraction. |
|                           |         | 15 mg/m3   | Total dust           |

Appropriate engineering controls: Dust and fumes from processing: Use with adequate explosion-proof ventilation designed to handle particulates to meet the limits listed above.

Respiratory Protection (Specify Type): NONE FOR SOLID STATE. IF DUST, FUMES, FINES, TURNINGS OR POWDER ARE PRESENT, USE NIOSH APPROVED RESPIRATOR.

Ventilation: AS REQUIRED FOR DUST/FUME PRODUCING OPERATIONS.

Protective Gloves: USE STRONG INDUSTRIAL GLOVES TO AVOID LIMB INJURIES.

Eye Protection: USE SAFETY GLASSES IN ALL INDUSTRIAL OPERATIONS.

## 9. Physical and chemical properties

Boiling Point: N/A Specific Gravity (H<sub>2</sub>O=1): 2.7 Vapor Pressure (mm Hg): Not applicable

Percent Volatile by Volume: 0% Vapor Density (Air = 1): Not applicable Evaporation Rate: Not applicable

Solubility in Water: INSOLUBLE Reactivity in Water: NONE IN SOLID STATE

Appearance: SILVERY, DUCTILE METAL (SOLID) COATED WITH VARIATIONS OF COLORS

Odor: NONE Flash Point: Not applicable

Flammable Limits in Air % by Volume: Not applicable

Extinguisher Media: DOES NOT BURN Auto-Ignition Temperature: Not applicable

Odor threshold: Not applicable

pH: Not applicable Melting point/freezing point: 900 - 1200 °F (482.22 - 648.89 °C)

Initial boiling point and boiling range: Not determined

Flash point: Not applicable Evaporation rate: Not applicable Flammability (solid, gas): Not applicable.

Upper/lower flammability or explosive limits:

Flammability limit - upper (%) Not applicable

Flammability limit - lower (%) Not applicable

Explosive properties: Dust clouds may be explosive under certain conditions.

Dust explosion properties St class: Strong explosion.

Vapor pressure: Not applicable Vapor density: Not applicable Relative density: Not determined

Solubility(ies): Insoluble Auto-ignition temperature: Not applicable Decomposition temperature: Not applicable

Viscosity: Not applicable

## 10. Stability and reactivity

Reactivity: The product is stable and non-reactive under normal conditions of use, storage and transport.

Chemical stability: Stable under normal conditions of use, storage, and transportation as shipped.

Possibility of hazardous reactions: Hazardous polymerization does not occur.

Conditions to avoid: Chips, fines, dust and molten metal are considerably more reactive with the following:

- Heat: Oxidizes at a rate dependent upon temperature and particle size.
- Water: Slowly generates flammable/explosive hydrogen gas and heat. Generation rate is greatly increased with smaller particles (e.g., fines and dusts). Molten metal can react violently/explosively with water or moisture, particularly when the water is entrapped.

Incompatible Materials: Chips, fines, dust and molten metal are considerably more reactive with the following

- Strong oxidizers: Violent reaction with considerable heat generation. Can react explosively with nitrates (e.g., ammonium nitrate and fertilizers containing nitrate) when heated or molten.
- Acids and alkalis: Reacts to generate flammable/explosive hydrogen gas. Generation rate is greatly increased with smaller particles (e.g., fines and dusts)
- Halogenated compounds: Many halogenated hydrocarbons, including halogenated fire extinguishing agents, can react violently with finely divided or molten aluminum.
- Iron oxide (rust and other metal oxides (e.g., copper and lead oxides): A violent thermite reaction generating considerable heat can occur. Reaction with aluminum fines and dusts requires only generating considerable heat can occur. Reaction with aluminum fines and dusts requires only very weak ignition sources for initiation. Molten aluminum can react violently with iron oxide without external ignition source.
- Iron powder and water: Explosive reaction forming hydrogen gas when heated above 1470°F (800°C)

Thermite explosions have been reported when aluminum alloys were melted in furnaces used for alloying with lead, bismuth or other metals with low melting temperatures. These metals, when added as high purity ingots, can seep through cracks in furnace liners and become oxidized. During subsequent melts in the furnace, molten aluminum can contact these metal oxides resulting in a thermite explosion.

Hazardous decomposition products: No hazardous decomposition products are known.

