



# PRODUCT INFORMATION SHEET

**MATERION**

## SECTION 1: Identification of the substance/mixture and of the company/undertaking

### 1.1. Product identifier

<b>Name of the substance</b>	Beryllium Solid
<b>Identification number</b>	004-001-00-7 (Index number)
<b>Synonyms</b>	Metallic Beryllium, Be, Glucinium
<b>Document number</b>	M10
<b>Version number</b>	02
<b>Revision date</b>	08-June-2015
<b>Supersedes date</b>	08-June-2015

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

<b>Identified uses</b>	Industrial uses: Uses of substances as such or in preparations at industrial sites Offshore industries Manufacture of basic metals, including alloys Manufacture of computer, electronic and optical products, electrical equipment General manufacturing, e.g. machinery, equipment, vehicles, other transport equipment Electricity, steam, gas water supply and sewage treatment Scientific research and development Other: Manufacture of medical and defense equipment
<b>Uses advised against</b>	Professional uses: Public domain (administration, education, entertainment, services, craftsmen) Consumer uses: Private households (= general public = consumers)

### 1.3. Details of the supplier of the product information sheet

#### Only Representative

<b>Company name</b>	UMCO Umwelt Consult GmbH
<b>Address</b>	Georg-Wilhelm-Strasse 183 D-21107 Hamburg Germany
<b>Telephone</b>	+49 (0)40 79 02 36 300
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<b>e-mail</b>	s.zahn@umco.de
<b>Contact person</b>	Susanne Zahn

#### Manufacturer

<b>Company name</b>	Materion Brush Inc.
<b>Address</b>	6070 Parkland Boulevard Mayfield Heights, OH 44124
<b>Telephone</b>	+1 216 486 4200
<b>Contact person</b>	Theodore Knudson
<b>e-mail</b>	ehs@materion.com

## SECTION 2: Hazards identification

### 2.1. Classification of the substance or mixture

The mixture has been assessed and/or tested for its physical, health and environmental hazards and the following classification applies.

#### Classification according to Directive 67/548/EEC or 1999/45/EC as amended

**Classification** Carc. Cat. 2;R49, T+;R26, T;R25-48/23, Xi;R36/37/38, R43

The full text for all R-phrases is displayed in section 16.

#### Classification according to Regulation (EC) No 1272/2008 as amended

##### Health hazards

Acute toxicity, oral	Category 3	H301 - Toxic if swallowed.
Acute toxicity, inhalation	Category 2	
Skin sensitisation	Category 1	H317 - May cause an allergic skin reaction.

Carcinogenicity

Category 1B

H350i - May cause cancer by inhalation.

Specific target organ toxicity - single exposure Category 3 respiratory tract irritation

Specific target organ toxicity - repeated exposure Category 1

H372 - Causes damage to organs through prolonged or repeated exposure.

## Hazard summary

### Physical hazards

Not classified for physical hazards.

### Health hazards

May cause cancer by inhalation. Very toxic by inhalation. Toxic if swallowed. Toxic: danger of serious damage to health by prolonged exposure through inhalation. Irritating to eyes, respiratory system and skin. May cause sensitisation by skin contact. Occupational exposure to the substance or mixture may cause adverse health effects.

### Environmental hazards

Not classified for hazards to the environment.

### Specific hazards

Harmful: danger of serious damage to health by prolonged exposure through inhalation. Irritating to mouth, throat, and stomach. Risk of serious damage to eyes. May cause cancer by inhalation. Limited evidence of a carcinogenic effect. Danger of serious damage to health by prolonged exposure. Prolonged exposure may cause chronic effects.

### Main symptoms

Discomfort in the chest. Shortness of breath. Coughing. Oedema. Liver enlargement. Jaundice. Proteinuria. Irritating to mouth, throat, and stomach. Skin irritation. Rash. Sensitisation. Prolonged exposure may cause chronic effects.

## 2.2. Label elements

### Label according to Regulation (EC) No. 1272/2008 as amended

#### Contains:

Beryllium

#### Hazard pictograms



#### Signal word

Danger

#### Hazard statements

H301	Toxic if swallowed.
H317	May cause an allergic skin reaction.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H373	May cause damage to organs (respiratory system) through prolonged or repeated exposure.
H350i	May cause cancer by inhalation.
H372	Causes damage to organs through prolonged or repeated exposure.

