

**1. Product and company identification**

<b>Product identifier</b>	<b>Beryllium Solid</b>
<b>Other means of identification</b>	
SDS number	M10
CAS number	7440-41-7
Synonyms	Metallic Beryllium, Glucinium, I220H, IF-1®, S200F, S200FH, S200FC, SR200, S65, PS-200®, PF10, PF-60®, O-30, O-30H, I-70, I-70H, UHP Beryllium, .9999 Beryllium, B-26D, Be, IS-50M®

**Recommended use of the chemical and restrictions on use**

<b>Recommended use</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>Restrictions on use</b>	Professional uses: Public domain (administration, education, entertainment, services, craftsmen) Casting, grinding or polishing of beryllium-containing alloys by artists; Casting, grinding or polishing of beryllium-containing alloys for dental crowns, appliances or prosthetics; Casting, grinding or polishing of beryllium-containing alloys for jewelry. Consumer uses: Private households (= general public = consumers)

**Manufacturer/Importer/Supplier/Distributor information****Manufacturer**

<b>Company name</b>	Materion Brush Inc.
<b>Address</b>	6070 Parkland Boulevard Mayfield Heights, OH 44124 United States
<b>Telephone</b>	+1.216.383.4019
<b>Website</b>	www.materion.com
<b>E-mail</b>	ehs@materion.com
<b>Contact person</b>	Theodore Knudson
<b>Emergency phone number</b>	See Section 16.

**2. Hazard(s) identification**

<b>Physical hazards</b>	Not classified.	
<b>Health hazards</b>	Carcinogenicity	Category 2
	Specific target organ toxicity, repeated exposure	Category 1 (Respiratory system)
<b>Environmental hazards</b>	Not classified.	

**Label elements**

<b>Signal word</b>	Danger
<b>Hazard statement</b>	Suspected of causing cancer. Causes damage to organs (respiratory system) through prolonged or repeated exposure by inhalation.

## Precautionary statement

### Prevention

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

### Response

IF SWALLOWED: Immediately call a POISON CENTER/doctor. Rinse mouth. If on skin: Wash with plenty of water. If experiencing respiratory symptoms: Call a poison center/doctor. If exposed or concerned: Get medical advice/attention.

### Storage

Store in a well-ventilated place. Keep container tightly closed. Store locked up.

### Disposal

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

### Other hazards which do not result in classification

None known.

### Supplemental information

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

## 3. Composition/information on ingredients

### Substances

Chemical name	Common name and synonyms	CAS number	%
Beryllium	Metallic Beryllium, Glucinium, I220H, IF-1®, S200F, S200FH, S200FC, SR200, S65, PS-200®, PF10, PF-60®, O-30, O-30H, I-70, I-70H, UHP Beryllium, .9999 Beryllium, B-26D, Be, IS-50M®	7440-41-7	100

## 4. First-aid measures

### Inhalation

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

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. Take off contaminated clothing and wash before reuse.

### 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

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

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

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.

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."

### General information

If exposed or concerned: get medical attention/advice. 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.

## 5. Fire-fighting measures

<b>Suitable extinguishing media</b>	Water fog. Foam. Dry chemical powder. Dry sand. Carbon dioxide (CO <sub>2</sub> ). Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
<b>Unsuitable extinguishing media</b>	Do not use water to extinguish fires around operations involving molten metal due to the potential for steam explosions.
<b>Specific hazards arising from the chemical</b>	None known.
<b>Special protective equipment and precautions for firefighters</b>	Self-contained breathing apparatus and full protective clothing must be worn in case of fire. Firefighters should wear full protective clothing including self contained breathing apparatus. Wear suitable protective equipment.
<b>Fire fighting equipment/instructions</b>	In case of fire and/or explosion do not breathe fumes. Move containers from fire area if you can do so without risk. Water runoff can cause environmental damage.
<b>Specific methods</b>	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.

## 6. Accidental release measures

**Personal precautions, protective equipment and emergency procedures** 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.