## 11. Toxicological information

Threshold Limit Value: PLEASE NOTE SECTION 8

Signs and Symptoms of Exposure:

1. Acute Overexposure: SHORTNESS OF BREATH FROM INHALATION OF ALUMINUM DUST.
2. Chronic Overexposure: MAY AGGRAVATE BRONCHIAL CONDITIONS.

Medical Conditions Generally Aggravated by Exposure: RESPIRATORY ILLNESS.

Chemical Listed as Carcinogen or Potential Carcinogen: NO

National Toxicity Program: No I.A.R.C. Monographs: No OSHA: No

OSHA Permissible Exposure Limit: SEE SECTION 8

ACGIH Threshold Limit Value: SEE SECTION 8

Emergency and First Aid Procedures:

1. Inhalation: Fumes/Dust - REMOVE TO FRESH AIR. GET MEDICAL ATTENTION.
2. Eyes: Fumes/Dust - FLUSH WITH WATER. GET MEDICAL ATTENTION.
3. Skin: Molten State - USE COPIUS AMOUNTS OF POTABLE WATER ON EXPOSED AREAS.
4. Ingestion: N/A

## 12. Ecological Information

Ecotoxicity: Not expected to be harmful to aquatic organisms

Persistence and degradability: Not inherently biodegradable.

Bioaccumulative potential: The product is not bioaccumulating.

Mobility in soil: Not considered mobile.

Mobility in general: Not applicable.

Other adverse effects: None known.

## 13. Disposal Considerations

Disposal instructions: Reuse or recycle material whenever possible. If reuse or recycling is not possible, disposal must be made according to local or governmental regulations.

Local disposal regulations: Dispose in accordance with all applicable regulations.

Waste codes:

RCRA Status: Not federally regulated in the U.S. if disposed of "as is."

RCRA waste codes other than described here may apply depending on use of the product. Status must be determined at the point of waste generation. Refer to 40 CFR 261 or state equivalent in the U.S. TCLP testing is recommended for chromium and lead in a waste disposal scenario.

US RCRA Hazardous Waste P List: Reference

|                    |                  |      |
|--------------------|------------------|------|
| Nitric oxide       | (CAS 10102-43-9) | P076 |
| Nitrogen dioxide   | (CAS 10102-44-0) | P078 |
| Vanadium pentoxide | (CAS 1314-62-1)  | P120 |

Waste from residues / unused products: Dispose of in accordance with local regulations.

Contaminated packaging: Dispose of in accordance with local regulations.

**14. Transport information**

General Shipping Information

Basic Shipping Information

|                      |               |
|----------------------|---------------|
| ID number            | -             |
| Proper shipping name | Not regulated |
| Hazard class         | -             |
| Packing group        | -             |

General Shipping Notes: When "not regulated", enter the proper freight classification, SDS Number and Product Name onto the shipping paperwork.

Disclaimer: This section provides basic classification information and, where relevant, information with respect to specific modal regulations, environmental hazards and special precautions. Otherwise, it is presumed that the information is not available/not relevant

**15. Regulatory Information**

US federal regulations:

In reference to Title VI of the Clean Air Act of 1990, this material does not contain nor was it manufactured using ozone-depleting chemicals. All electrical equipment must be suitable for use in hazardous atmospheres involving aluminum powder in accordance with 29 CFR 1910.307. The National Electrical Code, NFPA 70, contains guidelines for determining the type and design of equipment and installation which will meet this requirement.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

|  |  |
|--|--|
| Chromium (VI) compounds (CAS 18540-29-9)                                   | 0.1 % Annual Export Notification required. |
| Chromium (VI) compounds, certain water insoluble forms (CAS Not available) | 0.1 % Annual Export Notification required. |
| Chromium (VI) compounds, water soluble forms (CAS Not available)           | 0.1 % Annual Export Notification required. |

CERCLA Hazardous Substance List (40 CFR 302.4)

|  |        |
|--|--------|
| Chromium (CAS 7440-47-3)                           | LISTED |
| Chromium (II) compounds (CAS Not available)        | LISTED |
| Chromium (III) compounds (CAS Not available)       | LISTED |
| Chromium (VI) compounds (CAS 18540-29-9)           | LISTED |
| Copper (CAS 7440-50-8)                             | LISTED |
| Lead (CAS 7439-92-1)                               | LISTED |
| Manganese (CAS 7439-96-5)                          | LISTED |
| Manganese compounds, inorganic (CAS Not available) | LISTED |
| Nickel (CAS 7440-02-0)                             | LISTED |
| Nickel compounds, insoluble (CAS Not available)    | LISTED |
| Nitric oxide (CAS 10102-43-9)                      | LISTED |
| Nitrogen dioxide (CAS 10102-44-0)                  | LISTED |
| Vanadium pentoxide (CAS 1314-62-1)                 | LISTED |
| Zinc (CAS 7440-66-6)                               | LISTED |
| Zinc oxide (CAS 1314-13-2)                         | LISTED |

