

1 Identification

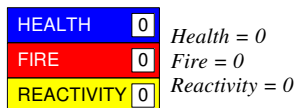
- **Product identifier**
- **Product Name:** 23-ELEMENT OIL STANDARD
- **Part Number:** S23-100Y
- **Application of the substance / the mixture** Certified Reference Material
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
SPEX CertiPrep, LLC.
203 Norcross Ave, Metuchen,
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** The product is not classified, according to the Globally Harmonized System (GHS).
- **Label elements**
- **GHS label elements** Not Regulated
- **Hazard pictograms** Not Regulated
- **Signal word** Not Regulated
- **Hazard statements** Not Regulated
- **Classification system:**
- **NFPA ratings (scale 0 - 4)**



- **HMIS-ratings (scale 0 - 4)**



- **Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

3 Composition/information on ingredients

- **Chemical characterization:** Mixtures
- **Description:** Mixture of the substances listed below with nonhazardous additions.
- **Dangerous components:** Not Regulated

Chemical identification of the substance/preparation

64742-65-0	Distillates (petroleum), solvent-dewaxed heavy paraffinic	99.77%
7429-90-5	aluminium	0.01%
7440-42-8	boron	0.01%
7440-39-3	Barium from Barium carbonate	0.01%
7440-70-2	Calcium from Calcium carbonate	0.01%
7440-43-9	cadmium (non-pyrophoric)	0.01%
7440-47-3	Chromium from Chromium(III) nitrate nonahydrate	0.01%
7440-50-8	copper	0.01%
7439-89-6	iron	0.01%
7440-09-7	potassium	0.01%
7439-95-4	magnesium	0.01%
7439-96-5	manganese	0.01%
7439-98-7	molybdenum	0.01%
7440-23-5	Sodium from Sodium carbonate	0.01%

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7440-02-0	nickel	0.01%
7723-14-0	phosphorus	0.01%
7439-92-1	Lead from Lead Oxide	0.01%
7440-36-0	antimony	0.01%
7440-21-3	alkali fluorosilicates (NH4)	0.01%
7440-31-5	tin	0.01%
7440-32-6	titanium from ammonium hexafluorotitanate	0.01%
7440-62-2	Vanadium from Ammonium trioxovanadate	0.01%
7440-66-6	zinc powder -zinc dust (stabilized)	0.01%
7440-22-4	silver	0.01%

4 First-aid measures

- **Description of first aid measures**
- **General information:** No special measures required.
- **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 vomiting
- **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).
- **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.
- **Protective Action Criteria for Chemicals**

· **PAC-I:**

64742-65-0	Distillates (petroleum), solvent-dewaxed heavy paraffinic	140 mg/m ³
7440-42-8	boron	1.9 mg/m ³
7440-39-3	Barium from Barium carbonate	1.5 mg/m ³
7440-43-9	cadmium (non-pyrophoric)	0.10 mg/m ³
7440-47-3	Chromium from Chromium(III) nitrate nonahydrate	1.5 mg/m ³
7440-50-8	copper	3 mg/m ³
7439-89-6	iron	3.2 mg/m ³
7440-09-7	potassium	2.3 mg/m ³
7439-95-4	magnesium	18 mg/m ³
7439-96-5	manganese	3 mg/m ³
7439-98-7	molybdenum	30 mg/m ³
7440-23-5	Sodium from Sodium carbonate	13 mg/m ³
7440-02-0	nickel	4.5 mg/m ³
7723-14-0	phosphorus	0.27 mg/m ³
7439-92-1	Lead from Lead Oxide	0.15 mg/m ³
7440-36-0	antimony	1.5 mg/m ³

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7440-21-3	alkali fluorosilicates (NH ₄)	45 mg/m ³
7440-31-5	tin	6 mg/m ³
7440-32-6	titanium from ammonium hexafluorotitanate	30 mg/m ³
7440-62-2	Vanadium from Ammonium trioxovanadate	3 mg/m ³
7440-66-6	zinc powder -zinc dust (stabilized)	6 mg/m ³
7440-22-4	silver	0.3 mg/m ³

· PAC-2:

64742-65-0	Distillates (petroleum), solvent-dewaxed heavy paraffinic	1,500 mg/m ³
7440-42-8	boron	21 mg/m ³
7440-39-3	Barium from Barium carbonate	180 mg/m ³
7440-43-9	cadmium (non-pyrophoric)	0.76 mg/m ³
7440-47-3	Chromium from Chromium(III) nitrate nonahydrate	17 mg/m ³
7440-50-8	copper	33 mg/m ³
7439-89-6	iron	35 mg/m ³
7440-09-7	potassium	25 mg/m ³
7439-95-4	magnesium	200 mg/m ³
7439-96-5	manganese	5 mg/m ³
7439-98-7	molybdenum	330 mg/m ³
7440-23-5	Sodium from Sodium carbonate	140 mg/m ³
7440-02-0	nickel	50 mg/m ³
7723-14-0	phosphorus	3 mg/m ³
7439-92-1	Lead from Lead Oxide	120 mg/m ³
7440-36-0	antimony	13 mg/m ³
7440-21-3	alkali fluorosilicates (NH ₄)	100 mg/m ³
7440-31-5	tin	67 mg/m ³
7440-32-6	titanium from ammonium hexafluorotitanate	330 mg/m ³
7440-62-2	Vanadium from Ammonium trioxovanadate	5.8 mg/m ³
7440-66-6	zinc powder -zinc dust (stabilized)	21 mg/m ³
7440-22-4	silver	170 mg/m ³

· PAC-3:

