



SAFETY DATA SHEET

MATERION

SECTION 1. Identification of the hazardous chemical substance or mixture and of the supplier or manufacturer

Name of the hazardous chemical substance or mixture	Copper Beryllium Wrought Alloy
Other means of identification	
Common name(s), synonym(s)	Beryllium Copper, Copper Beryllium, BeCu, CuBe, Alloy 10, Alloy 10X (C17500); Alloy 165 (17000); Alloy 170; Alloy 171 (C17450), Alloy C717 (C71700), Brush 60®, BrushForm® 47, BrushForm® 65 (C17460); Alloy 174 (C17400), (C17410), (C17420); Alloy 25, Alloy 190, BrushForm® 290 (C17200); Alloy 3 (C17510); Alloy 310; Alloy 390®; Alloy 390E, MoldMAX®, PROtherm®, WeldPak®, EtchMet™
SDS number	A10
Suppliers details	
Company name	Materion Brush Inc.
Address	6070 Parkland Boulevard Mayfield Heights, OH 44124 United States
Telephone	1.800.862.4118
Website	www.materion.com
E-mail	ehs@materion.com
Contact person	Theodore Knudson
Emergency phone number	1.800.862.4118

SECTION 2. Hazard identification

Classification of the substance or mixture		
Physical hazards	Not classified.	
Health hazards	Sensitization, respiratory	Category 1
	Carcinogenicity	Category 1A
	Specific target organ toxicity, repeated exposure	Category 1 (Respiratory system)
Environmental hazards	Not classified.	

Elements of labeling, including precautionary statements and warning pictograms



Signal word	Danger
Hazard statement	
H370	Causes damage to organs by skin contact.
H350	May cause cancer.
H372	Causes damage to organs (respiratory system) through prolonged or repeated exposure by inhalation.
Precautionary statement	
Prevention	Minimize dust generation and accumulation.
P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P260	Do not breathe dust/fume.

P264 Wash thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P272 Contaminated work clothing must not be allowed out of the workplace.
P280 Wear protective gloves/protective clothing/eye protection/face protection.

Response

P301 + P312 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.
P330 Rinse mouth.
P302 + P350 If on skin: Wash with plenty of water.
P304 + P340 If inhaled: Remove person to fresh air and keep comfortable for breathing.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P342 + P311 If experiencing respiratory symptoms: Call a poison center/doctor.
P308 + P311 If exposed or concerned: Call a poison center/doctor.
P320 Specific treatment is urgent (see this label).
P333 + P313 If skin irritation or rash occurs: Get medical advice/attention.
P337 + P313 If eye irritation persists: Get medical advice/attention.
P342 + P311 If experiencing respiratory symptoms: Call a POISON CENTER/doctor.
P363 Wash contaminated clothing before reuse.

Storage

P405 Store locked up.

Disposal

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

Other hazards which do not result in classification

None known.

Supplemental information

Exposure to the elements listed in Section 3 by inhalation, ingestion, and skin contact can occur when melting, casting, dross handling, pickling, chemical cleaning, heat treating, abrasive cutting, welding, grinding, sanding, polishing, milling, crushing, or otherwise heating or abrading the surface of this material in a manner which generates particulate.

For further information, please contact the Product Stewardship Department at +1.216.383.4019.

SECTION 3. Composition/information on ingredients

Mixtures

Chemical identity	Common name(s), synonym(s)	CAS number and other unique identifiers	Concentration
Copper		7440-50-8	96.3 - 99.5
Cobalt		7440-48-4	0 - 2.7
Nickel		7440-02-0	0 - 2.2
Beryllium		7440-41-7	0.15 - 2
Zirconium		7440-67-7	0 - 0.5

SECTION 4. First-aid measures

Description of necessary first-aid measures

Inhalation

Remove victim to fresh air and keep at rest in a position comfortable for breathing. Oxygen or artificial respiration if needed. Do not use mouth-to-mouth method if victim inhaled the substance. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. If experiencing respiratory symptoms: Call a poison center or doctor/physician. Breathing difficulty caused by inhalation of particulate requires immediate removal to fresh air. If breathing has stopped, perform artificial respiration and obtain medical help.