US EPCRA Section 304 Extremely Haz. Subs. & CERCLA Haz. Subs.: Section 304 EHS reportable quantity

|                                    |          |
|------------------------------------|----------|
| Nitric oxide (CAS 10102-43-9)      | 10 lbs   |
| Nitrogen dioxide (CAS 10102-44-0)  | 10 lbs   |
| Ozone (CAS 10028-15-6)             | 100 lbs  |
| Vanadium pentoxide (CAS 1314-62-1) | 1000 lbs |

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

|  |                       |
|--|-----------------------|
| Chromium (VI) compounds (CAS 18540-29-9)                                   | Cancer                |
| Chromium (VI) compounds, certain water insoluble forms (CAS Not available) | Cancer                |
| Chromium (VI) compounds, water soluble forms (CAS Not available)           | Cancer                |
| Lead (CAS 7439-92-1)   | Reproductive toxicity |
| Chromium (VI) compounds (CAS 18540-29-9)                                   | Eye irritation        |
| Chromium (VI) compounds, certain water insoluble forms                     | Eye irritation        |

|  |                        |
|--|------------------------|
| (CAS Not available)                                    |                        |
| Chromium (VI) compounds, water soluble forms           | Eye irritation         |
| (CAS Not available)                                    |                        |
| Lead (CAS 7439-92-1)                                   | Central nervous system |
| Chromium (VI) compounds (CAS 18540-29-9)               | Skin sensitization     |
| Chromium (VI) compounds, certain water insoluble forms | Skin sensitization     |
| (CAS Not available)                                    |                        |
| Chromium (VI) compounds, water soluble forms           | Skin sensitization     |
| (CAS Not available)                                    |                        |
| Lead (CAS 7439-92-1)                                   | Kidney                 |
|  | Blood                  |
|  | Acute toxicity         |

Superfund Amendments and Reauthorization Act of 1986 (SARA)

|                                   |                         |   |
|-----------------------------------|-------------------------|---|
| Section 311/312 hazard categories | Immediate Hazard - Yes  | If particulates/fumes generated during processing |
|                                   | Delayed Hazard - Yes    | If particulates/fumes generated during processing |
|                                   | Fire Hazard - No        |   |
|                                   | Pressure Hazard - No    |   |
|                                   | Reactivity Hazard - Yes | If molten   |

SARA 302 Extremely hazardous substance: No

SARA 311/312 Hazardous chemical: Yes

SARA 313 (TRI reporting)

| Chemical name | CAS number | % by wt. |
|---------------|------------|----------|
| Aluminum      | 7429-90-5  | >88.2    |
| Zinc          | 7440-66-6  | 0 - 6.6  |
| Nickel        | 7440-02-0  | 0 - 6.1  |
| Copper        | 7440-50-8  | 0 - 4.1  |
| Manganese     | 7439-96-5  | 0 - 3.1  |
| Lead          | 7439-92-1  | 0 - 0.11 |

US state regulations

US. Massachusetts RTK - Substance List

- Aluminum (CAS 7429-90-5)
- Aluminum oxide (non-fibrous) (CAS 1344-28-1) Chromium (CAS 7440-47-3)
- Copper (CAS 7440-50-8)
- Lead (CAS 7439-92-1)
- Magnesium (CAS 7439-95-4)
- Magnesium oxide (CAS 1309-48-4) Manganese (CAS 7439-96-5)
- Nickel (CAS 7440-02-0)
- Nitric oxide (CAS 10102-43-9)
- Nitrogen dioxide (CAS 10102-44-0)
- Oil mist, mineral (CAS 8012-95-1)
- Ozone (CAS 10028-15-6)
- Silicon (CAS 7440-21-3)
- Vanadium (CAS 7440-62-2)
- Vanadium pentoxide (CAS 1314-62-1)
- Zinc (CAS 7440-66-6)
- Zinc oxide (CAS 1314-13-2)

