

Safety Data Sheet acc. to OSHA HCS

Date of issue: 06/30/2026

Reviewed on 06/30/2026

1 Identification

- **Product identifier**
- **Trade name:** *SPEI-017, SQCI-017*
- **Other means of identification**
- **Application of the substance / the mixture** *For Laboratory Use Only*
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
*NSI Lab Solutions
7212 ACC Blvd.,
Raleigh, NC 27617
USA*
- **Information department:** *Product safety department*
- **Emergency telephone number:** *During normal opening times: +1 (919) 789-3000*

* 2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS08 Health hazard

Germ cell mutagenicity 2

H341 Suspected of causing genetic defects.

Carcinogenicity 1A

H350 May cause cancer.

Specific target organ toxicity (single exposure) 1

H370 Causes damage to organs.

Specific target organ toxicity (repeated exposure) 1

H372 Causes damage to organs through prolonged or repeated exposure.



GHS07

Skin irritation 2

H315 Causes skin irritation.

Eye irritation 2A

H319 Causes serious eye irritation.

- **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:**
Quartz (SiO₂)

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- **Hazard statements**

Causes skin irritation.
 Causes serious eye irritation.
 Suspected of causing genetic defects.
 May cause cancer.
 Causes damage to organs.
 Causes damage to organs through prolonged or repeated exposure.

- **Precautionary statements**

Obtain special instructions before use.
 Do not handle until all safety precautions have been read and understood.
 Do not breathe dust/fume/gas/mist/vapors/spray.
 Wash thoroughly after handling.
 Do not eat, drink or smoke when using this product.
 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.
 If on skin: Wash with plenty of water.
 Specific treatment (see on this label).
 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 IF exposed or concerned: Get medical advice/attention.
 Get medical advice/attention if you feel unwell.
 If skin irritation occurs: Get medical advice/attention.
 Take off contaminated clothing and wash it before reuse.
 If eye irritation persists: Get medical advice/attention.
 Store locked up.
 Dispose of contents/container in accordance with local/regional/national/international regulations.

- **Information pertaining to particular dangers for man and environment:**

- **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.

- **Classification according to (d)(1)(ii) of § 1910.1200**

The SDS issuer does not object to the classifications provided by importers or manufacturers of precursor products.

- **Hazards not otherwise classified**

There are no adverse physical or health effects known that are not covered by the hazard classes of the Hazard Communications Standard.

* 3 Composition/information on ingredients

- **Chemical characterization: Mixtures**

- **Description:** Mixture of the substances listed below with nonhazardous additions.

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· Dangerous components:		
14808-60-7	Quartz (SiO ₂)	≥80–≤100%
1310-73-2	sodium hydroxide	≥0.5–<1%
· Non-hazardous components		
7732-18-5	water, distilled, conductivity or of similar purity	≥3–≤5%
13746-66-2	tripotassium hexacyanoferrate	≥0–≤1%

4 First-aid measures

- **Description of first aid measures**
- **General information:**
Immediately remove any clothing soiled by the product.
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
- **After inhalation:** 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. If symptoms persist, consult a doctor.
- **After swallowing:** If symptoms persist consult 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** During heating or in case of fire poisonous gases are produced.
- **Advice for firefighters**
- **Protective equipment:** Mouth respiratory protective device.

* 6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures** Mount respiratory protective device.
- **Environmental precautions:**
Dilute with plenty of water.
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.
- **Protective Action Criteria for Chemicals**

· PAC-1:		
14808-60-7	Quartz (SiO ₂)	0.075 mg/m ³
1310-73-2	sodium hydroxide	0.50 mg/m ³
13746-66-2	tripotassium hexacyanoferrate	12 mg/m ³
· PAC-2:		
14808-60-7	Quartz (SiO ₂)	8.3 mg/m ³
1310-73-2	sodium hydroxide	5.0 mg/m ³

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13746-66-2	tripotassium hexacyanoferrate	54 mg/m ³
· PAC-3:		
14808-60-7	Quartz (SiO ₂)	50 mg/m ³
1310-73-2	sodium hydroxide	50 mg/m ³
13746-66-2	tripotassium hexacyanoferrate	320 mg/m ³

· 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

· Precautions for safe handling

Ensure good ventilation/exhaustion at the workplace.