Skin contact	Remove contaminated clothing immediately and wash skin with soap and water. Take off contaminated clothing and wash before reuse. In case of eczema or other skin disorders: Seek medical attention and take along these instructions. Thoroughly wash skin cuts or wounds to remove all particulate debris from the wound. Seek medical attention for wounds that cannot be thoroughly cleansed. Treat skin cuts and wounds with standard first aid practices such as cleansing, disinfecting and covering to prevent wound infection and contamination before continuing work. Obtain medical help for persistent irritation. Material accidentally implanted or lodged under the skin must be removed.
Eye contact	Do not rub eyes. Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists. Immediately flush eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention if symptoms persist.
Ingestion	If swallowed, seek medical advice immediately and show this container or label. Rinse mouth. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs. Induce vomiting immediately as directed by medical personnel. Never give anything by mouth to an unconscious person.
Most important symptoms/effects, acute and delayed	May cause allergic skin reaction. May cause allergic respiratory reaction. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Difficulty in breathing. May cause an allergic skin reaction. Dermatitis. Rash. Prolonged exposure may cause chronic effects.
Indication of immediate medical attention and special treatment needed	Treatment of Chronic Beryllium Disease: There is no known treatment which will cure chronic beryllium disease. Prednisone or other corticosteroids are the most specific treatment currently available. They are directed at suppressing the immunological reaction and can be effective in diminishing signs and symptoms of chronic beryllium disease. In cases where steroid therapy has had only partial or minimal effectiveness, other immunosuppressive agents, such as cyclophosphamide, cyclosporine, or methotrexate, have been used. In view of the potential side effects of all the immunosuppressive medications, including steroids such as prednisone, they should be used only under the direct care of a physician. Other treatment, such as oxygen, inhaled steroids or bronchodilators, may be prescribed by some physicians and can be effective in selected cases. In general, treatment is reserved for cases with significant symptoms and/or significant loss of lung function. The decision about when and with what medication to treat is a judgment situation for individual physicians.
General information	In their 2014 official statement on the Diagnosis and Management of Beryllium Sensitivity and Chronic Beryllium Disease, the American Thoracic Society states that "it seems prudent for workers with BeS to avoid all future occupational exposure to beryllium." If exposed or concerned: get medical attention/advice. IF exposed or concerned: Get medical advice/attention. If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance. Wash contaminated clothing before reuse. As supplied, there is no immediate medical risk with beryllium products in article form. First aid measures provided are related to particulate containing beryllium.

SECTION 5. Fire-fighting measures

Suitable extinguishing media	Powder. Dry sand. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. The product is non-combustible.
Unsuitable extinguishing media	Do not use water to extinguish fires around operations involving molten metal due to the potential for steam explosions.
Specific hazards arising from the chemical	During fire, gases hazardous to health may be formed.
Special protective actions for firefighters	Firefighters should wear full protective clothing including self contained breathing apparatus. Wear suitable protective equipment.
Fire fighting equipment/instructions	Move containers from fire area if you can do so without risk. Water runoff can cause environmental damage.
Specific methods	Pressure-demand self-contained breathing apparatus must be worn by firefighters or any other persons potentially exposed to the particulate released during or after a fire.

General fire hazards No unusual fire or explosion hazards noted.

SECTION 6. Measures that must be taken in the event of accidental spillage or an accidental leak

Personal precautionary measures, protective equipment and emergency procedure

For non-emergency personnel Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Do not breathe dust. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS. In solid form this material poses no special clean-up problems.

For emergency responders Keep unnecessary personnel away. Use personal protection recommended in Section 8 of the SDS.

Environmental precautions Avoid release to the environment. In the event of a spill or accidental release, notify relevant authorities in accordance with all applicable regulations. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground.

Methods and materials for containing and cleaning up spills or releases Clean up in accordance with all applicable regulations.

SECTION 7. Handling and storage

Precautions for safe handling Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Minimize dust generation and accumulation. Do not breathe dust/fume. Wear protective gloves/protective clothing/eye protection/face protection. Wear respiratory protection. Wash thoroughly after handling. When using, do not eat, drink or smoke. Contaminated work clothing must not be allowed out of the workplace.

Conditions for safe storage, including any incompatibilities Keep locked-up. Avoid contact with acids and alkalis. Avoid contact with oxidizing agents.