US. New Jersey Worker and Community Right-to-Know Act

|  |         |
|--|---------|
| Aluminum (CAS 7429-90-5)   | 500 lbs |
| Aluminum oxide (non-fibrous) (CAS 1344-28-1)                     | 500 lbs |
| Chromium (CAS 7440-47-3)   | 500 lbs |
| Chromium (II) compounds (CAS Not available)                      | 500 lbs |
| Chromium (III) compounds (CAS Not available)                     | 500 lbs |
| Chromium (VI) compounds (CAS 18540-29-9)                         | 500 lbs |
| Chromium (VI) compounds, water soluble forms (CAS Not available) | 500 lbs |
| Copper (CAS 7440-50-8)   | 500 lbs |
| Lead (CAS 7439-92-1)   | 500 lbs |
| Manganese (CAS 7439-96-5)  | 500 lbs |
| Manganese compounds, inorganic (CAS Not available)               | 500 lbs |
| Nickel (CAS 7440-02-0)   | 500 lbs |
| Nickel compounds, insoluble (CAS Not available)                  | 500 lbs |
| Nitric oxide (CAS 10102-43-9)                                    | 100 lbs |

|  |                           |
|--|---------------------------|
| Nitrogen dioxide (CAS 10102-44-0)  | 100 lbs                   |
| Ozone (CAS 10028-15-6)   | 100 lbs                   |
| Vanadium (CAS 7440-62-2)   | 500 lbs                   |
| Vanadium pentoxide (CAS 1314-62-1)   | 100 lbs                   |
| Zinc (CAS 7440-66-6)   | 500 lbs                   |
| Zinc oxide (CAS 1314-13-2)   | 500 lbs                   |
| US. Pennsylvania RTK - Hazardous Substances  |                           |
| Aluminum (CAS 7429-90-5)   |                           |
| Aluminum oxide (non-fibrous) (CAS 1344-28-1)   |                           |
| Chromium (CAS 7440-47-3)   |                           |
| Chromium (VI) compounds, certain water insoluble forms (CAS Not available)   |                           |
| Chromium (VI) compounds, water soluble forms (CAS Not available)   |                           |
| Copper (CAS 7440-50-8)   |                           |
| Lead (CAS 7439-92-1)   |                           |
| Magnesium (CAS 7439-95-4)  |                           |
| Magnesium oxide (CAS 1309-48-4)  |                           |
| Manganese (CAS 7439-96-5)  |                           |
| Nickel (CAS 7440-02-0)   |                           |
| Nitric oxide (CAS 10102-43-9)  |                           |
| Nitrogen dioxide (CAS 10102-44-0)  |                           |
| Oil mist, mineral (CAS 8012-95-1)  |                           |
| Ozone (CAS 10028-15-6)   |                           |
| Silica, amorphous (CAS 69012-64-2)   |                           |
| Silicon (CAS 7440-21-3)  |                           |
| Vanadium (CAS 7440-62-2)   |                           |
| Vanadium pentoxide (CAS 1314-62-1)   |                           |
| Zinc (CAS 7440-66-6)   |                           |
| Zinc oxide (CAS 1314-13-2)   |                           |
| US. Rhode Island RTK   |                           |
| Aluminum (CAS 7429-90-5)   |                           |
| Aluminum oxide (non-fibrous) (CAS 1344-28-1)   |                           |
| Chromium (CAS 7440-47-3)   |                           |
| Chromium (II) compounds (CAS Not available)  |                           |
| Chromium (VI) compounds (CAS 18540-29-9)   |                           |
| Chromium (VI) compounds, water soluble forms (CAS Not available)   |                           |
| Copper (CAS 7440-50-8)   |                           |
| Lead (CAS 7439-92-1)   |                           |
| Manganese (CAS 7439-96-5)  |                           |
| Manganese compounds, inorganic (CAS Not available)   |                           |
| Nickel (CAS 7440-02-0)   |                           |
| Nickel compounds, insoluble (CAS Not available)  |                           |
| Nitric oxide (CAS 10102-43-9)  |                           |
| Nitrogen dioxide (CAS 10102-44-0)  |                           |
| Ozone (CAS 10028-15-6)   |                           |
| Vanadium (CAS 7440-62-2)   |                           |
| Vanadium pentoxide (CAS 1314-62-1)   |                           |
| Zinc (CAS 7440-66-6)   |                           |
| Zinc oxide (CAS 1314-13-2)   |                           |
| US. California Proposition 65  |                           |
| WARNING: This product contains a chemical known to the State of California to cause cancer and birth defects or other reproductive harm. |                           |
| US - California Proposition 65 - CRT: Listed date/Carcinogenic substance   |                           |
| Chromium (VI) compounds (CAS 18540-29-9)   | Listed: February 27, 1987 |
| Chromium (VI) compounds, certain water insoluble forms (CAS Not available)   | Listed: February 27, 1987 |
| Chromium (VI) compounds, water soluble forms (CAS Not available)   | Listed: February 27, 1987 |
| Lead (CAS 7439-92-1)   | Listed: October 1, 1992   |
| Nickel (CAS 7440-02-0)   | Listed: May 7, 2004       |
| Nickel compounds, insoluble (CAS Not available)  | Listed: May 7, 2004       |
| Vanadium pentoxide (CAS 1314-62-1)   | Listed: February 11, 2005 |
| US - California Proposition 65 - CRT: Listed date/Developmental toxin  |                           |

