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1 Identification

- · Product identifier
- · Product Name: 1000 ug/g Berillium in Base Oil 75
- · Part Number: ORG-BE8-2Z
- · Application of the substance / the mixture Certified Reference Material
- · Details of the supplier of the safety data sheet · Manufacturer/Supplier: SPEX CertiPrep, LLC. 203 Norcross Ave, Metuchen, NJ 08840 USA
- · Information department: product safety department · Emergency telephone number: Emergency Phone Number (24 hours) CHEMTREC (800-424-9300) Outside US: 703-527-3887

2 Hazard(s) identification

· Classification of the substance or mixture



GHS08 Health hazard

Carc. 1A H350 May cause cancer.

· Label elements

- GHS label elements The product is classified and labeled according to the Globally Harmonized System (GHS).
- · Hazard pictograms



· Signal word Danger

- · Hazard-determining components of labeling:
- Beryllium from Beryllium Acetate
- · Hazard statements
- H350 May cause cancer.
- · Precautionary statements
- If medical advice is needed, have product container or label at hand.

Keep out of reach of children.

Read label before use.

Obtain special instructions before use.

Do not handle until all safety precautions have been read and understood.

- Wear protective gloves/protective clothing/eye protection/face protection.
- IF exposed or concerned: Get medical advice/attention.

Store locked up.

- Dispose of contents/container in accordance with local/regional/national/international regulations.
- · Classification system:
- · NFPA ratings (scale 0 4)



Health = 0Reactivity = 0

· HMIS-ratings (scale 0 - 4)



· Other hazards

· Results of PBT and vPvB assessment

· PBT: Not applicable.

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· vPvB: Not applicable.

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0.1%

99.9%

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3 Composition/information on ingredients

- · Chemical characterization: Mixtures
- · Description: Mixture of the substances listed below with nonhazardous additions.
- · Dangerous components:
- 7440-41-7 Beryllium from Beryllium Acetate
- · Chemical identification of the substance/preparation
- 64742-65-0 Distillates (petroleum), solvent-dewaxed heavy paraffinic

4 First-aid measures

- · Description of first aid measures
- · After inhalation: Supply fresh air; consult doctor in case of complaints.
- After skin contact: Generally the product does not irritate the skin.
- After eye contact: Rinse opened eye for several minutes under running water.
- · After swallowing: Do not give anything to eat or drink Do not induce vomitting
- · Information for Doctor:
- · Most important symptoms and effects, both acute and delayed No further relevant information available.
- Indication of any immediate medical attention and special treatment needed No further relevant information available.

5 Fire-fighting measures

- · Extinguishing media
- · Suitable extinguishing agents: Use fire fighting measures that suit the environment.
- · Special hazards arising from the substance or mixture No further relevant information available.
- · Advice for firefighters
- · Protective equipment: No special measures required.

6 Accidental release measures

- · Personal precautions, protective equipment and emergency procedures Not required.
- · Environmental precautions: Do not allow to enter sewers/ surface or ground water.
- Methods and material for containment and cleaning up:
- Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
- Dispose contaminated material as waste according to item 13.
- Ensure adequate ventilation.
- · Reference to other sections
- See Section 7 for information on safe handling.
- See Section 8 for information on personal protection equipment.
- See Section 13 for disposal information.

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· Protective Action Criteria for Chemicals
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• PAC-1:		
64742-65-0	Distillates (petroleum), solvent-dewaxed heavy paraffinic	140 mg/m³
7440-41-7	Beryllium from Beryllium Acetate	0.0023 mg/m ³
· PAC-2:		
64742-65-0	Distillates (petroleum), solvent-dewaxed heavy paraffinic	1,500 mg/m ³
7440-41-7	Beryllium from Beryllium Acetate	$0.025 \ mg/m^3$
· PAC-3:		
	Distillates (petroleum), solvent-dewaxed heavy paraffinic	8,900 mg/m ³
7440-41-7	Beryllium from Beryllium Acetate	$0.1 \ mg/m^3$

7 Handling and storage

- · Handling:
- · Precautions for safe handling
- Ensure good ventilation/exhaustion at the workplace.

Open and handle receptacle with care.