#### Precautionary statements

##### Prevention

P201	Minimise dust generation and accumulation.
P202	Obtain special instructions before use.
P260	Do not handle until all safety precautions have been read and understood.
P264	Do not breathe dust/fume.
P270	Wash thoroughly after handling.
P271	Do not eat, drink or smoke when using this product.
P272	Use only outdoors or in a well-ventilated area.
P272	Contaminated work clothing should not be allowed out of the workplace.
P272	Contaminated work clothing must not be allowed out of the workplace.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P284	Wear respiratory protection.

##### Response

P302 + P350	If on skin: Wash with plenty of water.
P304 + P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P308 + P313	If exposed or concerned: Get medical advice/attention.
P312	Call a POISON CENTER/doctor if you feel unwell.
P320	Specific treatment is urgent (see this label).
P330	Rinse mouth.
P333 + P313	If skin irritation or rash occurs: Get medical advice/attention.
P342 + P311	If experiencing respiratory symptoms: Call a poison center/doctor.
P362 + P364	Take off contaminated clothing and wash it before reuse.

##### Storage

P403 + P233	Store in a well-ventilated place. Keep container tightly closed.
P405	Store locked up.

## Disposal

P501

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

## Supplemental label information

For further information, please contact the Product Stewardship Department at +1.800.862.4118.

## 2.3. Other hazards

None known.

## SECTION 3: Composition/information on ingredients

### 3.1. Substances

#### General information

Chemical name	%	CAS-No. / EC No.	REACH Registration No.	INDEX No.	Notes
Beryllium	100	7440-41-7 231-150-7	01-2119487134-37-0000	004-001-00-7	
<b>Classification:</b>	<b>DSD:</b>	Carc. Cat. 2;R49, T+;R26, T;R25-48/23, Xi;R36/37/38, R43			E
	<b>CLP:</b>	Acute Tox. 3;H301, Skin Sens. 1;H317, Resp. Sens. 1;H334, Carc. 1B;H350i, STOT RE 1;H372, STOT RE 2;H373			

#### List of abbreviations and symbols that may be used above

CLP: Regulation No. 1272/2008.

DSD: Directive 67/548/EEC.

#: This substance has been assigned Community workplace exposure limit(s).

PBT: persistent, bioaccumulative and toxic substance.

vPvB: very persistent and very bioaccumulative substance.

#### Composition comments

The full text for all R- and H-phrases is displayed in section 16.

## SECTION 4: First aid measures

#### General information

If exposed or concerned: get medical attention/advice. Get medical attention if symptoms occur. 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.

#### 4.1. Description of first aid measures

##### Inhalation

If symptoms develop move victim to fresh air. For breathing difficulties, oxygen may be necessary. 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

Take off contaminated clothing and wash before reuse. 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

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. Induce vomiting immediately as directed by medical personnel. Never give anything by mouth to an unconscious person.

#### 4.2. Most important symptoms and effects, both acute and delayed

May cause allergic skin reaction. May cause allergic respiratory reaction. Prolonged exposure may cause chronic effects.

#### 4.3. Indication of any 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. These latter agents remain investigational. Further, 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. In general, these medications should be reserved for cases with significant symptoms and/or significant loss of lung function. Other symptomatic treatment, such as oxygen, inhaled steroids or bronchodilators, may be prescribed by some physicians and can be effective in selected cases.

The decision about when and with what medication to treat is a judgment situation for individual physicians. For the most part, treatment is reserved for those persons with symptoms and measurable loss of lung function. The value of starting oral steroid treatment, before signs or symptoms are evident, remains a medically unresolved issue.

The effects of continued low exposure to beryllium are unknown for individuals who are sensitized to beryllium or who have a diagnosis of chronic beryllium disease. It is generally recommended that persons who are sensitized to beryllium or who have CBD terminate their occupational exposure to beryllium.

### SECTION 5: Firefighting measures

#### General fire hazards

Not available.

