

1 Identification

- **Product identifier**
- **Product Name:** 21-ELEMENT OIL STANDARD
- **Part Number:**
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%
7439-89-6	iron	0.01%
7723-14-0	Phosphorus from Ammonium dihydrogenorthophosphate	0.01%
7440-21-3	alkali fluorosilicates (NH ₄)	0.01%
7440-62-2	Vanadium from Ammonium trioxovanadate	0.01%
7429-90-5	aluminium	0.01%
7440-47-3	Chromium from Chromium(III) nitrate nonahydrate	0.01%
7440-23-5	Sodium from Sodium carbonate	0.01%
7440-42-8	Boron from Ammonium tetraborate tetrahydrate	0.01%
7440-43-9	cadmium (non-pyrophoric)	0.01%
7440-50-8	copper	0.01%
7439-92-1	Lead from Lead Oxide	0.01%
7439-96-5	manganese	0.01%

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7440-02-0	nickel	0.01%
7440-66-6	zinc powder -zinc dust (stabilized)	0.01%
7440-32-6	titanium	0.01%
7439-95-4	magnesium	0.01%
7439-98-7	molybdenum	0.01%
7440-31-5	tin	0.01%
7440-22-4	silver	0.01%
7440-39-3	Barium from Barium carbonate	0.01%
7440-70-2	Calcium from Calcium carbonate	0.01%

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.
- **Specific end use(s)** No further relevant information available.

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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.
- **Solubility in / Miscibility with Water:** Not miscible or difficult to mix.

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- **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
7439-92-1	Lead from Lead Oxide	2B
7440-02-0	nickel	2B

· NTP (National Toxicology Program)

7440-43-9	cadmium (non-pyrophoric)	K
7439-92-1	Lead from Lead Oxide	R
7440-02-0	nickel	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.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

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· **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, IMDG, IATA	Not Regulated
· UN proper shipping name · DOT, ADR, IMDG, IATA	Not Regulated
· Transport hazard class(es) · DOT, ADR, 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
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· **Section 313 (Specific toxic chemical listings):**

7723-14-0	Phosphorus from Ammonium dihydrogenorthophosphate
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7440-62-2	Vanadium from Ammonium trioxovanadate
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7429-90-5	aluminium
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7440-47-3	Chromium from Chromium(III) nitrate nonahydrate
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7440-43-9	cadmium (non-pyrophoric)
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7440-50-8	copper
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7439-92-1	Lead from Lead Oxide
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7439-96-5	manganese
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7440-02-0	nickel
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7440-66-6	zinc powder -zinc dust (stabilized)
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7440-22-4	silver
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7440-39-3	Barium from Barium carbonate
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· **TSCA (Toxic Substances Control Act):**

All ingredients are listed.

· **Proposition 65**

· **Chemicals known to cause cancer:**

7440-43-9	cadmium (non-pyrophoric)
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7439-92-1	Lead from Lead Oxide
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7440-02-0	nickel
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· **Chemicals known to cause reproductive toxicity for females:**

None of the ingredients is listed.

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

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

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

· **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** 07/21/2016 / -

· **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