

Safety Data Sheet
acc. to OSHA HCS

Printing date 09/25/2020

Reviewed on 09/25/2020

1 Identification

- **Product identifier**
- **Product Name:** 21-ELEMENT OIL STANDARD
- **Part Name:**
S21-100Y 100gram
S21-100Z 50gram
- **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)**

HEALTH	0	Health = 0
FIRE	0	Fire = 0
REACTIVITY	0	Reactivity = 0

- **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	99.79%
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%
7440-21-3	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%

(Contd. on page 2)

Safety Data Sheet
acc. to OSHA HCS

Printing date 09/25/2020

Reviewed on 09/25/2020

Product Name: 21-ELEMENT OIL STANDARD

(Contd. of page 1)

7440-39-3	barium	0.01%
7440-42-8	boron	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**
- **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
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
7440-21-3	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
7440-39-3	barium	1.5 mg/m ³
7440-42-8	boron	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

(Contd. on page 3)

Safety Data Sheet
acc. to OSHA HCS

Printing date 09/25/2020

Reviewed on 09/25/2020

Product Name: 21-ELEMENT OIL STANDARD

(Contd. of page 2)

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:

64742-65-0	Distillates (petroleum), solvent-dewaxed heavy paraffinic	1,500 mg/m ³
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
7440-21-3	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
7440-39-3	barium	180 mg/m ³
7440-42-8	boron	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
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:

64742-65-0	Distillates (petroleum), solvent-dewaxed heavy paraffinic	8,900 mg/m 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
7440-21-3	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
7440-39-3	barium	1,100 mg/m ³
7440-42-8	boron	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**

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.**

(Contd. on page 4)

Safety Data Sheet
acc. to OSHA HCS

Printing date 09/25/2020

Reviewed on 09/25/2020

Product Name: 21-ELEMENT OIL STANDARD

(Contd. of page 3)

- **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.
- **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.

(Contd. on page 5)

Safety Data Sheet
acc. to OSHA HCS

Printing date 09/25/2020

Reviewed on 09/25/2020

Product Name: 21-ELEMENT OIL STANDARD

(Contd. of page 4)

· 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)**

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.

US

(Contd. on page 6)

Safety Data Sheet
acc. to OSHA HCS

Printing date 09/25/2020

Reviewed on 09/25/2020

Product Name: 21-ELEMENT OIL STANDARD

(Contd. of page 5)

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, 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**
- **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
7440-39-3	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.	

(Contd. on page 7)

Safety Data Sheet
acc. to OSHA HCS

Printing date 09/25/2020

Reviewed on 09/25/2020

Product Name: 21-ELEMENT OIL STANDARD

(Contd. of page 6)

· **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	I (oral)
7440-43-9	cadmium	B1
7440-50-8	copper	D
7440-66-6	zinc	D, I, II

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

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** 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** 09/25/2020 / -

· **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