SECTION 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Mexico. Occupational Exposure Limit Values

Components	Type	Value	Form
Beryllium (CAS 7440-41-7)	TWA	0.00005 mg/m3	Inhalable fraction.
Cobalt (CAS 7440-48-4)	TWA	0.02 mg/m3	
Copper (CAS 7440-50-8)	TWA	1 mg/m3	Dust and mist.
		0.2 mg/m3	Fume.
Nickel (CAS 7440-02-0)	TWA	1.5 mg/m3	Inhalable fraction.
Zirconium (CAS 7440-67-7)	STEL	10 mg/m3	
	TWA	5 mg/m3	

US. ACGIH Threshold Limit Values

Components	Type	Value	Form
Beryllium (CAS 7440-41-7)	TWA	0.00005 mg/m3 (as beryllium)	Inhalable fraction.
Cobalt (CAS 7440-48-4)	TWA	0.02 mg/m3	
Copper (CAS 7440-50-8)	TWA	1 mg/m3	Dust and mist.
		0.2 mg/m3	Fume.
Nickel (CAS 7440-02-0)	TWA	1.5 mg/m3	Inhalable fraction.
Zirconium (CAS 7440-67-7)	STEL	10 mg/m3	
	TWA	5 mg/m3	

Biological limit values

Mexico. Biological Exposure Indices

Components	Value	Determinant	Specimen	Sampling Time
Cobalt (CAS 7440-48-4)	15 µg/l	Cobalto	Urine	*
	1 µg/l	Cobalto	Blood	*

* - For sampling details, please see the source document.

ACGIH Biological Exposure Indices

Components	Value	Determinant	Specimen	Sampling Time
Cobalt (CAS 7440-48-4)	15 µg/l	Cobalt	Urine	*

* - For sampling details, please see the source document.

Exposure guidelines

On July 14, 2020, the Occupational Safety and Health Administration (OSHA) issued the final Beryllium Standard for General Industry (29 CFR 1910.1024) which includes a Permissible Exposure Limit (PEL) of 0.2 µg/m³ as an 8-hour TWA. The Preamble to the OSHA Beryllium Standards in 29 CFR Parts 1910, 1915 and 1926 states: "OSHA concludes that exposure to beryllium constitutes a significant risk of material impairment to health and that the final rule will substantially lower that risk. The Agency considers the level of risk remaining at the new TWA PEL to still be significant. However, OSHA did not adopt a lower TWA PEL because the Agency could not demonstrate technological feasibility of a lower TWA PEL. The Agency has adopted the STEL and ancillary provisions of the rule to further reduce the remaining significant risk."

Based on joint research conducted with the National Institute for Occupational Safety and Health (NIOSH), Materion adopted an 8 element Beryllium Worker Protection Model (BWPM) which includes the use of a recommended exposure guideline (REG) for airborne beryllium of 0.2 µg/m³ as a time-weighted average (TWA) limit for an 8-hour work day. Subsequent NIOSH studies have shown that the BWPM has reduced but not eliminated the risk of beryllium sensitization and chronic beryllium disease (CBD) in workers. Therefore, Materion recommends that beryllium users not only comply with the OSHA Beryllium Standard and carefully apply all elements of the BWPM, but reduce airborne exposures to the lowest feasible level. Information on the BWPM can be found at www.berylliumsafety.com or by contacting Materion at +1 800.862.4118.

The American Conference of Governmental Industrial Hygienists (ACGIH®) is a scientific body that has developed guidelines for all listed substances. In its development documents, the ACGIH® states that "Threshold Limit Values and Biological Exposure Indices represent conditions under which ACGIH® believes that nearly all workers may be repeatedly exposed without adverse health effects. They are not fine lines between safe and dangerous exposures, nor are they a relative index of toxicology."

Specific genetic factors have been identified and shown to increase an individual's susceptibility to CBD. Medical testing is available to detect those genetic factors in individuals.

Mexico OELs: Skin designation

Beryllium (CAS 7440-41-7) Can be absorbed through the skin.

Control banding approach Not available.

Appropriate engineering controls Ensure adequate ventilation, especially in confined areas.

Whenever possible, the use of local exhaust ventilation or other engineering controls is the preferred method of controlling exposure to airborne particulate. Where utilized, exhaust inlets to the ventilation system must be positioned as close as possible to the source of airborne generation. Avoid disruption of the airflow in the area of a local exhaust inlet by equipment such as a man-cooling fan. Check ventilation equipment regularly to ensure it is functioning properly. Provide training on the use and operation of ventilation to all users. Use qualified professionals to design and install ventilation systems.

