

Safety Data Sheet
acc. to OSHA HCS

Printing date 10/27/2016

Reviewed on 10/27/2016

1 Identification

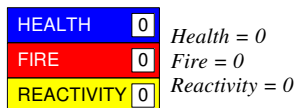
- **Product identifier**
- **Product Name:** 23-ELEMENT OIL STANDARD
- **Part Number:** S23-300Z
- **Application of the substance / the mixture** Certified Reference Material
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
SPEX CertiPrep, LLC.
203 Norcross Ave, Metuchen,
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	99.31%
7440-47-3	Chromium from Chromium(III) nitrate nonahydrate	0.03%
7440-23-5	Sodium from Sodium carbonate	0.03%
7440-22-4	silver	0.03%
7440-39-3	Barium from Barium carbonate	0.03%
7439-95-4	magnesium	0.03%
7440-31-5	tin	0.03%
7439-98-7	molybdenum	0.03%
7440-42-8	Boron from Ammonium tetraborate tetrahydrate	0.03%
7440-43-9	cadmium (non-pyrophoric)	0.03%
7440-50-8	copper	0.03%
7439-96-5	manganese	0.03%
7440-02-0	nickel	0.03%
7439-92-1	Lead from Lead Oxide	0.03%

(Contd. on page 2)

Safety Data Sheet
acc. to OSHA HCS

Printing date 10/27/2016

Reviewed on 10/27/2016

Product Name: 23-ELEMENT OIL STANDARD

(Contd. of page 1)

7440-32-6	titanium	0.03%
7440-66-6	zinc powder -zinc dust (pyrophoric)	0.03%
7440-70-2	Calcium from Calcium carbonate	0.03%
7439-89-6	iron	0.03%
7440-09-7	Potassium from Potassium nitrate	0.03%
7723-14-0	Phosphorus from Ammonium dihydrogenorthophosphate	0.03%
7440-36-0	antimony	0.03%
7440-62-2	Vanadium from Ammonium trioxovanadate	0.03%
7429-90-5	aluminium	0.03%
7440-21-3	alkali fluorosilicates (NH ₄)	0.03%

4 First-aid measures

- **Description of first aid measures**
- **General information:** No special measures required.
- **After inhalation:**
Supply fresh air and to be sure call for a doctor.
In case of unconsciousness place patient stably in side position for transportation.
- **After skin contact:** Immediately wash with water and soap and rinse thoroughly.
- **After eye contact:** Rinse opened eye for several minutes under running water.
- **After swallowing:** If symptoms persist consult doctor.
- **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:** CO₂, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **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).
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.

7 Handling and storage

- **Handling:**
- **Precautions for safe handling**
No special measures required.
Ensure good ventilation/exhaustion at the workplace.
Prevent formation of aerosols.
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.

(Contd. on page 3)

US

Safety Data Sheet
acc. to OSHA HCS

Printing date 10/27/2016

Reviewed on 10/27/2016

Product Name: 23-ELEMENT OIL STANDARD

(Contd. of page 2)

· **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:** Immediately remove all soiled and contaminated clothing.

· **Breathing equipment:**

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:**



Protective gloves

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.

· **Ignition temperature:**

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.

(Contd. on page 4)

Safety Data Sheet
acc. to OSHA HCS

Printing date 10/27/2016

Reviewed on 10/27/2016

Product Name: 23-ELEMENT OIL STANDARD

(Contd. of page 3)

- **Solubility in / Miscibility with Water:** Not miscible or difficult to mix.
- **Partition coefficient (n-octanol/water):** Not applicable.
- **Viscosity:**
 - Dynamic:** Not applicable.
 - Kinematic:** Not applicable.
- **Solvent content:**
 - Organic solvents:** 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 skin:** No irritant effect.
 - on the eye:** No irritating effect.
- **Sensitization:** Sensitization possible through skin contact.
- **Additional toxicological information:**
 - The product shows the following dangers according to internally approved calculation methods for preparations:
 - 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.
 - Irritant
- **Carcinogenic categories**

- **IARC (International Agency for Research on Cancer)**

7440-47-3	Chromium from Chromium(III) nitrate nonahydrate	3
7440-43-9	cadmium (non-pyrophoric)	1
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)	
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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.

(Contd. on page 5)

Safety Data Sheet
acc. to OSHA HCS

Printing date 10/27/2016

Reviewed on 10/27/2016

Product Name: 23-ELEMENT OIL STANDARD

(Contd. of page 4)

- **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 355 (extremely hazardous substances):	
7723-14-0	Phosphorus from Ammonium dihydrogenorthophosphate
· Section 313 (Specific toxic chemical listings):	
7440-47-3	Chromium from Chromium(III) nitrate nonahydrate
7440-22-4	silver
7440-39-3	Barium from Barium carbonate
7440-43-9	cadmium (non-pyrophoric)
7440-50-8	copper
7439-96-5	manganese
7440-02-0	nickel
7439-92-1	Lead from Lead Oxide
7440-66-6	zinc powder -zinc dust (pyrophoric)
7723-14-0	Phosphorus from Ammonium dihydrogenorthophosphate
7440-36-0	antimony
7440-62-2	Vanadium from Ammonium trioxovanadate
7429-90-5	aluminium
· TSCA (Toxic Substances Control Act):	
64742-65-0	Distillates (petroleum), solvent-dewaxed heavy paraffinic
7440-47-3	Chromium from Chromium(III) nitrate nonahydrate
7440-23-5	Sodium from Sodium carbonate
7440-22-4	silver
7440-39-3	Barium from Barium carbonate