Open and handle receptacle with care.

Prevent formation of aerosols.

· Information about protection against explosions and fires: Keep respiratory protective device available.**· 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

· Control parameters**· Components with limit values that require monitoring at the workplace:****14808-60-7 Quartz (SiO₂)**

PEL Long-term value: 0.05* mg/m³
 *resp. dust; 30mg/m³/‰SiO₂+2

REL Long-term value: 0.05* mg/m³
 *respirable dust; See Pocket Guide App. A

TLV Long-term value: 0.025* mg/m³
 *respirable particulate matter, A2

1310-73-2 sodium hydroxide

PEL Long-term value: 2 mg/m³

REL Ceiling limit value: 2 mg/m³

TLV Ceiling limit value: 2 mg/m³

· Additional information: The lists that were valid during the creation were used as basis.**· Exposure controls****· Appropriate engineering controls** No further data; see section 7.**· 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.

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Store protective clothing separately.

Avoid contact with the eyes and skin.

- **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:**



Tightly sealed goggles

- **Body protection:** Protective work clothing

* 9 Physical and chemical properties

- **Information on basic physical and chemical properties**

- **General Information**

- **Physical state**

Liquid

- **Color:**

According to product specification

- **Odor:**

Characteristic

- **Odor threshold:**

Not determined.

- **Melting point/Melting range:**

Undetermined.

- **Boiling point/Boiling range:**

2,230 °C (3630 °F)

- **Flammability:**

Not applicable.

- **Explosion limits:**

- **Lower:**

Not determined.

- **Upper:**

Not determined.

- **Flash point:**

Not applicable.

- **Decomposition temperature:**

Not determined.

- **pH-value:**

Not determined.

- **Viscosity:**

- **Kinematic:**

Not determined.

- **Dynamic:**

Not determined.

- **Solubility in / Miscibility with**

- **Water:**

Fully miscible.

- **Partition coefficient (n-octanol/water):**

Not determined.

- **Vapor pressure at 1732 °C (3,149.6 °F):**

13.5 hPa (10.1 mm Hg)

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· Vapor pressure:	
· Density at 20 °C (68 °F):	2.11211–2.577 g/cm ³ (17.62556–21.50507 lbs/gal)
· Relative density	Not determined.
· Bulk density:	1,364–1,420 kg/m ³
· Vapor density	Not determined.
· Particle characteristics	Not applicable.
· Other information	
· Appearance:	
· Form:	Fluid
· Important information on protection of health and environment, and on safety.	
· Ignition temperature:	Product is not selfigniting.
· Danger of explosion:	Product does not present an explosion hazard.
· Solvent content:	
· Water:	3.7–4.2 %
· VOC content:	0.00 %
	0.0 g/l / 0.00 lb/gal
· Solids content:	95.3–96.3 %
· Change in condition	
· Evaporation rate	Not determined.

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:**

· LD/LC50 values that are relevant for classification:
1310-73-2 sodium hydroxide
Oral LD50 2,000 mg/kg (rat)

- **Primary irritant effect:**
- **on the skin:** Irritant to skin and mucous membranes.
- **on the eye:** Irritating effect.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**
The product shows the following dangers according to internally approved calculation methods for preparations:
Irritant
- **Interactive effects** No interactive effects between components are known.

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- **Carcinogenic categories**

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

14808-60-7 | Quartz (SiO₂)

I

- **NTP (National Toxicology Program)**

14808-60-7 | Quartz (SiO₂)

K

- **OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients is listed.

- **Alternative sources for toxicological information** No non-standard sources for toxicological information where used.

12 Ecological information

- **Toxicity**

- **Aquatic toxicity:** No further relevant information available.

- **Persistence and degradability** No further relevant information available.

- **Bioaccumulative potential** No further relevant information available.

- **Mobility in soil** No further relevant information available.

- **Results of PBT and vPvB assessment**

- **PBT:** Not applicable.

- **vPvB:** Not applicable.

- **Other adverse effects**

- **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.

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.

- **Recommended cleansing agent:** Water, if necessary with cleansing agents.