#### 5.1. Extinguishing media

##### Suitable extinguishing media

The product is non-combustible. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

##### Unsuitable extinguishing media

Do not use water to extinguish fires around operations involving molten metal due to the potential for steam explosions.

#### 5.2. Special hazards arising from the substance or mixture

Not available.

#### 5.3. Advice for firefighters

##### Special protective equipment for firefighters

Firefighters should wear full protective clothing including self contained breathing apparatus.

##### Special firefighting procedures

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.

### SECTION 6: Accidental release measures

#### 6.1. Personal precautions, protective equipment and emergency procedures

##### For non-emergency personnel

In solid form this material poses no special clean-up problems. Wear appropriate protective equipment and clothing during clean-up.

##### For emergency responders

Not available.

#### 6.2. 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.

#### 6.3. Methods and material for containment and cleaning up

Clean up in accordance with all applicable regulations.

#### 6.4. Reference to other sections

For personal protection, see section 8 of the PIS. For waste disposal, see section 13 of the PIS.

### SECTION 7: Handling and storage

#### 7.1. Precautions for safe handling

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Minimise 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.

#### 7.2. Conditions for safe storage, including any incompatibilities

Keep locked-up. Avoid contact with acids and alkalis. Avoid contact with oxidising agents.

**SECTION 8: Exposure controls/personal protection****8.1. Control parameters****Occupational exposure limits****Austria. TRK List, OEL Ordinance (GwV), BGBl. II, no. 184/2001**

Material	Type	Value	Form
Beryllium (CAS 7440-41-7)	STEL	0,008 mg/m <sup>3</sup>	Inhalable fraction.
	TWA	0,002 mg/m <sup>3</sup>	Inhalable fraction.

**Belgium. Exposure Limit Values.**

Material	Type	Value
Beryllium (CAS 7440-41-7)	STEL	0,01 mg/m <sup>3</sup>
	TWA	0,002 mg/m <sup>3</sup>

**Bulgaria. OELs. Regulation No 13 on protection of workers against risks of exposure to chemical agents at work**

Material	Type	Value
Beryllium (CAS 7440-41-7)	TWA	0,002 mg/m <sup>3</sup>

**Croatia. Dangerous Substance Exposure Limit Values in the Workplace (ELVs), Annexes 1 and 2, Narodne Novine, 13/09**

Material	Type	Value
Beryllium (CAS 7440-41-7)	MAC	0,002 mg/m <sup>3</sup>

**Cyprus. OELs. Control of factory atmosphere and dangerous substances in factories regulation, PI 311/73, as amended.**

Material	Type	Value
Beryllium (CAS 7440-41-7)	TWA	0,002 mg/m <sup>3</sup>

**Czech Republic. OELs. Government Decree 361**

Material	Type	Value
Beryllium (CAS 7440-41-7)	Ceiling	0,002 mg/m <sup>3</sup>
	TWA	0,001 mg/m <sup>3</sup>

**Denmark. Exposure Limit Values**

Material	Type	Value
Beryllium (CAS 7440-41-7)	TLV	0,001 mg/m <sup>3</sup>

**Estonia. OELs. Occupational Exposure Limits of Hazardous Substances. (Annex of Regulation No. 293 of 18 September 2001)**

Material	Type	Value
Beryllium (CAS 7440-41-7)	TWA	0,002 mg/m <sup>3</sup>

**Finland. Workplace Exposure Limits**

Material	Type	Value
Beryllium (CAS 7440-41-7)	STEL	0,0004 mg/m <sup>3</sup>
	TWA	0,0001 mg/m <sup>3</sup>

**France. Threshold Limit Values (VLEP) for Occupational Exposure to Chemicals in France, INRS ED 984**

Material	Type	Value
Beryllium (CAS 7440-41-7)	VME	0,002 mg/m <sup>3</sup>

**Greece. OELs (Decree No. 90/1999, as amended)**

Material	Type	Value
Beryllium (CAS 7440-41-7)	TWA	0,005 mg/m <sup>3</sup>

**Hungary. OELs. Joint Decree on Chemical Safety of Workplaces**

Material	Type	Value
Beryllium (CAS 7440-41-7)	Ceiling	0,002 mg/m <sup>3</sup>

**Iceland. OELs. Regulation 154/1999 on occupational exposure limits**

Material	Type	Value	Form
Beryllium (CAS 7440-41-7)	TWA	0,001 mg/m <sup>3</sup>	Dust.