WET METHODS: Machining operations are usually performed under a liquid lubricant/coolant flood which assists in reducing airborne particulate. However, the cycling through of machine coolant containing finely divided particulate in suspension can result in the concentration building to a point where the particulate may become airborne during use. Certain processes such as sanding and grinding may require complete hooded containment and local exhaust ventilation. Prevent coolant from splashing onto floor areas, external structures or operators' clothing. Utilize a coolant filtering system to remove particulate from the coolant.

WORK PRACTICES: Develop work practices and procedures that prevent particulate from coming in contact with worker skin, hair, or personal clothing. If work practices and/or procedures are ineffective in controlling airborne exposure or visual particulate from deposition on skin, hair, or clothing, provide appropriate cleaning/washing facilities. Procedures should be written that clearly communicate the facility's requirements for protective clothing and personal hygiene. These clothing and personal hygiene requirements help keep particulate from being spread to non-production areas or from being taken home by the worker. Never use compressed air to clean work clothing or other surfaces.

Fabrication processes may leave a residue of particulate on the surface of parts, products or equipment that could result in employee exposure during subsequent material handling activities. As necessary, clean loose particulate from parts between processing steps. As a standard hygiene practice, wash hands before eating or smoking.

HOUSEKEEPING: Use vacuum and wet cleaning methods for particulate removal from surfaces. Be certain to de-energize electrical systems, as necessary, before beginning wet cleaning. Use vacuum cleaners with high efficiency particulate air (HEPA). Do not use compressed air, brooms, or conventional vacuum cleaners to remove particulate from surfaces as this activity can result in elevated exposures to airborne particulate. Follow the manufacturer's instructions when performing maintenance on HEPA filtered vacuums used to clean hazardous materials.

VENTILATION: Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

Individual protection measures, such as personal protective equipment (PPE)

Eye/face protection Wear approved safety glasses, goggles, face shield and/or welder's helmet when risk of eye injury is present, particularly during operations that generate dust, mist or fume.

Skin protection

Hand protection Wear appropriate chemical resistant gloves. Wear gloves to prevent contact with particulate or solutions. Wear gloves to prevent metal cuts and skin abrasions during handling.

Other

Wear appropriate chemical resistant clothing. Use of an impervious apron is recommended. Protective overgarments or work clothing must be worn by persons who may become contaminated with particulate during activities. Skin contact with this material may cause, in some sensitive individuals, an allergic dermal response. Particulate that becomes lodged under the skin has the potential to induce sensitization and skin lesions.

Respiratory protection	Wear positive pressure self-contained breathing apparatus (SCBA). When airborne exposures exceed or have the potential to exceed the occupational exposure limits, approved respirators must be used as specified by an Industrial Hygienist or other qualified professional. Respirator users must be medically evaluated to determine if they are physically capable of wearing a respirator. Quantitative and/or qualitative fit testing and respirator training must be satisfactorily completed by all personnel prior to respirator use. Users of tight fitting respirators must be clean shaven on those areas of the face where the respirator seal contacts the face. Use pressure-demand airline respirators when performing jobs with high potential exposures such as changing filters in a baghouse air cleaning device.
Thermal hazards	Not applicable. Wear appropriate thermal protective clothing, when necessary.
General hygiene considerations	Observe any medical surveillance requirements. Keep away from food and drink. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Contaminated work clothing should not be allowed out of the workplace.

SECTION 9. Physical and chemical properties

Appearance

Physical state	Solid.
Form	Solid. Various shapes.
Color	Copper.
Odor	None.
Odor threshold	Not applicable.
pH	Not applicable.
Melting point/freezing point	1600 - 1960 °F (871.11 - 1071.11 °C) / Not applicable.
Initial boiling point and boiling range	Not applicable.
Flash point	Not applicable.
Evaporation rate	Not applicable.
Flammability (solid, gas)	None known.
Upper/lower flammability or explosive limits	
Explosive limit - lower (%)	Not applicable.
Explosive limit - upper (%)	Not applicable.
Vapor pressure	Not applicable.
Vapor density	Not applicable.
Relative density	Not applicable.
Solubility(ies)	
Solubility (water)	Insoluble
Auto-ignition temperature	Not applicable.
Decomposition temperature	Not applicable.
Viscosity	Not applicable.
Molecular weight	Not available.
Other information	
Density	8.80 g/cm ³ estimated
Explosive properties	Not explosive.
Oxidizing properties	Not oxidizing.

