



## Safety Data Sheet

Version number: 10.0  
SDS# K3803

2021-04-09

### SECTION 1: Identification

#### 1.1 Product identifier

Trade name

**K-3803 Ampoules, R-3810**

Other means of identification

Cyanide Vacu-vials® Ampoules and CHEMetrics® Re-fill

#### 1.2 Relevant identified uses of the substance or mixture and uses advised against

Component of water analysis test kits:

K-3803, K-3810

#### 1.3 Details of the supplier of the safety data sheet

CHEMetrics, Inc.  
4295 Catlett Road  
Midland VA 22728  
United States

Telephone: 1-540-788-9026  
Telefax: 1-540-788-4856  
e-mail: technical@chemetrics.com  
Website: www.chemetrics.com

#### 1.4 Emergency telephone number

Emergency information service

ChemTel Inc.: 1-800-255-3924, +01-813-248-0585

### SECTION 2: Hazard(s) identification

#### 2.1 Classification of the substance or mixture

Classification acc. to OSHA "Hazard Communication Standard" (29 CFR 1910.1200)

| Section | Hazard class                      | Category | Hazard class and category | Hazard statement |
|---------|-----------------------------------|----------|---------------------------|------------------|
| A.2     | skin corrosion/irritation         | 2        | Skin Irrit. 2             | H315             |
| A.3     | serious eye damage/eye irritation | 2        | Eye Irrit. 2              | H319             |

For full text of abbreviations: see SECTION 16.

#### 2.2 Label elements

Labelling acc. to OSHA "Hazard Communication Standard" (29 CFR 1910.1200)

- Signal word                warning
- Pictograms

GHS07

**- Hazard statements**

- H315 Causes skin irritation.  
 H319 Causes serious eye irritation.

**- Precautionary statements**

- P280 Wear protective gloves.  
 P302+P352 If on skin: Wash with plenty of water.  
 P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
 P321 Specific treatment (see on this label).  
 P332+P313 If skin irritation occurs: Get medical advice/attention.  
 P337+P313 If eye irritation persists: Get medical advice/attention.  
 P362 Take off contaminated clothing and wash it before reuse.

## SECTION 3: Composition/information on ingredients

### 3.1 Substances

Not relevant (mixture)

### 3.2 Mixtures

Description of the mixture

| Name of substance              | Identifier          | Wt% | Classification acc. to GHS                | Pictograms |
|--------------------------------|---------------------|-----|---|------------|
| water                          | CAS No<br>7732-18-5 | 95  |   |            |
| Isonicotinic acid              | CAS No<br>55-22-1   | 2   |   |            |
| sodium hydroxide               | CAS No<br>1310-73-2 | 1   | Skin Corr. 1A / H314<br>Eye Dam. 1 / H318 |            |
| Potassium phosphate mono-basic | CAS No<br>7778-77-0 | 1   | Acute Tox. 3 / H331                       |            |
| Barbituric acid                | CAS No<br>67-52-7   | 1   |   |            |

For full text of abbreviations: see SECTION 16.

## SECTION 4: First-aid measures

### 4.1 Description of first-aid measures

#### General notes

Do not leave affected person unattended. Remove victim out of the danger area. Keep affected person warm, still and covered. Take off immediately all contaminated clothing. In all cases of doubt, or when symptoms persist, seek medical advice. In case of unconsciousness place person in the recovery position. Never give anything by mouth.

#### Following inhalation

If breathing is irregular or stopped, immediately seek medical assistance and start first aid actions. In case of respiratory tract irritation, consult a physician. Provide fresh air.

#### Following skin contact

Wash with plenty of soap and water.

#### Following eye contact

Remove contact lenses, if present and easy to do. Continue rinsing. Irrigate copiously with clean, fresh water for at least 10 minutes, holding the eyelids apart.

#### Following ingestion

Rinse mouth with water (only if the person is conscious). Do NOT induce vomiting.

### 4.2 Most important symptoms and effects, both acute and delayed

Symptoms and effects are not known to date.

## SECTION 5: Fire-fighting measures

### 5.1 Extinguishing media

#### Suitable extinguishing media

Water spray, Alcohol resistant foam, BC-powder, Carbon dioxide (CO<sub>2</sub>)

#### Unsuitable extinguishing media

Water jet

### 5.2 Special hazards arising from the substance or mixture

#### Hazardous combustion products

Carbon monoxide (CO), Carbon dioxide (CO<sub>2</sub>)

### 5.3 Advice for firefighters

In case of fire and/or explosion do not breathe fumes. Coordinate firefighting measures to the fire surroundings. Do not allow firefighting water to enter drains or water courses. Collect contaminated firefighting water separately. Fight fire with normal precautions from a reasonable distance.