**Ireland. Occupational Exposure Limits**

Material	Type	Value
Beryllium (CAS 7440-41-7)	STEL	0,0002 mg/m <sup>3</sup>

**Ireland. Occupational Exposure Limits**

Material	Type	Value
	TWA	0,00005 mg/m <sup>3</sup>

**Italy. Occupational Exposure Limits**

Material	Type	Value	Form
Beryllium (CAS 7440-41-7)	TWA	0,00005 mg/m <sup>3</sup>	Inhalable fraction.

**Latvia. OELs. Occupational exposure limit values of chemical substances in work environment**

Material	Type	Value
Beryllium (CAS 7440-41-7)	TWA	0,001 mg/m <sup>3</sup>

**Lithuania. OELs. Limit Values for Chemical Substances, General Requirements**

Material	Type	Value
Beryllium (CAS 7440-41-7)	TWA	0,002 mg/m <sup>3</sup>

**Norway. Administrative Norms for Contaminants in the Workplace**

Material	Type	Value
Beryllium (CAS 7440-41-7)	TLV	0,001 mg/m <sup>3</sup>

**Poland. MACs. Minister of Labour and Social Policy Regarding Maximum Allowable Concentrations and Intensities in Working Environment**

Material	Type	Value
Beryllium (CAS 7440-41-7)	TWA	0,0002 mg/m <sup>3</sup>

**Portugal. VLEs. Norm on occupational exposure to chemical agents (NP 1796)**

Material	Type	Value
Beryllium (CAS 7440-41-7)	STEL	0,01 mg/m <sup>3</sup>
	TWA	0,002 mg/m <sup>3</sup>

**Romania. OELs. Protection of workers from exposure to chemical agents at the workplace**

Material	Type	Value
Beryllium (CAS 7440-41-7)	TWA	0,002 mg/m <sup>3</sup>

**Slovenia. OELs. Regulations concerning protection of workers against risks due to exposure to chemicals while working (Official Gazette of the Republic of Slovenia)**

Material	Type	Value	Form
Beryllium (CAS 7440-41-7)	TWA	0,002 mg/m <sup>3</sup>	Inhalable fraction.

**Spain. Carcinogens and Mutagens with Limit Values (Table 2)**

Material	Type	Value
Beryllium (CAS 7440-41-7)	TWA	0,0002 mg/m <sup>3</sup>

**Sweden. Occupational Exposure Limit Values**

Material	Type	Value	Form
Beryllium (CAS 7440-41-7)	TWA	0,002 mg/m <sup>3</sup>	Total dust.

**Switzerland. SUVA Grenzwerte am Arbeitsplatz**

Material	Type	Value	Form
Beryllium (CAS 7440-41-7)	TWA	0,002 mg/m <sup>3</sup>	Inhalable dust.

**UK. EH40 Workplace Exposure Limits (WELs)**

Material	Type	Value
Beryllium (CAS 7440-41-7)	TWA	0,002 mg/m <sup>3</sup>

**Biological limit values** No biological exposure limits noted for the ingredient(s).

**Recommended monitoring procedures**

**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.

**Derived no-effect level (DNEL)**

Not available.

**Predicted no effect concentrations (PNECs)**

Not available.

**8.2. Exposure controls**

**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.

**Individual protection measures, such as personal protective equipment**

**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 particulate such as melting, casting, machining, grinding, welding and powder handling.

**Skin protection**

**- Hand protection**

Wear gloves to prevent contact with particulate or solutions. Wear gloves to prevent metal cuts and skin abrasions during handling.

**- Other**

Personal protection equipment should be chosen according to the CEN standards and in discussion with the supplier of the personal protective equipment. Protective overgarments or work clothing must be worn by persons who may become contaminated with particulate during activities such as machining, furnace rebuilding, air cleaning equipment filter changes, maintenance, furnace tending, etc. 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**

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.

**Hygiene measures**

Handle in accordance with good industrial hygiene and safety practices.