14 Transport information

- **UN-Number**

- **DOT, IMDG, IATA**

UN1824

- **UN proper shipping name**

- **DOT, IATA**

Sodium hydroxide solution

- **IMDG**

SODIUM HYDROXIDE SOLUTION

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· Transport hazard class(es) · DOT	
	
· Class · Label	8 Corrosive substances 8
· IMDG, IATA	
	
· Class · Label	8 Corrosive substances 8
· Packing group · DOT, IMDG, IATA	III
· Environmental hazards:	Not applicable.
· Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	Not applicable.
· Transport/Additional information: · DOT · Quantity limitations	
	On passenger aircraft/rail: 5 L On cargo aircraft only: 60 L
· IMDG · Limited quantities (LQ) · Excepted quantities (EQ)	
	5L Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· Special precautions for user · Hazard identification number (Kemler code): · EMS Number: · Segregation groups · Stowage Category · Segregation Code	Warning: Corrosive substances 80 F-A,S-B (SGG18) Alkalies A SG35 Stow "separated from" SGGI-acids
· UN "Model Regulation":	UN 1824 SODIUM HYDROXIDE SOLUTION, 8, III

15 Regulatory information

· Safety, health and environmental regulations/legislation specific for the substance or mixture
 · Sara

· **Section 355 (extremely hazardous substances):**

None of the ingredients is listed.

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· Section 313 (Specific toxic chemical listings):	
13746-66-2	tripotassium hexacyanoferrate
· TSCA (Toxic Substances Control Act):	
All components have the value ACTIVE.	
· Hazardous Air Pollutants	
13746-66-2	tripotassium hexacyanoferrate
· Proposition 65	
· Chemicals known to cause cancer:	
14808-60-7	Quartz (SiO ₂)
· Chemicals known to cause reproductive toxicity for females:	
None of the ingredients is listed.	
· Chemicals known to cause reproductive toxicity for males:	
None of the ingredients is listed.	
· Chemicals known to cause developmental toxicity:	
None of the ingredients is listed.	
· Carcinogenic categories	
· EPA (Environmental Protection Agency)	
13746-66-2	tripotassium hexacyanoferrate
· TLV (Threshold Limit Value)	
14808-60-7	Quartz (SiO ₂)
· NIOSH-Ca (National Institute for Occupational Safety and Health)	
14808-60-7	Quartz (SiO ₂)

· **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:**

Quartz (SiO₂)

· **Hazard statements**

Causes skin irritation.

Causes serious eye irritation.

Suspected of causing genetic defects.

May cause cancer.

Causes damage to organs.

Causes damage to organs through prolonged or repeated exposure.

· **Precautionary statements**

Obtain special instructions before use.

Do not handle until all safety precautions have been read and understood.

Do not breathe dust/fume/gas/mist/vapors/spray.

Wash thoroughly after handling.

Do not eat, drink or smoke when using this product.

Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.

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*If on skin: Wash with plenty of water.**Specific treatment (see on this label).**If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.**If exposed or concerned: Get medical advice/attention.**Get medical advice/attention if you feel unwell.**If skin irritation occurs: Get medical advice/attention.**Take off contaminated clothing and wash it before reuse.**If eye irritation persists: Get medical advice/attention.**Store locked up.**Dispose of contents/container in accordance with local/regional/national/international regulations.***· National regulations:****· Information about limitation of use:***Workers are not allowed to be exposed to the hazardous carcinogenic materials contained in this preparation. Exceptions can be made by the authorities in certain cases.***· 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:** *Environment protection department.***· Contact:** *- Department Technical Manager***· Date of previous version** *04/19/2024***· Date of preparation** *06/30/2026***· 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)**LC50: Lethal concentration, 50 percent**LD50: Lethal dose, 50 percent**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**Skin irritation 2: Skin corrosion/irritation – Category 2**Eye irritation 2A: Serious eye damage/eye irritation – Category 2A**Germ cell mutagenicity 2: Germ cell mutagenicity – Category 2**Carcinogenicity 1A: Carcinogenicity – Category 1A**Specific target organ toxicity (single exposure) 1: Specific target organ toxicity (single exposure) – Category 1**Specific target organ toxicity (repeated exposure) 1: Specific target organ toxicity (repeated exposure) – Category 1***· * Data compared to the previous version altered.**