|   |                           |
|---|---------------------------|
| Chromium (VI) compounds (CAS 18540-29-9)                                    | Listed: December 19, 2008 |
| Chromium (VI) compounds, certain water insoluble forms (CAS Not available)  | Listed: December 19, 2008 |
| Chromium (VI) compounds, water soluble forms (CAS Not available)            | Listed: December 19, 2008 |
| Lead (CAS 7439-92-1)  | Listed: February 27, 1987 |
| US - California Proposition 65 - CRT: Listed date/Female reproductive toxin |                           |
| Chromium (VI) compounds (CAS 18540-29-9)                                    | Listed: December 19, 2008 |
| Chromium (VI) compounds, certain water insoluble forms (CAS Not available)  | Listed: December 19, 2008 |
| Chromium (VI) compounds, water soluble forms (CAS Not available)            | Listed: December 19, 2008 |
| Lead (CAS 7439-92-1)  | Listed: February 27, 1987 |
| US - California Proposition 65 - CRT: Listed date/Male reproductive toxin   |                           |
| Chromium (VI) compounds (CAS 18540-29-9)                                    | Listed: December 19, 2008 |
| Chromium (VI) compounds, certain water insoluble forms (CAS Not available)  | Listed: December 19, 2008 |
| Chromium (VI) compounds, water soluble forms (CAS Not available)            | Listed: December 19, 2008 |
| Lead (CAS 7439-92-1)  | Listed: February 27, 1987 |

## International Inventories

| Country(s) or region        | Inventory name   | On inventory (yes/no)* |
|-----------------------------|--|------------------------|
| Australia                   | Australian Inventory of Chemical Substances (AICS)                     | Yes                    |
| Canada                      | Domestic Substances List (DSL)   | Yes                    |
| Canada                      | Non-Domestic Substances List (NDSL)                                    | No                     |
| China                       | Inventory of Existing Chemical Substances in China (IECSC)             | Yes                    |
| Europe                      | European Inventory of Existing Commercial Chemical Substances (EINECS) | No                     |
| Europe                      | European List of Notified Chemical Substances (ELINCS)                 | No                     |
| Japan                       | Inventory of Existing and New Chemical Substances (ENCS)               | Yes                    |
| Korea                       | Existing Chemicals List (ECL)  | Yes                    |
| New Zealand                 | New Zealand Inventory  | Yes                    |
| Philippines                 | Philippine Inventory of Chemicals and Chemical Substances (PICCS)      | Yes                    |
| United States & Puerto Rico | Toxic Substances Control Act (TSCA) Inventory                          | Yes                    |

\*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s).  
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

**16. Other information**

Issue Date: May 31, 2015

Revision Date: May 31, 2015

Disclaimer: All information, recommendations, and suggestions appearing herein concerning this product are taken from sources or based upon data believed to be reliable. Although reasonable care has been taken in the preparation of this information, Hohmann & Barnard extends no warranties or guarantees, express or implied, makes no representations, and assumes no responsibility as to the accuracy, reliability or completeness of the information presented. Since the actual use of the product described herein is beyond our control, POSCO assumes no liability arising out of the use of the product by others. It is the user's responsibility to determine the suitability of the information presented herein, to assess the safety and toxicity of the product under their own conditions of use, and to comply with all applicable laws and regulations. Appropriate warnings and safe handling procedures should be provided to handlers and users.