SECTION 10. Stability and reactivity

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

Possibility of hazardous reactions	Hazardous polymerization does not occur.
Conditions that must be avoided	Avoid temperatures exceeding the decomposition temperature. Contact with incompatible materials. Avoid dust formation. Contact with acids. Contact with alkalis.
Incompatible materials	Strong acids, alkalies and oxidizing agents.
Hazardous decomposition products	No hazardous decomposition products are known.

SECTION 11. Toxicological information

Information about likely routes of entry

Inhalation	Fatal if inhaled. May cause sensitization by inhalation. May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause damage to organs (respiratory system) through prolonged or repeated exposure.
Skin contact	May cause an allergic skin reaction.
Eye contact	Causes serious eye irritation. Not likely, due to the form of the product.
Ingestion	Harmful if swallowed. Not likely, due to the form of the product.
Symptoms related to the physical, chemical and toxicological characteristics	Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Difficulty in breathing. May cause an allergic skin reaction. Dermatitis. Rash. Respiratory disorder.

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

Numerical measures of toxicity (such as acute toxicity estimates)

Acute toxicity	Fatal if inhaled. May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause allergic skin reaction. Harmful if swallowed.
Skin corrosion/irritation	Not likely, due to the form of the product.
Serious eye damage/eye irritation	Harmful in contact with eyes. Causes serious eye irritation.
Respiratory or skin sensitization	

ACGIH sensitization

BERYLLIUM AND COMPOUNDS, SOLUBLE AND INSOLUBLE COMPOUNDS, AS BE, INHALABLE FRACTION (CAS 7440-41-7)	Respiratory sensitization
Cobalt and inorganic compounds, as Co (CAS 7440-48-4)	Dermal sensitization
	Respiratory sensitization

Respiratory sensitization May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Skin sensitization May cause an allergic skin reaction.

Germ cell mutagenicity Due to lack of data the classification is not possible.

Carcinogenicity Cancer hazard.

ACGIH Carcinogens

Beryllium (CAS 7440-41-7)	A1 Confirmed human carcinogen.
Cobalt (CAS 7440-48-4)	A2 Suspected human carcinogen.
	A3 Confirmed animal carcinogen with unknown relevance to humans.
Nickel (CAS 7440-02-0)	A5 Not suspected as a human carcinogen.
Zirconium (CAS 7440-67-7)	A4 Not classifiable as a human carcinogen.

IARC Monographs. Overall Evaluation of Carcinogenicity

Beryllium (CAS 7440-41-7)	1 Carcinogenic to humans.
Cobalt (CAS 7440-48-4)	2B Possibly carcinogenic to humans.
Nickel (CAS 7440-02-0)	2B Possibly carcinogenic to humans.

Reproductive toxicity Not classified.

Specific target organ toxicity - single exposure	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Specific target organ toxicity - repeated exposure	Causes damage to organs (Respiratory system) through prolonged or repeated exposure. May cause damage to organs (respiratory system) through prolonged or repeated exposure by inhalation.
Aspiration hazard	Due to lack of data the classification is not possible.
Other information	Symptoms may be delayed.

SECTION 12. Ecotoxicological information

Toxicity The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Product	Species	Test Results
Copper Beryllium Wrought Alloy		
Aquatic		
<i>Acute</i>		
Fish	LC50	0.0326 mg/l, 96 hours estimated
Components	Species	Test Results
Copper (CAS 7440-50-8)		
Aquatic		
<i>Acute</i>		
Crustacea	EC50	Blue crab (<i>Callinectes sapidus</i>) 0.0031 mg/l
Fish	LC50	Fathead minnow (<i>Pimephales promelas</i>) 0.0219 - 0.0446 mg/l, 96 hours
Nickel (CAS 7440-02-0)		
Aquatic		
<i>Acute</i>		
Fish	LC50	Rainbow trout, donaldson trout (Oncorhynchus mykiss) 0.06 mg/l, 4 days

* Estimates for product may be based on additional component data not shown.

