

1 Identification

- **Product identifier**
- **Trade name:** PEI-035, PEI-083, QCI-035, QCI-083, QCI-035B, QCI-083B
- **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

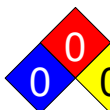
Toxic to Reproduction 1B H360 May damage fertility or the unborn child.

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



GHS08

- **Signal word** Danger
- **Hazard-determining components of labeling:**
 Disodium tetraborate, decahydrate
- **Hazard statements**
 May damage fertility or the unborn child.
- **Precautionary statements**
 Obtain special instructions before use.
 Do not handle until all safety precautions have been read and understood.
 Wear protective gloves/protective clothing/eye protection/face protection.
 IF exposed or concerned: Get medical advice/attention.
 Store locked up.
 Dispose of contents/container in accordance with local/regional/national/international regulations.
- **Classification system:**
- **NFPA ratings (scale 0 - 4)**



Health = 0

Fire = 0

Reactivity = 0

- **HMIS-ratings (scale 0 - 4)**



HEALTH 0 Health = 0

FIRE 0 Fire = 0

REACTIVITY 0 Reactivity = 0

Safety Data Sheet

acc. to OSHA HCS

Printing date 11/21/2023

Reviewed on 11/21/2023

Trade name: PEI-035, PEI-083, QCI-035, QCI-083, QCI-035B, QCI-083B

(Contd. of page 1)

- **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:		
1303-96-4	Disodium tetraborate, decahydrate	≥0.1–≤0.5%
· Non-hazardous components		
7732-18-5	water, distilled, conductivity or of similar purity	90–97%
877-24-7	potassium hydrogen phthalate	0–1.5%
7778-77-0	potassium dihydrogenorthophosphate	0–0.7%
1310-73-2	sodium hydroxide	0–0.2%
7647-01-0	hydrochloric acid	0–0.1%

4 First-aid measures

- **Description of first aid measures**
 - **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:** 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:** 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:** Dilute with plenty of 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 item 13.
- **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.

(Contd. on page 3)

Safety Data Sheet

acc. to OSHA HCS

Printing date 11/21/2023

Reviewed on 11/21/2023

Trade name: PEI-035, PEI-083, QCI-035, QCI-083, QCI-035B, QCI-083B

(Contd. of page 2)

· Protective Action Criteria for Chemicals

· PAC-1:		
877-24-7	potassium hydrogen phthalate	9.6 mg/m ³
7778-77-0	potassium dihydrogenorthophosphate	9.6 mg/m ³
1303-96-4	Disodium tetraborate, decahydrate	6 mg/m ³
1310-73-2	sodium hydroxide	0.5 mg/m ³
7647-01-0	hydrochloric acid	1.8 ppm
· PAC-2:		
877-24-7	potassium hydrogen phthalate	110 mg/m ³
7778-77-0	potassium dihydrogenorthophosphate	110 mg/m ³
1303-96-4	Disodium tetraborate, decahydrate	190 mg/m ³
1310-73-2	sodium hydroxide	5 mg/m ³
7647-01-0	hydrochloric acid	22 ppm
· PAC-3:		
877-24-7	potassium hydrogen phthalate	630 mg/m ³
7778-77-0	potassium dihydrogenorthophosphate	630 mg/m ³
1303-96-4	Disodium tetraborate, decahydrate	1,100 mg/m ³
1310-73-2	sodium hydroxide	50 mg/m ³
7647-01-0	hydrochloric acid	100 ppm

7 Handling and storage

- **Handling:**
- **Precautions for safe handling** Open and handle receptacle with care.
- **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

- **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:	
1303-96-4 Disodium tetraborate, decahydrate	
REL	Long-term value: 5 mg/m ³
TLV	Short-term value: 6* mg/m ³
	Long-term value: 2* mg/m ³
	*as inhalable fraction, A4

- **Additional information:** The lists that were valid during the creation were used as basis.

(Contd. on page 4)

Safety Data Sheet

acc. to OSHA HCS

Printing date 11/21/2023

Reviewed on 11/21/2023

Trade name: PEI-035, PEI-083, QCI-035, QCI-083, QCI-035B, QCI-083B

(Contd. of page 3)

- **Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**
Keep away from foodstuffs, beverages and feed.
Wash hands before breaks and at the end of work.
Store protective clothing separately.
- **Breathing equipment:** *Not required.*
- **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:	<i>Fluid</i>
· Color:	<i>Colorless</i>
· Odor:	<i>Odorless</i>
· Odor threshold:	<i>Not determined.</i>
· pH-value:	<i>Not determined.</i>
· Change in condition	
· Melting point/Melting range:	<i>0 °C (32 °F)</i>
· Boiling point/Boiling range:	<i>100 °C (212 °F)</i>
· Flash point:	<i>Not applicable.</i>
· Flammability (solid, gaseous):	<i>Not applicable.</i>
· Decomposition temperature:	<i>Not determined.</i>
· Auto igniting:	<i>Product is not selfigniting.</i>
· Danger of explosion:	<i>Product does not present an explosion hazard.</i>
· Explosion limits:	
· Lower:	<i>Not determined.</i>
· Upper:	<i>Not determined.</i>
· Vapor pressure at 20 °C (68 °F):	<i>23 hPa (17.3 mm Hg)</i>