## SECTION 6: Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures

#### For non-emergency personnel

Remove persons to safety.

#### For emergency responders

Wear breathing apparatus if exposed to vapors/dust/aerosols/gases.

### 6.2 Environmental precautions

Keep away from drains, surface and ground water. Retain contaminated washing water and dispose of it.

### 6.3 Methods and material for containment and cleaning up

#### Advice on how to contain a spill

Covering of drains

#### Advice on how to clean up a spill

Wipe up with absorbent material (e.g. cloth, fleece). Collect spillage: sawdust, kieselgur (diatomite), sand, universal binder

Appropriate containment techniques

Use of adsorbent materials.

Other information relating to spills and releases

Place in appropriate containers for disposal. Ventilate affected area.

#### 6.4 Reference to other sections

Hazardous combustion products: see section 5. Personal protective equipment: see section 8. Incompatible materials: see section 10. Disposal considerations: see section 13.

### SECTION 7: Handling and storage

#### 7.1 Precautions for safe handling

Recommendations

**Wear impact- and splash-resistant eyewear. Break the ampoule tip only when it is completely immersed in sample. Breaking the tip in air may cause the glass ampoule to shatter.**

- Measures to prevent fire as well as aerosol and dust generation

Use local and general ventilation. Use only in well-ventilated areas.

Advice on general occupational hygiene

Wash hands after use. Do not eat, drink and smoke in work areas. Remove contaminated clothing and protective equipment before entering eating areas. Never keep food or drink in the vicinity of chemicals. Never place chemicals in containers that are normally used for food or drink. Keep away from food, drink and animal feedingstuffs.

#### 7.2 Conditions for safe storage, including any incompatibilities

- Packaging compatibilities

Only packagings which are approved (e.g. acc. to the Dangerous Goods Regulations) may be used.

#### 7.3 Other information

**For optimum analytical performance, store in the dark and at room temperature.**

### SECTION 8: Exposure controls/personal protection

#### 8.1 Control parameters

| Occupational exposure limit values (Workplace Exposure Limits) |                                 |           |            |           |                          |            |                           |                 |                                |          |                  |
|--|---------------------------------|-----------|------------|-----------|--------------------------|------------|---------------------------|-----------------|--------------------------------|----------|------------------|
| Country  | Name of agent                   | CAS No    | Identifier | TWA [ppm] | TWA [mg/m <sup>3</sup> ] | STEL [ppm] | STEL [mg/m <sup>3</sup> ] | Ceiling-C [ppm] | Ceiling-C [mg/m <sup>3</sup> ] | Notation | Source           |
| US   | sodium hydroxide                | 1310-73-2 | REL        |           |                          |            |                           |                 | 2                              |          | NIOSH REL        |
| US   | sodium hydroxide                | 1310-73-2 | TLV®       |           |                          |            |                           |                 | 2                              |          | ACGIH® 2019      |
| US   | sodium hydroxide                | 1310-73-2 | PEL        |           | 2                        |            |                           |                 |                                |          | 29 CFR 1910.1000 |
| US   | sodium hydroxide (caustic soda) | 1310-73-2 | PEL (CA)   |           |                          |            |                           |                 | 2                              |          | Cal/ OSHA PEL    |

|           |  |
|-----------|--|
| Notation  |  |
| Ceiling-C | ceiling value is a limit value above which exposure should not occur   |
| STEL      | short-term exposure limit: a limit value above which exposure should not occur and which is related to a 15-minute period (unless otherwise specified)                   |
| TWA       | time-weighted average (long-term exposure limit): measured or calculated in relation to a reference period of 8 hours time-weighted average (unless otherwise specified) |

| Relevant DNELs of components of the mixture |           |          |                         |                                    |                   |                            |
|---|-----------|----------|-------------------------|------------------------------------|-------------------|----------------------------|
| Name of substance                           | CAS No    | Endpoint | Threshold level         | Protection goal, route of exposure | Used in           | Exposure time              |
| sodium hydroxide                            | 1310-73-2 | DNEL     | 1 mg/m <sup>3</sup>     | human, inhalatory                  | worker (industry) | chronic - local effects    |
| Potassium phosphate monobasic               | 7778-77-0 | DNEL     | 14.82 mg/m <sup>3</sup> | human, inhalatory                  | worker (industry) | chronic - systemic effects |

## 8.2 Exposure controls

### Appropriate engineering controls

General ventilation.