**Methods and materials for containment and cleaning up** Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Take precautionary measures against static discharge. Use only non-sparking tools. Avoid dispersal of dust in the air (i.e., clearing dust surfaces with compressed air). The product is immiscible with water and will spread on the water surface. Prevent product from entering drains. Clean up in accordance with all applicable regulations. Stop the flow of material, if this is without risk.

Large Spills: Wet down with water and dike for later disposal. Shovel the material into waste container. Following product recovery, flush area with water.

Small Spills: Sweep up or vacuum up spillage and collect in suitable container for disposal. Clean surface thoroughly to remove residual contamination.

Never return spills to original containers for re-use. Put material in suitable, covered, labeled containers. For waste disposal, see section 13 of the SDS.

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

## 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. Contaminated work clothing must not be allowed out of the workplace. Wear protective gloves/protective clothing/eye protection/face protection. Wear respiratory protection. When using, do not eat, drink or smoke. Wash thoroughly after handling.

**Conditions for safe storage, including any incompatibilities** Keep locked up. Store away from incompatible materials (see Section 10 of the SDS).

## 8. Exposure controls/personal protection

### Occupational exposure limits

Argentina. OELs. Law 19587 (Establishing the Conditions for Health and Safety in the Workplace) and Decree 351/79 Article 61, Annex III, as amended

Material	Type	Value
Beryllium (CAS 7440-41-7)	STEL	0.01 mg/m <sup>3</sup>
	TWA	0.002 mg/m <sup>3</sup>

**US. ACGIH Threshold Limit Values**

Material	Type	Value	Form
Beryllium (CAS 7440-41-7)	TWA	0.00005 mg/m3 (as Inhalable fraction. beryllium)	

**Biological limit values**

No biological exposure limits noted for the ingredient(s).

**Appropriate engineering controls**

**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.

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.

**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 dust, mist or fume.

**Skin protection****Hand protection**

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. 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.

<b>Respiratory protection</b>	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.
<b>Thermal hazards</b>	Not applicable. Wear appropriate thermal protective clothing, when necessary.
<b>General hygiene considerations</b>	Observe any medical surveillance requirements. When using do not smoke. 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.

## 9. Physical and chemical properties

### Appearance

<b>Physical state</b>	Solid.
<b>Form</b>	Solid. Various shapes.
<b>Color</b>	Grey
<b>Odor</b>	None.
<b>Odor threshold</b>	Not applicable.
<b>pH</b>	Not applicable
<b>Melting point/freezing point</b>	2348.6 °F (1287 °C) / Not applicable.
<b>Initial boiling point and boiling range</b>	Not applicable.
<b>Flash point</b>	Not applicable
<b>Evaporation rate</b>	Not applicable.
<b>Flammability (solid, gas)</b>	Not classified as a readily combustible substance
<b>Upper/lower flammability or explosive limits</b>	
<b>Explosive limit - lower (%)</b>	Not applicable.
<b>Explosive limit - upper (%)</b>	Not applicable.
<b>Vapor pressure</b>	Not applicable.
<b>Vapor density</b>	Not applicable
<b>Relative density</b>	Not applicable.
<b>Solubility(ies)</b>	
<b>Solubility (water)</b>	Insoluble.
<b>Partition coefficient (n-octanol/water)</b>	Not applicable.
<b>Auto-ignition temperature</b>	Not applicable.
<b>Decomposition temperature</b>	Not applicable.
<b>Viscosity</b>	Not applicable.
<b>Other information</b>	
<b>Density</b>	1.85 g/cm <sup>3</sup> 2 estimated
<b>Explosive properties</b>	Not explosive.
<b>Molecular formula</b>	Be
<b>Molecular weight</b>	9.01 g/mol
<b>Oxidizing properties</b>	Not oxidizing.

## 10. Stability and reactivity

<b>Reactivity</b>	The product is stable and non-reactive under normal conditions of use, storage and transport.
<b>Chemical stability</b>	Material is stable under normal conditions.
<b>Possibility of hazardous reactions</b>	No dangerous reaction known under conditions of normal use. Hazardous polymerization does not occur.