• Information about protection against explosions and fires: Keep respiratory protective device available.

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· Conditions for safe storage, including any incompatibilities
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- · Storage:
- · Requirements to be met by storerooms and receptacles: No special requirements.
- Information about storage in one common storage facility: Not required.
- · Further information about storage conditions: Keep receptacle tightly sealed.
- · Specific end use(s) No further relevant information available.

8 Exposure controls/personal protection

• Additional information about design of technical systems: No further data; see item 7.

· Control parameters

· Components with limit values that require monitoring at the workplace:

- 7440-41-7 Beryllium from Beryllium Acetate
- PEL Short-term value: 0.002 mg/m² Long-term value: 0.0002; 0.002* mg/m³ Ceiling limit value: 0.025*/** mg/m³, 0.005** ppm as Be; *see 1910.1024; **30 min peak/8-hr shift
- REL Ceiling limit value: 0.0005 mg/m³ as Be; See Pocket Guide App. A
- TLV Long-term value: 0.00005 mg/m³ as Be; inhalable; RSEN; soluble comp.: Skin, DSEN
- Additional information: The lists that were valid during the creation were used as basis.
- · Exposure controls
- · Personal protective equipment:
- · General protective and hygienic measures: Keep away from foodstuffs, beverages and feed. Wash hands before breaks and at the end of work. Store protective clothing separately.
- · Respiratory protection:

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

· Protection of hands:



The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

- Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.
- Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
- Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

- · Penetration time of glove material
- The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
- · Eye protection:



Tightly sealed goggles

9 Physical and chemical properties

- · Information on basic physical and chemical properties
- · General Information

· Appearance:	
Form:	Liquid
Color:	According to product specification
· Odor:	Characteristic
· Odour Threshold:	Not applicable.

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· pH-value:	Not applicable.	
· Change in condition		
Melting point/Melting range:	Undetermined.	
Boiling point/Boiling range:	Undetermined.	
· Flash point:	Not applicable.	
· Flammability (solid, gaseous):	Not applicable.	
· Decomposition temperature:	Not applicable.	
• Auto igniting:	Product is not selfigniting.	
• Danger of explosion:	Product does not present an explosion hazard.	
· Explosion limits:		
Lower:	Not applicable.	
Upper:	Not applicable.	
· Vapor pressure:	Not determined.	
· Density	Not applicable.	
· Relative density	Not applicable.	
· Vapor density	Not applicable.	
· Evaporation rate	Not applicable.	
· Solubility in / Miscibility with		
Water:	Not miscible or difficult to mix.	
· Partition coefficient (n-octanol/wa	ter): Not applicable.	
· Viscosity:		
Dynamic:	Not applicable.	
Kinematic:	Not applicable.	
· Solvent content:		
VOC content:	0.00~%	
Solids content:	0.0 %	
• Other information	No further relevant information available.	

10 Stability and reactivity

- · Reactivity No further relevant information available.
- · Chemical stability
- Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
- · Possibility of hazardous reactions No dangerous reactions known.
- Conditions to avoid No further relevant information available.
- · Incompatible materials: No further relevant information available.
- · Hazardous decomposition products: No dangerous decomposition products known.

11 Toxicological information

- · Information on toxicological effects
- · Acute toxicity:
- · Primary irritant effect:
- on the eye: No irritating effect.
- \cdot Sensitization: No sensitizing effects known.
- Additional toxicological information: The product shows the following dangers according to internally approved calculation methods for preparations:
- · Carcinogenic categories

· IARC (International Agency for Research on Cancer)	
7440-41-7 Beryllium from Beryllium Acetate	1
· NTP (National Toxicology Program)	
7440-41-7 Beryllium from Beryllium Acetate	K
· OSHA-Ca (Occupational Safety & Health Administration)	
None of the ingredients is listed.	
	LIG

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12 Ecological information

- · Toxicity
- Aquatic toxicity: No further relevant information available.
- · Persistence and degradability No further relevant information available.
- · Behavior in environmental systems:
- · Bioaccumulative potential No further relevant information available.
- · Mobility in soil No further relevant information available.
- · Additional ecological information:
- · General notes:
- Water hazard class 1 (Self-assessment): slightly hazardous for water
- Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
- · Results of PBT and vPvB assessment
- **PBT:** Not applicable.
- vPvB: Not applicable.
- · Other adverse effects No further relevant information available.

