

1 Identification

- **Product identifier**
- **Product Name:** 23-ELEMENT OIL STANDARD
- **Part Number:**
S23-500Y
S23-500Z
- **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.

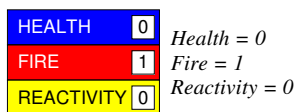
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- Classification system:
- NFPA ratings (scale 0 - 4)



- 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	98.85%
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· Chemical identification of the substance/preparation

7429-90-5	aluminium	0.05%
7439-89-6	iron	0.05%
7439-92-1	lead	0.05%
7439-95-4	magnesium	0.05%
7439-96-5	manganese	0.05%
7439-98-7	molybdenum	0.05%
7440-02-0	nickel	0.05%
7440-09-7	potassium	0.05%
7440-21-3	silicon	0.05%
7440-22-4	silver	0.05%
7440-23-5	sodium	0.05%
7440-31-5	tin	0.05%
7440-32-6	titanium	0.05%
7440-36-0	antimony	0.05%
7440-39-3	barium	0.05%
7440-42-8	Boron from Ammonium tetraborate tetrahydrate	0.05%
7440-43-9	cadmium	0.05%
7440-47-3	chromium	0.05%
7440-50-8	copper	0.05%
7440-62-2	vanadium	0.05%
7440-66-6	zinc powder- zinc dust (pyrophoric)	0.05%
7440-70-2	calcium	0.05%
7723-14-0	phosphorus	0.05%

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.

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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
7439-95-4	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
7723-14-0	phosphorus	0.27 mg/m ³

· PAC-2:		
7439-89-6	iron	35 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
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
7723-14-0	phosphorus	3 mg/m ³

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· PAC-3:		
7439-89-6	iron	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
7440-02-0	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
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.
- **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.

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- **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:	Not miscible or difficult to mix.
· Partition coefficient (n-octanol/water): Not applicable.	
· Viscosity:	
Dynamic:	Not applicable.
Kinematic:	Not applicable.
· Solvent content:	
VOC content:	0.00 %
Solids content:	1.0 %
· 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.
- **Sensitization:** Sensitization possible through skin contact.
- **Additional toxicological information:**
The product shows the following dangers according to internally approved calculation methods for preparations:
Irritant

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· **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, IMDG, IATA	Not Regulated
· UN proper shipping name	
· DOT, ADR, 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** No further relevant information available.
- **Sara**

· Section 313 (Specific toxic chemical listings):	
7429-90-5	aluminium

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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 powder- zinc dust (pyrophoric)
7723-14-0	phosphorus

· TSCA (Toxic Substances Control Act):

8042-47-5	White mineral oil, petroleum	ACTIVE
7429-90-5	aluminium	ACTIVE
7439-89-6	iron	ACTIVE
7439-95-4	magnesium	ACTIVE
7439-96-5	manganese	ACTIVE
7439-98-7	molybdenum	ACTIVE
7440-02-0	nickel	ACTIVE
7440-09-7	potassium	ACTIVE
7440-21-3	silicon	ACTIVE
7440-22-4	silver	ACTIVE
7440-23-5	sodium	ACTIVE
7440-31-5	tin	ACTIVE
7440-32-6	titanium	ACTIVE
7440-36-0	antimony	ACTIVE
7440-39-3	barium	ACTIVE
7440-42-8	Boron from Ammonium tetraborate tetrahydrate	ACTIVE
7440-43-9	cadmium	ACTIVE
7440-47-3	chromium	ACTIVE
7440-50-8	copper	ACTIVE
7440-70-2	calcium	ACTIVE
7723-14-0	phosphorus	ACTIVE

· Hazardous Air Pollutants

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:

7439-92-1	lead
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· Chemicals known to cause reproductive toxicity for males:

7439-92-1	lead
7440-43-9	cadmium

· Chemicals known to cause developmental toxicity:

7439-92-1	lead
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)

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Reviewed on 12/04/2024

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7440-42-8	Boron from Ammonium tetraborate tetrahydrate	I (oral)
7440-43-9	cadmium	B1
7440-50-8	copper	D
7440-66-6	zinc powder- zinc dust (pyrophoric)	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
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** 12/04/2024

· **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