**Environmental exposure controls**

Environmental manager must be informed of all major releases.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

#### Appearance

<b>Physical state</b>	Solid.
<b>Form</b>	Various shapes.
<b>Colour</b>	Grey

**Odour** None.

**Odour threshold** Not applicable.

**pH** Not applicable

**Melting point/freezing point** 1287 °C (2348,6 °F)

**Initial boiling point and boiling range** 2970 °C (5378 °F)

**Flash point** Not applicable

**Evaporation rate** Not applicable.

**Flammability (solid, gas)** Not applicable.

#### Upper/lower flammability or explosive limits

**Explosive limit - lower (%)** Not applicable.

**Explosive limit – upper (%)** Not applicable.

**Vapour pressure** 6,67 hPa estimated

**Vapour density** Not applicable

**Relative density** Not applicable.

#### Solubility(ies)

**Solubility (water)** Not applicable.

**Solubility (other)** Not available.

**Partition coefficient (n-octanol/water)** Not available.

**Auto-ignition temperature** Not applicable.

**Decomposition temperature** Not applicable.

**Viscosity** Not applicable.

**Explosive properties** Not available.

**Oxidizing properties** Not available.

### 9.2. Other information

**Density** 1,85 g/cm<sup>3</sup> 2 estimated

**Molecular formula** Be

**Molecular weight** 9,01 g/mol

**Specific gravity** 1,85 estimated

## SECTION 10: Stability and reactivity

**10.1. Reactivity** Not available.

**10.2. Chemical stability** Material is stable under normal conditions.

**10.3. Possibility of hazardous reactions** Hazardous polymerisation does not occur.

**10.4. Conditions to avoid** Avoid dust formation. Contact with acids. Contact with alkalis.

**10.5. Incompatible materials** Strong acids, alkalies and oxidizing agents.

**10.6. Hazardous decomposition products** No hazardous decomposition products are known.

## SECTION 11: Toxicological information

**General information** Occupational exposure to the substance or mixture may cause adverse effects.

#### Information on likely routes of exposure

**Inhalation** May cause sensitisation 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.



<b>Skin contact</b>	May cause an allergic skin reaction.
<b>Eye contact</b>	Not likely, due to the form of the product.
<b>Ingestion</b>	Not likely, due to the form of the product.
<b>Symptoms</b>	Respiratory disorder.

### 11.1. Information on toxicological effects

<b>Acute toxicity</b>	May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause allergic skin reaction.
<b>Skin corrosion/irritation</b>	Not likely, due to the form of the product.
<b>Serious eye damage/eye irritation</b>	Harmful in contact with eyes.
<b>Respiratory sensitisation</b>	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
<b>Skin sensitisation</b>	May cause an allergic skin reaction.
<b>Germ cell mutagenicity</b>	Due to lack of data the classification is not possible.
<b>Carcinogenicity</b>	Cancer hazard.

#### IARC Monographs. Overall Evaluation of Carcinogenicity

Beryllium (CAS 7440-41-7) 1 Carcinogenic to humans.

<b>Reproductive toxicity</b>	Not classified.
<b>Specific target organ toxicity - single exposure</b>	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
<b>Specific target organ toxicity - repeated exposure</b>	May cause damage to organs (respiratory system) through prolonged or repeated exposure by inhalation.
<b>Aspiration hazard</b>	Due to lack of data the classification is not possible.
<b>Mixture versus substance information</b>	Not available.
<b>Other information</b>	Symptoms may be delayed.

## SECTION 12: Ecological information

<b>12.1. Toxicity</b>	No toxicity data noted for the ingredient(s).
<b>12.2. Persistence and degradability</b>	No data is available on the degradability of this product.
<b>12.3. Bioaccumulative potential</b>	Not available.
<b>Partition coefficient n-octanol/water (log Kow)</b>	Not available.
<b>Bioconcentration factor (BCF)</b>	Not available.
<b>12.4. Mobility in soil</b>	Not available.
<b>12.5. Results of PBT and vPvB assessment</b>	Not a PBT or vPvB substance or mixture.
<b>12.6. Other adverse effects</b>	Not available.

