

1 Identification

- **Product identifier**
- **Product Name:** 23-ELEMENT OIL STANDARD
- **Part Number:**
S23-100Y
S23-100Z
- **Application of the substance / the mixture** For Laboratory Use Only
- **Uses advised against** Not for Human or Animal Use
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Spex CertiPrep, LLC.
203 Norcross Ave, Metuchen,
NJ 08840 USA
732-549-7144
USMet-CRMSales@antylia.com
- **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

Aspiration Hazard 1 H304 May be fatal if swallowed and enters airways.



GHS07

Sensitization - Skin 1 H317 May cause an allergic skin reaction.

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



GHS07



GHS08

- **Signal word** Danger
- **Hazard-determining components of labeling:**
White mineral oil, petroleum
- **Hazard statements**
H317 May cause an allergic skin reaction.
H304 May be fatal if swallowed and enters airways.
- **Precautionary statements**
P261 Avoid breathing dust/fume/gas/mist/vapors/spray
P272 Contaminated work clothing must not be allowed out of the workplace.
P280 Wear protective gloves.
P301+P310 If swallowed: Immediately call a poison center/doctor.
P321 Specific treatment (see on this label).
P331 Do NOT induce vomiting.
P302+P352 If on skin: Wash with plenty of water.
P333+P313 If skin irritation or rash occurs: Get medical advice/attention.
P363 Wash contaminated clothing before reuse.
P405 Store locked up.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

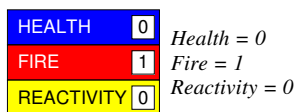
Product Name: 23-ELEMENT OIL STANDARD

(Contd. of page 1)

- 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:

8042-47-5	White mineral oil, petroleum	99.77%
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· Chemical identification of the substance/preparation

7429-90-5	aluminium	0.01%
7439-89-6	iron	0.01%
7439-92-1	lead	0.01%
7439-95-4	magnesium	0.01%
7439-96-5	manganese	0.01%
7439-98-7	molybdenum	0.01%
7440-02-0	nickel	0.01%
7440-09-7	potassium	0.01%
7440-21-3	silicon	0.01%
7440-22-4	silver	0.01%
7440-23-5	sodium	0.01%
7440-31-5	tin	0.01%
7440-32-6	titanium	0.01%
7440-36-0	antimony	0.01%
7440-39-3	barium	0.01%
7440-42-8	Boron from Ammonium tetraborate tetrahydrate	0.01%
7440-43-9	cadmium	0.01%
7440-47-3	chromium	0.01%
7440-50-8	copper	0.01%
7440-62-2	vanadium	0.01%
7440-66-6	zinc	0.01%
7440-70-2	calcium	0.01%
7723-14-0	phosphorus	0.01%

4 First-aid measures

- Description of first aid measures
- 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: 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.

(Contd. on page 3)

Product Name: 23-ELEMENT OIL STANDARD

(Contd. of page 2)

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 section 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.
- **Protective Action Criteria for Chemicals**

· PAC-1:		
7439-89-6	iron	3.2 mg/m ³
7439-92-1	lead	0.15 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
7440-02-0	nickel	4.5 mg/m ³
7440-09-7	potassium	2.3 mg/m ³
7440-21-3	silicon	45 mg/m ³
7440-22-4	silver	0.3 mg/m ³
7440-23-5	sodium	13 mg/m ³
7440-31-5	tin	6 mg/m ³
7440-32-6	titanium	30 mg/m ³
7440-36-0	antimony	1.5 mg/m ³
7440-39-3	barium	1.5 mg/m ³
7440-42-8	Boron from Ammonium tetraborate tetrahydrate	1.9 mg/m ³
7440-43-9	cadmium	0.10 mg/m ³
7440-47-3	chromium	1.5 mg/m ³
7440-50-8	copper	3 mg/m ³
7440-62-2	vanadium	3 mg/m ³
7440-66-6	zinc	6 mg/m ³
7723-14-0	phosphorus	0.27 mg/m ³

· PAC-2:		
7439-89-6	iron	35 mg/m ³
7439-92-1	lead	120 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
7440-02-0	nickel	50 mg/m ³
7440-09-7	potassium	25 mg/m ³
7440-21-3	silicon	100 mg/m ³
7440-22-4	silver	170 mg/m ³
7440-23-5	sodium	140 mg/m ³
7440-31-5	tin	67 mg/m ³
7440-32-6	titanium	330 mg/m ³
7440-36-0	antimony	13 mg/m ³
7440-39-3	barium	180 mg/m ³
7440-42-8	Boron from Ammonium tetraborate tetrahydrate	21 mg/m ³

(Contd. on page 4)

Product Name: 23-ELEMENT OIL STANDARD

(Contd. of page 3)