<b>Conditions to avoid</b>	Avoid dust formation. Contact with acids. Contact with alkalis.
<b>Incompatible materials</b>	Strong acids, alkalies and oxidizing agents.
<b>Hazardous decomposition products</b>	No hazardous decomposition products are known.

## 11. Toxicological information

### Information on likely routes of exposure

<b>Inhalation</b>	May cause damage to organs (respiratory system) through prolonged or repeated exposure.
<b>Skin contact</b>	Not likely, due to the form of the product.
<b>Eye contact</b>	Not likely, due to the form of the product.
<b>Ingestion</b>	Expected to be a low ingestion hazard.

**Symptoms related to the physical, chemical and toxicological characteristics** Prolonged exposure may cause chronic effects.

### Information on toxicological effects

**Acute toxicity** Based on available data, the classification criteria are not met.

**Skin corrosion/irritation** Not likely, due to the form of the product.

**Serious eye damage/eye irritation** Not likely, due to the form of the product.

### Respiratory or skin sensitization

**Respiratory sensitization** Not a respiratory sensitizer.

**Skin sensitization** Not a skin sensitizer.

**Germ cell mutagenicity** Not classified.

**Carcinogenicity** Cancer hazard.

#### ACGIH Carcinogens

Beryllium (CAS 7440-41-7) A1 Confirmed human carcinogen.

#### Argentina. Carcinogens (Resolution 415/2002, Annex I) as amended

Beryllium (CAS 7440-41-7)

#### Argentina. OELs. Law 19587 (Establishing the Conditions for Health and Safety in the Workplace) and Decree 351/79 Article 61, Annex III, as amended

Beryllium (CAS 7440-41-7) Confirmed carcinogen.

**Reproductive toxicity** Not classified.

**Specific target organ toxicity - single exposure** May cause respiratory irritation.

**Specific target organ toxicity - repeated exposure** Causes damage to organs through prolonged or repeated exposure. May cause damage to organs (respiratory system) through prolonged or repeated exposure by inhalation.

**Aspiration hazard** Not an aspiration hazard.

**Chronic effects** Prolonged exposure may cause chronic effects.

**Further information** Symptoms may be delayed.

## 12. Ecological information

**Ecotoxicity** Not relevant, due to the form of the product.

**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.

### 13. Disposal considerations

<b>Disposal instructions</b>	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. 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.
<b>Local disposal regulations</b>	Dispose in accordance with all applicable regulations.
<b>Waste from residues / unused products</b>	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).
<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.

### 14. Transport information

<b>ADR</b>	Not regulated as dangerous goods.
<b>RID</b>	Not regulated as dangerous goods.
<b>IATA</b>	Not regulated as dangerous goods.
<b>IMDG</b>	Not regulated as dangerous goods.
<b>Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code</b>	Not applicable.

### 15. Regulatory information

<b>Safety, health and environmental regulations specific for the product in question</b>	
<b>Active Ingredients Not Permitted in Household Insecticides (Disposición 7292/1998, Annex VII, as amended through Disposicion ANMAT 2659/2008, May 2008)</b>	Not listed.
<b>Chemical Precursors. Decree 1095/96, Annex 1, Lists I, II, III (amended by Decree 1161/00 December 11, 2000)</b>	Not listed.
<b>CWC. Law 26.247 Implementation of the Convention on prohibition of development, production methods, stockpiling and use of chemical weapons and on their destruction (May 21, 2007)</b>	Not regulated
<b>Export Control Chemical Substances (2012)</b>	Not regulated
<b>Prohibited Chemical Substances</b>	Beryllium (CAS 7440-41-7)
<b>Restricted Chemical Substances</b>	Not regulated
<b>Small Operators of Controlled Chemicals, Annex I, Lists I and II (Resolution 1227/2010, September 29, 2010)</b>	Not regulated
<b>International regulations</b>	
<b>Stockholm Convention</b>	Not applicable.
<b>Rotterdam Convention</b>	Not applicable.
<b>Montreal Protocol</b>	Not applicable.
<b>Kyoto protocol</b>	Not applicable.