Persistence and degradability	No data is available on the degradability of this product.
Bioaccumulative potential	No data available.
Mobility in soil	No data available.
Other adverse effects	No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

SECTION 13. Disposal considerations

Disposal methods	
Disposal instructions	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Dispose of contents/container in accordance with local/regional/national/international regulations. Material should be recycled if possible. Disposal recommendations are based on material as supplied. Disposal must be in accordance with current applicable laws and regulations, and material characteristics at time of disposal.
Local disposal regulations	Dispose in accordance with all applicable regulations.
Hazardous waste code	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
Waste from residues / unused products	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
Contaminated packaging	Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

SECTION 14. Transport information

SCT

Not regulated as dangerous goods.

DOT

Not regulated as dangerous goods.

ADR

Not regulated as dangerous goods.

RID

Not regulated as dangerous goods.

ADN

Not regulated as dangerous goods.

IATA

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not applicable.

SECTION 15. Regulatory information

Safety, health and environmental regulations specific for the hazard chemical substance or mixture in question This safety data sheet was prepared in accordance with the Official Mexican Standard (NOM-018-STPS-2015).

Mexico. Hazard identification guidance list (NOM-018-STPS)

Beryllium (CAS 7440-41-7)	Listed.
Cobalt (CAS 7440-48-4)	Listed.
Copper (CAS 7440-50-8)	Listed.
Nickel (CAS 7440-02-0)	Listed.
Zirconium (CAS 7440-67-7)	Listed.

Mexico. Substances subject to reporting for the pollutant release and transfer registry (PRTR)

Beryllium (CAS 7440-41-7)	1000 KG
	2500 KG

Mexico. Wastewater Discharges - Maximum Limits into Coastal Waters, Dams, Rivers, Soil and Wetlands (NOM-001-ECOL)

Copper (CAS 7440-50-8)	Listed.
Nickel (CAS 7440-02-0)	Listed.

International regulations

Montreal Protocol

Not applicable.

Stockholm Convention

Not applicable.

Rotterdam Convention

Not applicable.

Kyoto protocol

Not applicable.

Basel Convention

Not applicable.

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes

Country(s) or region	Inventory name	On inventory (yes/no)*
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)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
Taiwan	Taiwan Chemical Substance Inventory (TCSI)	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).

SECTION 16. Other included information relevant to the preparation and updating of safety data sheets

Issue date 03-10-2021

Revision date 04-21-2021

Version # 02

List of abbreviations

ACGIH: American Conference of Governmental Industrial Hygienists.

ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways.

ADR: European Agreement Concerning the International Carriage of Dangerous Goods by Road.

ANTT: National Agency of Land Transport.

CAS: Chemical Abstract Service.

DOT: Department of Transportation.

GHS: Globally Harmonized System of Classification and Labeling of Chemicals.

IARC: International Agency for Research on Cancer.

IATA: International Air Transport Association.

IBC Code: International Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk.

IMDG: International Maritime Dangerous Goods.

MARPOL: International Convention for the Prevention of Pollution from Ships.

NFPA: National Fire Protection Association.

RID: Regulations concerning the International Carriage of Dangerous Goods by Rail.

SCT: Secretariat of Communications and Transportation (NOM-002-SCT/2011).

STEL: Short term exposure limit.

TWA: Time Weighted Average.

References

NMX-R-019-SCFI-2011 - Harmonized system of classification and communication of dangers of chemical products
NOM-010-STPS-2014 (second revision) – Occupational Exposure Limits – becomes effective on April 28, 2016
NOM-018-STPS-2015 - Harmonized system for the identification and communication of hazards and risks for hazardous chemicals in the workplace
NOM-026-STPS-2008 - Colors and signals of safety and hygiene, and risk identification through fluids in pipes
NOM-028-STPS-2012 – Work-Safety Management System for Processes and Critical Equipment Handling Hazardous Chemical Substances
NOM-047-SSA1-2011 – Workplace Biological Exposure Indices (BEIs) to Chemical Substances
Workplace Threshold Quantities of Hazardous Chemicals

Further information

Transportation Emergency
Call Chemtrec at:
International: 703.741.5970
Spain: 900.868.538
Switzerland: 0800.564.402

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