13 Disposal considerations

- · Waste treatment methods
- Recommendation: Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
- · Uncleaned packagings:
- · Recommendation: Disposal must be made according to official regulations.

14 Transport information · UN-Number · DOT, ADR, ADN, IMDG, IATA Not Regulated · UN proper shipping name · DOT, ADR, ADN, IMDG, IATA Not Regulated · Transport hazard class(es) · DOT, ADR, ADN, IMDG, IATA Not Regulated · Class · Packing group · DOT, ADR, IMDG, IATA Not Regulated · Environmental hazards: Not applicable. Not applicable. · Special precautions for user · Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code Not applicable. UN "Model Regulation": Not Regulated

15 Regulatory information

\cdot Safety, health and environmental regulations/legislation specific for the substance or mixture \cdot Sara	
· Section 313 (Specific toxic chemical listings):	
7440-41-7 Beryllium from Beryllium Acetate	
· TSCA (Toxic Substances Control Act):	
All ingredients are listed.	
· Proposition 65	
· Chemicals known to cause cancer:	
7440-41-7 Beryllium from Beryllium Acetate	
· Chemicals known to cause reproductive toxicity for females:	
None of the ingredients is listed.	
· Chemicals known to cause reproductive toxicity for males:	
None of the ingredients is listed.	
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Chemicals known to cause developmental toxicity:	
None of the ingredients is listed.	
Carcinogenic categories	
EPA (Environmental Protection Agency)	
7440-41-7 Beryllium from Beryllium Acetate	B1, K/L(inh), CBD(oral)
TLV (Threshold Limit Value established by ACGIH)	
None of the ingredients is listed.	
NIOSH-Ca (National Institute for Occupational Safety and Health)	
None of the ingredients is listed.	
GHS label elements The product is classified and labeled according to the Globally Harmonized System	(GHS).
Hazard pictograms	
GHS08	
Signal word Danger	
Hazard-determining components of labeling:	
Beryllium from Beryllium Acetate	
Hazard statements H350 May cause cancer.	
Precautionary statements	
If medical advice is needed, have product container or label at hand.	
Keep out of reach of children. Read label before use.	
Obtain special instructions before use.	
Do not handle until all safety precautions have been read and understood.	
Wear protective gloves/protective clothing/eye protection/face protection.	
IF exposed or concerned: Get medical advice/attention. Store locked up.	
Dispose of contents/container in accordance with local/regional/national/international regulations.	
National regulations:	
Additional classification according to Decree on Hazardous Materials: Carcinogenic hazardous materia	al group III (dangerous).
Information about limitation of use:	
Workers are not allowed to be exposed to the hazardous carcinogenic materials contained in this prepare	ation. Exceptions can be made by the authoritie
in certain cases.	

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· Department issuing SDS: product safety department

- · Contact:
- SPEX CertiPrep, LLC.
- 1-732-549-7144
- · Date of preparation / last revision 11/30/2018 / -
- · Abbreviations and acronyms:
- ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road) IMDG: International Maritime Code for Dangerous Goods
- DOT: US Department of Transportation
- IATA: International Air Transport Association ACGIH: American Conference of Governmental Industrial Hygienists
- EINECS: European Inventory of Existing Commercial Chemical Substances ELINCS: European List of Notified Chemical Substances
- CAS: Chemical Abstracts Service (division of the American Chemical Society)
- NFPA: National Fire Protection Association (USA) HMIS: Hazardous Materials Identification System (USA)
- VOC: Volatile Organic Compounds (USA, EU) PBT: Persistent, Bioaccumulative and Toxic
- PDI: Persistent, bioaccumulative and route vPvB: very Persistent and very Bioaccumulative NIOSH: National Institute for Occupational Safety OSHA: Occupational Safety & Health TLV: Threshold Limit Value PEL: Permissible Exposure Limit

- REL: Recommended Exposure Limit Carc. 1A: Carcinogenicity Category 1A