64742-65-0	Distillates (petroleum), solvent-dewaxed heavy paraffinic	8,900 mg/m ³
7440-42-8	boron	130 mg/m ³
7440-39-3	Barium from Barium carbonate	1,100 mg/m ³
7440-43-9	cadmium (non-pyrophoric)	4.7 mg/m ³
7440-47-3	Chromium from Chromium(III) nitrate nonahydrate	99 mg/m ³
7440-50-8	copper	200 mg/m ³
7439-89-6	iron	150 mg/m ³
7440-09-7	potassium	150 mg/m ³
7439-95-4	magnesium	1,200 mg/m ³
7439-96-5	manganese	1,800 mg/m ³
7439-98-7	molybdenum	2,000 mg/m ³
7440-23-5	Sodium from Sodium carbonate	870 mg/m ³
7440-02-0	nickel	99 mg/m ³
7723-14-0	phosphorus	18 mg/m ³
7439-92-1	Lead from Lead Oxide	700 mg/m ³
7440-36-0	antimony	80 mg/m ³
7440-21-3	alkali fluorosilicates (NH ₄)	630 mg/m ³
7440-31-5	tin	400 mg/m ³
7440-32-6	titanium from ammonium hexafluorotitanate	2,000 mg/m ³
7440-62-2	Vanadium from Ammonium trioxovanadate	35 mg/m ³
7440-66-6	zinc powder -zinc dust (stabilized)	120 mg/m ³
7440-22-4	silver	990 mg/m ³

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7 Handling and storage

- **Handling:**
- **Precautions for safe handling**
No special measures required.
Follow good laboratory practices.
- **Information about protection against explosions and fires:** No special measures required.
- **Conditions for safe storage, including any incompatibilities**
- **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:** None.
- **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:**
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
- **Additional information:** The lists that were valid during the creation were used as basis.
- **Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:** The usual precautionary measures for handling chemicals should be followed.
- **Respiratory protection:** Not required.
- **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:** Goggles recommended during refilling.

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.
- **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.

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· Relative density	Not applicable.
· Vapor density	Not applicable.
· Evaporation rate	Not applicable.
· Solubility in / Miscibility with Water:	Negligible
· Partition coefficient (n-octanol/water):	Not applicable.
· Viscosity:	
Dynamic:	Not applicable.
Kinematic:	Not applicable.
· Solvent content:	
VOC content:	0.00 %
Solids content:	0.2 %
· 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 skin:** No irritant effect.
- on the eye:** No irritating effect.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**
The product is not subject to classification according to internally approved calculation methods for preparations:
When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.

- **Carcinogenic categories**

· IARC (International Agency for Research on Cancer)		
7440-43-9	cadmium (non-pyrophoric)	I
7440-47-3	Chromium from Chromium(III) nitrate nonahydrate	3
7440-02-0	nickel	2B
7439-92-1	Lead from Lead Oxide	2B
· NTP (National Toxicology Program)		
7440-43-9	cadmium (non-pyrophoric)	K
7440-02-0	nickel	R
7439-92-1	Lead from Lead Oxide	R
· OSHA-Ca (Occupational Safety & Health Administration)		
7440-43-9	cadmium (non-pyrophoric)	

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

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- 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:** Smaller quantities can be disposed of with household waste.
- **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	
· Class	Not Regulated
· Packing group	
· DOT, ADR, IMDG, IATA	Not Regulated
· Environmental hazards:	Not applicable.
· Special precautions for user	Not applicable.
· Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
· UN "Model Regulation":	Not Regulated

15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Sara**

· Section 313 (Specific toxic chemical listings):	
7429-90-5	aluminium
7440-39-3	Barium from Barium carbonate
7440-43-9	cadmium (non-pyrophoric)
7440-47-3	Chromium from Chromium(III) nitrate nonahydrate
7440-50-8	copper
7439-96-5	manganese
7440-02-0	nickel
7723-14-0	phosphorus
7439-92-1	Lead from Lead Oxide
7440-36-0	antimony
7440-62-2	Vanadium from Ammonium trioxovanadate
7440-66-6	zinc powder -zinc dust (stabilized)
7440-22-4	silver
· TSCA (Toxic Substances Control Act):	
All ingredients are listed.	
· Proposition 65	
· Chemicals known to cause cancer:	
7440-43-9	cadmium (non-pyrophoric)
7440-02-0	nickel
7439-92-1	Lead from Lead Oxide

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· **Chemicals known to cause reproductive toxicity for females:**

None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for males:**

7440-43-9 cadmium (non-pyrophoric)

· **Chemicals known to cause developmental toxicity:**

7440-43-9 cadmium (non-pyrophoric)

· **Carcinogenic categories**

· **EPA (Environmental Protection Agency)**

7440-42-8	boron	I (oral)
7440-39-3	Barium from Barium carbonate	D, CBD(inh), NL(oral)
7440-43-9	cadmium (non-pyrophoric)	B1
7440-50-8	copper	D
7439-96-5	manganese	D
7439-92-1	Lead from Lead Oxide	B2
7440-66-6	zinc powder -zinc dust (stabilized)	D, I, II
7440-22-4	silver	D

· **TLV (Threshold Limit Value established by ACGIH)**

7429-90-5	aluminium	A4
7440-39-3	Barium from Barium carbonate	A4
7440-43-9	cadmium (non-pyrophoric)	A2
7439-98-7	molybdenum	A3
7440-02-0	nickel	A5
7439-92-1	Lead from Lead Oxide	A3

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**

7440-43-9	cadmium (non-pyrophoric)
7440-02-0	nickel

- **GHS label elements** Not Regulated
- **Hazard pictograms** Not Regulated
- **Signal word** Not Regulated
- **Hazard statements** Not Regulated
- **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

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** 02/27/2019 / -

· **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
 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