**Basel Convention**

Not applicable.

**International Inventories**

<b>Country(s) or region</b>	<b>Inventory name</b>	<b>On inventory (yes/no)*</b>
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)	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).

**16. Other information**

<b>Issue date</b>	06-08-2022
<b>Version #</b>	01
<b>Further information</b>	Transportation Emergency Call Chemtrec at: US: 800.424.9300 International: 703.741.5970 Spain: 900.868.538 Switzerland: 0800.564.402 Chemtrec's toll free, mobile-enabled number in Germany – 0800 1817059 South Korea Toll-free Number – 080-880-0468



## References

ACGIH  
EPA: AQUIRE database  
NLM: Hazardous Substances Data Base  
US. IARC Monographs on Occupational Exposures to Chemical Agents  
Korea. Accidental Release Prevention Substances (Presidential Decree of Toxic Chemical Control Law, Executive Order No. 19203)  
Korea. Dangerous Substances Threshold Quantity (Presidential Decree of Dangerous Substances Safety Management Act No. 18406, Schedule 1)  
Korea. Harmful Substances Prohibited from Manufacturing (Presidential Decree on the Industrial Safety and Health Act (No. 13053), Article 29)  
Korea. Harmful Substances Requiring Permission for Manufacture or Use (Presidential Decree on the Industrial Safety and Health Act (No. 13053), Article 30)  
Korea. Non-Toxic Chemicals List (National Institute of Environment Research (NIER) Public Notice No. 1997-10, as amended)  
Korea. Observational Chemicals (Ministerial Decree of TCCL Article 6)  
Korea. OELs. Regulation for Permitted Concentration of Hazardous Substances (Ministry of Labor (MOL) Public Notice No. 1986-45, as amended)  
Korea. Prohibited Chemical Substances (TCCL Article 11)  
Korea. Regulated volatile organic compounds (VOCs) (MOE Notice No. 2001-36, March 8, 2001, as amended)  
Korea. Restricted Chemical Substances (TCCL Article 11)  
Korea. Toxic Chemical Control Law (TCCL), Existing Chemicals Inventory (KECI)  
Korea. Toxic Chemical Control Law (TCCL), pre-1997 List  
Korea. Toxic Chemicals (TCCL Article 10)  
Korea. Toxic Release Inventory (TRI) Chemicals (TCCL Article 14)  
Taiwan. Dangerous Materials (Rules on Hazard Communication of Dangerous Materials and Toxic Materials)  
Taiwan. Industrial Precursor Chemicals (Categories and Regulations Governing Inspection and Declaration of Industrial Precursor Chemicals, MOEA Decree No. 87, as amended)  
Taiwan. OELs. (Standards on Workplace Atmosphere of Dangerous and Hazardous Materials)  
Taiwan. Toxic Chemical Substances (TCS) (List of Toxic Chemical Substances announced by the Environmental Protection Administration)  
Taiwan. Toxic Materials (Rules on Hazard Communication of Dangerous Materials and Toxic Materials)  
HSDB® - Hazardous Substances Data Bank  
IARC Monographs. Overall Evaluation of Carcinogenicity  
National Toxicology Program (NTP) Report on Carcinogens  
ACGIH Documentation of the Threshold Limit Values and Biological Exposure Indices  
Japan Society for Occupational Health, Recommendation of Occupational Exposure Limits  
GOST 30333-2007 - Chemical production safety passport. General requirements  
JIS Z 7252:2009 Classification of chemicals based on "Globally Harmonized System of Classification and Labelling of Chemicals (GHS)"  
JIS Z 7253:2012 Hazard communication of chemicals based on GHS – Labelling and Safety Data Sheet (SDS)  
Japan Chemical Industry Association (JCIA) GHS Guideline, June 2012

## Disclaimer

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