### Individual protection measures (personal protective equipment)

#### Eye/face protection

Wear eye/face protection.

#### Skin protection

##### - Hand protection

Wear suitable gloves. Chemical protection gloves are suitable, which are tested according to EN 374. Check leak-tightness/impermeability prior to use. In the case of wanting to use the gloves again, clean them before taking off and air them well. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

##### - Other protection measures

Take recovery periods for skin regeneration. Preventive skin protection (barrier creams/ointments) is recommended. Wash hands thoroughly after handling.

#### Respiratory protection

In case of inadequate ventilation wear respiratory protection.

#### Environmental exposure controls

Use appropriate container to avoid environmental contamination. Keep away from drains, surface and ground water.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

**Product description** Vacu-vials Ampoules: Sealed glass ampoules, 13 mm OD, for instrumental colorimetric water analysis. Each Vacu-vial™ ampoule contains approximately 2 mL of liquid reagent sealed under vacuum. Test kits contain 30 ampoules.

CHEMets Refills: Sealed glass ampoules, 7 mm OD, for visual colorimetric water analysis. Each CHEMet™ ampoule contains approximately 0.2 - 0.5 mL of liquid reagent sealed under vacuum. Refills contain 30 ampoules, test kits contain 1 refill.

**Appearance**

|                |  |
|----------------|--|
| Physical state | liquid                                   |
| Color          | colorless to pale yellow - may be cloudy |
| Odor           | odorless                                 |

**Other safety parameters**

|   |                                   |
|---|-----------------------------------|
| pH (value)                              | 10                                |
| Melting point/freezing point            | 2 °C                              |
| Initial boiling point and boiling range | 103 °C at 101,325 Pa              |
| Flash point                             | not determined                    |
| Evaporation rate                        | Not determined                    |
| Flammability (solid, gas)               | not relevant, (fluid)             |
| Vapor pressure                          | 0 Pa at 25 °C                     |
| Density                                 | not determined                    |
| Vapor density                           | this information is not available |
| Relative density                        | 1 (water = 1)                     |

**Solubility(ies)**

|                    |                            |
|--------------------|----------------------------|
| - Water solubility | miscible in any proportion |
|--------------------|----------------------------|

**Partition coefficient**

|                             |                                   |
|-----------------------------|-----------------------------------|
| - n-octanol/water (log KOW) | this information is not available |
|-----------------------------|-----------------------------------|

**Auto-ignition temperature**

|                      |                |
|----------------------|----------------|
| Viscosity            | not determined |
| Explosive properties | none           |
| Oxidizing properties | none           |

## SECTION 10: Stability and reactivity

### 10.1 Reactivity

Concerning incompatibility: see below "Conditions to avoid" and "Incompatible materials".

### 10.2 Chemical stability

See below "Conditions to avoid".

### 10.3 Possibility of hazardous reactions

No known hazardous reactions.

### 10.4 Conditions to avoid

There are no specific conditions known which have to be avoided.

### 10.5 Incompatible materials

Oxidizers

### 10.6 Hazardous decomposition products

Reasonably anticipated hazardous decomposition products produced as a result of use, storage, spill and heating are not known. Hazardous combustion products: see section 5.

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

Test data are not available for the complete mixture.

#### Classification procedure

The method for classification of the mixture is based on ingredients of the mixture (additivity formula).

#### Classification acc. to OSHA "Hazard Communication Standard" (29 CFR 1910.1200)

#### Acute toxicity

Shall not be classified as acutely toxic.

#### Acute toxicity estimate (ATE) of components of the mixture

| Name of substance             | CAS No    | Exposure route        | ATE          |
|-------------------------------|-----------|-----------------------|--------------|
| Potassium phosphate monobasic | 7778-77-0 | inhalation: dust/mist | 0.83 mg/l/4h |

#### Skin corrosion/irritation

Causes skin irritation.

#### Serious eye damage/eye irritation

Causes serious eye irritation.

#### Respiratory or skin sensitization

Shall not be classified as a respiratory or skin sensitizer.

#### Germ cell mutagenicity

Shall not be classified as germ cell mutagenic.

**Carcinogenicity**

Shall not be classified as carcinogenic.

**Reproductive toxicity**

Shall not be classified as a reproductive toxicant.