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

<b>Residual waste</b>	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).
<b>Contaminated packaging</b>	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.
<b>EU waste code</b>	The Waste code should be assigned in discussion between the user, the producer and the waste disposal company. Waste codes should be assigned by the user based on the application for which the product was used.
<b>Disposal methods/information</b>	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. When this product as supplied is to be discarded as waste, it does not meet the definition of a RCRA waste under 40 CFR 261.

## SECTION 14: Transport information

### 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.

## SECTION 15: Regulatory information

### 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

#### EU regulations

**Regulation (EC) No. 1005/2009 on substances that deplete the ozone layer, Annex I, as amended**

Not listed.

**Regulation (EC) No. 1005/2009 on substances that deplete the ozone layer, Annex II, as amended**

Not listed.

**Regulation (EC) No. 850/2004 on persistent organic pollutants, Annex I**

Not listed.

**Regulation (EC) No. 689/2008 concerning the export and import of dangerous chemicals, Annex I, part 1**

Not listed.

**Regulation (EC) No. 689/2008 concerning the export and import of dangerous chemicals, Annex I, part 2**

Not listed.

**Regulation (EC) No. 689/2008 concerning the export and import of dangerous chemicals, Annex I, part 3**

Not listed.

**Regulation (EC) No. 689/2008 concerning the export and import of dangerous chemicals, Annex V**

Not listed.

**Regulation (EC) No. 166/2006 Annex II Pollutant Release and Transfer Registry, as amended**

Not listed.

**Regulation (EC) No. 1907/2006, REACH Article 59(10) Candidate List as currently published by ECHA**

Not listed.

#### Authorisations

**Regulation (EC) No. 1907/2006, REACH Annex XIV Substances subject to authorization, as amended**

Not listed.

**Regulation (EC) No. 1907/2006, REACH Annex XVII Substances subject to restriction on marketing and use as amended**

Beryllium (CAS 7440-41-7)

#### Restrictions on use

**Regulation (EC) No. 1907/2006 Annex XVII Substances subject to restriction on marketing and use**

Beryllium (CAS 7440-41-7)

**Directive 2004/37/EC: on the protection of workers from the risks related to exposure to carcinogens and mutagens at work, as amended**

Beryllium (CAS 7440-41-7)

**Directive 92/85/EEC: on the safety and health of pregnant workers and workers who have recently given birth or are breastfeeding, as amended**

Not listed.

#### Other EU regulations

**Directive 2012/18/EU on major accident hazards involving dangerous substances**

Beryllium (CAS 7440-41-7)

**Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work, as amended**

Beryllium (CAS 7440-41-7)

**Directive 94/33/EC on the protection of young people at work, as amended**

Beryllium (CAS 7440-41-7)

#### National regulations

Young people under 18 years old are not allowed to work with this product according to EU Directive 94/33/EC on the protection of young people at work.

**15.2. Chemical safety assessment**

No Chemical Safety Assessment has been carried out.

**SECTION 16: Other information**

**List of abbreviations**

Not available.

**References**

Not available.

**Information on evaluation method leading to the classification of mixture**

Not available.

**Full text of any statements or R-phrases and H-statements under Sections 2 to 15**

R25 Toxic if swallowed.

R26 Very toxic by inhalation.

R36/37/38 Irritating to eyes, respiratory system and skin.

R43 May cause sensitisation by skin contact.

R48/23 Toxic: danger of serious damage to health by prolonged exposure through inhalation.

R49 May cause cancer by inhalation.

H301 Toxic if swallowed.

H317 May cause an allergic skin reaction.

H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

H350i May cause cancer by inhalation.

H372 Causes damage to organs through prolonged or repeated exposure.

H373 May cause damage to organs (respiratory system) through prolonged or repeated exposure.

This document has undergone significant changes and should be reviewed in its entirety.

**Revision information**

**Training information**

Not available.

**Disclaimer**

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To avoid any misunderstandings or incorrect assumptions by the receiver of the safety information, it should be made clear that the supplied information is not in the form of a Safety Data Sheet (SDS), but is actually a voluntary Product Information Sheet closely following the guidelines of the Safety Data Sheet – COMMISSION REGULATION (EU) No 453/2010 of 20 May 2010 (REACH/SDS).