7440-43-9	cadmium	0.76 mg/m ³
7440-47-3	chromium	17 mg/m ³
7440-50-8	copper	33 mg/m ³
7440-62-2	vanadium	5.8 mg/m ³
7440-66-6	zinc	21 mg/m ³
7723-14-0	phosphorus	3 mg/m ³
· PAC-3:		
7439-89-6	iron	150 mg/m ³
7439-92-1	lead	700 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
7440-02-0	nickel	99 mg/m ³
7440-09-7	potassium	150 mg/m ³
7440-21-3	silicon	630 mg/m ³
7440-22-4	silver	990 mg/m ³
7440-23-5	sodium	870 mg/m ³
7440-31-5	tin	400 mg/m ³
7440-32-6	titanium	2,000 mg/m ³
7440-36-0	antimony	80 mg/m ³
7440-39-3	barium	1,100 mg/m ³
7440-42-8	Boron from Ammonium tetraborate tetrahydrate	130 mg/m ³
7440-43-9	cadmium	4.7 mg/m ³
7440-47-3	chromium	99 mg/m ³
7440-50-8	copper	200 mg/m ³
7440-62-2	vanadium	35 mg/m ³
7440-66-6	zinc	120 mg/m ³
7723-14-0	phosphorus	18 mg/m ³

7 Handling and storage

- **Handling:**
- **Precautions for safe handling**
Ensure good ventilation/exhaustion at the workplace.
Prevent formation of aerosols.
- **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:** 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 section 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:**
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing.
Wash hands before breaks and at the end of work.
- **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.

(Contd. on page 5)

Product Name: 23-ELEMENT OIL STANDARD

(Contd. of page 4)

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:** 315 °C (599 °F)

· **Flash point:** > 100 °C (> 212 °F)

· **Flammability (solid, gaseous):** Not applicable.

· **Decomposition temperature:** Not applicable.

· **Ignition temperature:** 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:** 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.

(Contd. on page 6)

Product Name: 23-ELEMENT OIL STANDARD

(Contd. of page 5)

· **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.
- **Sensitization:** Sensitization possible through skin contact.
- **Additional toxicological information:**
The product shows the following dangers according to internally approved calculation methods for preparations:
Irritant
- **Carcinogenic categories**

· IARC (International Agency for Research on Cancer)		
7439-92-1	lead	2B
7440-02-0	nickel	2B
7440-43-9	cadmium	1
7440-47-3	chromium	3
· NTP (National Toxicology Program)		
7439-92-1	lead	R
7440-02-0	nickel	R
7440-43-9	cadmium	K
· OSHA-Ca (Occupational Safety & Health Administration)		
7440-43-9	cadmium	

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	
· Class	Not Regulated
· Packing group	
· DOT, ADR, IMDG, IATA	Not Regulated
· Environmental hazards:	Not applicable.

(Contd. on page 7)

Product Name: 23-ELEMENT OIL STANDARD

(Contd. of page 6)

· 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** No further relevant information available.
· **Sara**

· Section 313 (Specific toxic chemical listings):	
7429-90-5	aluminium
7439-92-1	lead
7439-96-5	manganese
7440-02-0	nickel
7440-22-4	silver
7440-36-0	antimony
7440-39-3	barium
7440-43-9	cadmium
7440-47-3	chromium
7440-50-8	copper
7440-62-2	vanadium
7440-66-6	zinc
7723-14-0	phosphorus

· TSCA (Toxic Substances Control Act):	
All components have the value ACTIVE.	

· Hazardous Air Pollutants	
7439-92-1	lead
7439-96-5	manganese
7723-14-0	phosphorus

· Proposition 65	
· Chemicals known to cause cancer:	
7439-92-1	lead
7440-02-0	nickel
7440-43-9	cadmium

· 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

· Chemicals known to cause developmental toxicity:	
7440-43-9	cadmium

· Carcinogenic categories		
· EPA (Environmental Protection Agency)		
7439-92-1	lead	B2
7439-96-5	manganese	D
7440-22-4	silver	D
7440-39-3	barium	D, CBD(inh), NL(oral)
7440-42-8	Boron from Ammonium tetraborate tetrahydrate	I (oral)
7440-43-9	cadmium	B1
7440-50-8	copper	D
7440-66-6	zinc	D, I, II

· TLV (Threshold Limit Value)		
7429-90-5	aluminium	A4
7439-92-1	lead	A3
7439-98-7	molybdenum	A3
7440-02-0	nickel	A5
7440-39-3	barium	A4

(Contd. on page 8)

Printing date 09/30/2024

Reviewed on 09/30/2024

Product Name: 23-ELEMENT OIL STANDARD

(Contd. of page 7)

7440-43-9	cadmium	A2
· NIOSH-Ca (National Institute for Occupational Safety and Health)		
7440-02-0	nickel	
7440-43-9	cadmium	

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

· **Hazard pictograms**



GHS07

GHS08

· **Signal word** Danger

· **Hazard-determining components of labeling:**

White mineral oil, petroleum

· **Hazard statements**

H317 May cause an allergic skin reaction.

H304 May be fatal if swallowed and enters airways.

· **Precautionary statements**

P261 Avoid breathing dust/fume/gas/mist/vapors/spray

P272 Contaminated work clothing must not be allowed out of the workplace.

P280 Wear protective gloves.

P301+P310 If swallowed: Immediately call a poison center/doctor.

P321 Specific treatment (see on this label).

P331 Do NOT induce vomiting.

P302+P352 If on skin: Wash with plenty of water.

P333+P313 If skin irritation or rash occurs: Get medical advice/attention.

P363 Wash contaminated clothing before reuse.

P405 Store locked up.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

· **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** 09/30/2024

· **Abbreviations and acronyms:**

ADR: Accord relatif au transport international 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

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

Sensitization - Skin 1: Skin sensitisation – Category 1

Aspiration Hazard 1: Aspiration hazard – Category 1