(Contd. on page 6)

Safety Data Sheet
acc. to OSHA HCS

Printing date 10/27/2016

Reviewed on 10/27/2016

Product Name: 23-ELEMENT OIL STANDARD

(Contd. of page 5)

7439-95-4	magnesium
7440-31-5	tin
7439-98-7	molybdenum
7440-42-8	Boron from Ammonium tetraborate tetrahydrate
7440-43-9	cadmium (non-pyrophoric)
7440-50-8	copper
7439-96-5	manganese
7440-02-0	nickel
7439-92-1	Lead from Lead Oxide
7440-32-6	titanium
7440-70-2	Calcium from Calcium carbonate
7439-89-6	iron
7440-09-7	Potassium from Potassium nitrate
7723-14-0	Phosphorus from Ammonium dihydrogenorthophosphate
7440-36-0	antimony
7440-62-2	Vanadium from Ammonium trioxovanadate
7429-90-5	aluminium
7440-21-3	alkali fluorosilicates (NH4)

· Proposition 65**· Chemicals known to cause cancer:**

7440-43-9	cadmium (non-pyrophoric)
7440-02-0	nickel
7439-92-1	Lead from Lead Oxide

· 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)
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· Chemicals known to cause developmental toxicity:

7440-43-9	cadmium (non-pyrophoric)
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· Carcinogenic categories**· EPA (Environmental Protection Agency)**

7440-22-4	silver	D
7440-39-3	Barium from Barium carbonate	D, CBD(inh), NL(oral)
7440-42-8	Boron from Ammonium tetraborate tetrahydrate	I (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 (pyrophoric)	II

· TLV (Threshold Limit Value established by ACGIH)

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

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

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

· Protective Action Criteria for Chemicals**· PAC-1:**

64742-65-0	Distillates (petroleum), solvent-dewaxed heavy paraffinic	140 mg/m3
7440-47-3	Chromium from Chromium(III) nitrate nonahydrate	1.5 mg/m3
7440-23-5	Sodium from Sodium carbonate	13 mg/m3
7440-22-4	silver	0.3 mg/m3

(Contd. on page 7)

Safety Data Sheet
acc. to OSHA HCS

Printing date 10/27/2016

Reviewed on 10/27/2016

Product Name: 23-ELEMENT OIL STANDARD

(Contd. of page 6)

7440-39-3	Barium from Barium carbonate	1.5 mg/m ³
7439-95-4	magnesium	18 mg/m ³
7440-31-5	tin	6 mg/m ³
7439-98-7	molybdenum	30 mg/m ³
7440-42-8	Boron from Ammonium tetraborate tetrahydrate	1.9 mg/m ³
7440-43-9	cadmium (non-pyrophoric)	0.10 mg/m ³
7440-50-8	copper	3 mg/m ³
7439-96-5	manganese	3 mg/m ³
7440-02-0	nickel	4.5 mg/m ³
7439-92-1	Lead from Lead Oxide	0.15 mg/m ³
7440-32-6	titanium	30 mg/m ³
7439-89-6	iron	3.2 mg/m ³
7440-09-7	Potassium from Potassium nitrate	2.3 mg/m ³
7723-14-0	Phosphorus from Ammonium dihydrogenorthophosphate	0.27 mg/m ³
7440-36-0	antimony	1.5 mg/m ³
7440-62-2	Vanadium from Ammonium trioxovanadate	3 mg/m ³
7440-21-3	alkali fluorosilicates (NH ₄)	45 mg/m ³

· PAC-2:

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

· PAC-3:

64742-65-0	Distillates (petroleum), solvent-dewaxed heavy paraffinic	8,900 mg/m ³
7440-47-3	Chromium from Chromium(III) nitrate nonahydrate	99 mg/m ³
7440-23-5	Sodium from Sodium carbonate	870 mg/m ³
7440-22-4	silver	990 mg/m ³
7440-39-3	Barium from Barium carbonate	1,100 mg/m ³
7439-95-4	magnesium	1,200 mg/m ³
7440-31-5	tin	400 mg/m ³
7439-98-7	molybdenum	2,000 mg/m ³
7440-42-8	Boron from Ammonium tetraborate tetrahydrate	130 mg/m ³
7440-43-9	cadmium (non-pyrophoric)	4.7 mg/m ³
7440-50-8	copper	200 mg/m ³
7439-96-5	manganese	1,800 mg/m ³
7440-02-0	nickel	99 mg/m ³
7439-92-1	Lead from Lead Oxide	700 mg/m ³
7440-32-6	titanium	2,000 mg/m ³

(Contd. on page 8)

Safety Data Sheet
acc. to OSHA HCS

Printing date 10/27/2016

Reviewed on 10/27/2016

Product Name: 23-ELEMENT OIL STANDARD

(Contd. of page 7)

7439-89-6	iron	150 mg/m ³
7440-09-7	Potassium from Potassium nitrate	150 mg/m ³
7723-14-0	Phosphorus from Ammonium dihydrogenorthophosphate	18 mg/m ³
7440-36-0	antimony	80 mg/m ³
7440-62-2	Vanadium from Ammonium trioxovanadate	35 mg/m ³
7440-21-3	alkali fluorosilicates (NH ₄)	630 mg/m ³

- **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** 10/27/2016 / -

- **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)

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