(Contd. on page 5)

Safety Data Sheet

acc. to OSHA HCS

Printing date 11/21/2023

Reviewed on 11/21/2023

Trade name: PEI-035, PEI-083, QCI-035, QCI-083, QCI-035B, QCI-083B

(Contd. of page 4)

· Density at 20 °C (68 °F):	1 g/cm ³ (8.345 lbs/gal)
· Relative density	Not determined.
· Vapor density	Not determined.
· Evaporation rate	Not determined.
· Solubility in / Miscibility with Water:	Fully miscible.
· Partition coefficient (n-octanol/water):	Not determined.
· Viscosity:	
Dynamic at 20 °C (68 °F):	0.952 mPas
Kinematic:	Not determined.
· Solvent content:	
Water:	90–97 %
VOC content:	0.00 %
	0.0 g/l / 0.00 lb/gal
Solids content:	0–0.2 %
· 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 shows the following dangers according to internally approved calculation methods for preparations:
- **Carcinogenic categories**

· IARC (International Agency for Research on Cancer)	
7647-01-0 hydrochloric acid	3
· NTP (National Toxicology Program)	
None of the ingredients is listed.	

(Contd. on page 6)

Safety Data Sheet

acc. to OSHA HCS

Printing date 11/21/2023

Reviewed on 11/21/2023

Trade name: PEI-035, PEI-083, QCI-035, QCI-083, QCI-035B, QCI-083B

(Contd. of page 5)

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

None of the ingredients is listed.

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:** Not hazardous for water.
- **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.
- **Recommended cleansing agent:** Water, if necessary with cleansing agents.

14 Transport information

· UN-Number	
· DOT, IMDG, IATA	not regulated
· UN proper shipping name	
· DOT, IMDG, IATA	not regulated
· Transport hazard class(es)	
· DOT, ADN, IMDG, IATA	
· Class	not regulated
· Packing group	
· DOT, IMDG, IATA	not regulated
· Environmental hazards:	Not applicable.
· Special precautions for user	Not applicable.
· Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	Not applicable.
· UN "Model Regulation":	not regulated

— US —
(Contd. on page 7)

Safety Data Sheet

acc. to OSHA HCS

Printing date 11/21/2023

Reviewed on 11/21/2023

Trade name: PEI-035, PEI-083, QCI-035, QCI-083, QCI-035B, QCI-083B

(Contd. of page 6)

15 Regulatory information

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

No further relevant information available.

· **Sara**

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

7647-01-0	hydrochloric acid
-----------	-------------------

· **Section 313 (Specific toxic chemical listings):**

7647-01-0	hydrochloric acid
-----------	-------------------

· **TSCA (Toxic Substances Control Act):**

All components have the value ACTIVE.

· **Hazardous Air Pollutants**

7647-01-0	hydrochloric acid
-----------	-------------------

· **Proposition 65**

· **Chemicals known to cause cancer:**

None of the ingredients is listed.

· **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)**

1303-96-4	Disodium tetraborate, decahydrate	I (oral)
-----------	-----------------------------------	----------

· **TLV (Threshold Limit Value)**

1303-96-4	Disodium tetraborate, decahydrate	A4
-----------	-----------------------------------	----

7647-01-0	hydrochloric acid	A4
-----------	-------------------	----

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**

None of the ingredients is listed.

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

· **Hazard pictograms**



GHS08

· **Signal word** Danger

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

Disodium tetraborate, decahydrate

· **Hazard statements**

May damage fertility or the unborn child.

· **Precautionary statements**

Obtain special instructions before use.

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

(Contd. on page 8)

— US —

Safety Data Sheet

acc. to OSHA HCS

Printing date 11/21/2023

Reviewed on 11/21/2023

Trade name: PEI-035, PEI-083, QCI-035, QCI-083, QCI-035B, QCI-083B

(Contd. of page 7)

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

IF exposed or concerned: Get medical advice/attention.

Store locked up.

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:** Environment protection department.*

*· **Contact:** - Department Technical Manager*

*· **Date of preparation / last revision** 11/21/2023*

*· **Abbreviations and acronyms:***

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

Toxic to Reproduction 1B: Reproductive toxicity – Category 1B