**Specific target organ toxicity - single exposure**

Shall not be classified as a specific target organ toxicant (single exposure).

**Specific target organ toxicity - repeated exposure**

Shall not be classified as a specific target organ toxicant (repeated exposure).

**Aspiration hazard**

Shall not be classified as presenting an aspiration hazard.

**SECTION 12: Ecological information****12.1 Toxicity**

Shall not be classified as hazardous to the aquatic environment.

**12.2 Persistence and degradability**

Data are not available.

**12.3 Bioaccumulative potential**

Data are not available.

**12.4 Mobility in soil**

Data are not available.

**12.5 Results of PBT and vPvB assessment**

Data are not available.

**12.6 Endocrine disrupting properties**

Information on this property is not available.

**12.7 Other adverse effects**

Data are not available.

**SECTION 13: Disposal considerations****13.1 Waste treatment methods**

please consider the relevant national or regional provisions



## SECTION 14: Transport information

### 14.1 UN number

|           |         |
|-----------|---------|
| DOT       | UN 1760 |
| IMDG-Code | UN 1760 |
| ICAO-TI   | UN 1760 |

### 14.2 UN proper shipping name

|  |  |
|--|--|
|  | UN1760, Corrosive liquid, n.o.s., (sodium hydroxide, Potassium phosphate monobasic, solution), 8, II |
| DOT                                    | Corrosive liquid, n.o.s.   |
| IMDG-Code                              | CORROSIVE LIQUID, N.O.S.   |
| ICAO-TI                                | Corrosive liquid, n.o.s.   |
| Technical name (hazardous ingredients) | sodium hydroxide, Potassium phosphate monobasic  |

### 14.3 Transport hazard class(es)

|           |   |
|-----------|---|
| DOT       | 8 |
| IMDG-Code | 8 |
| ICAO-TI   | 8 |

### 14.4 Packing group

|           |    |
|-----------|----|
| DOT       | II |
| IMDG-Code | II |
| ICAO-TI   | II |

### 14.5 Environmental hazards

non-environmentally hazardous acc. to the dangerous goods regulations

### 14.6 Other relevant information

Shipping container markings and labels, received from CHEMetrics, may vary from the above information. Products that are regulated for transport will be packaged by CHEMetrics as Dangerous Goods in Excepted Quantities according to IATA, US DOT, and IMDG regulations. CHEMetrics may also elect to ship certain products as UN 3316 Chemical Kit, Hazard Class 9, Packing Group II or III. In case of reshipment, it is the responsibility of the shipper to determine appropriate labels and markings in accordance with applicable transportation regulations.

### 14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code

The cargo is not intended to be carried in bulk.

### Information for each of the UN Model Regulations

**Transport of dangerous goods by road or rail (49 CFR US DOT) - Additional information**

Reportable quantity (RQ) 100,000 lbs (45,400 kg) (sodium hydroxide)

Danger label(s) 8



Special provisions (SP) B2, IB2, T11, TP2, TP27

ERG No 154

**International Maritime Dangerous Goods Code (IMDG) - Additional information**

Marine pollutant -

Danger label(s) 8



Special provisions (SP) 274

Excepted quantities (EQ) E2

Limited quantities (LQ) 1 L

EmS F-A, S-B

**International Civil Aviation Organization (ICAO-IATA/DGR) - Additional information**

Danger label(s) 8



Special provisions (SP) A3

Excepted quantities (EQ) E2

Limited quantities (LQ) 0,5 L

**SECTION 15: Regulatory information****15.1 Safety, health and environmental regulations specific for the product in question****National regulations (United States)****Toxic Substance Control Act (TSCA)** all ingredients are listed**Superfund Amendment and Reauthorization Act (SARA TITLE III )**

- The List of Extremely Hazardous Substances and Their Threshold Planning Quantities (EPCRA Section 302, 304)

none of the ingredients are listed

- Specific Toxic Chemical Listings (EPCRA Section 313)

none of the ingredients are listed

**Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)**

- List of Hazardous Substances and Reportable Quantities (CERCLA section 102a) (40 CFR 302.4)

| Name of substance | CAS No    | Remarks | Statutory code | Final RQ pounds (Kg) |
|-------------------|-----------|---------|----------------|----------------------|
| sodium hydroxide  | 1310-73-2 |         | 1              | 1000 (454)           |

Legend

1 "1" indicates that the statutory source is section 311(b)(2) of the Clean Water Act

**Clean Air Act**

none of the ingredients are listed

**Right to Know Hazardous Substance List**

- Hazardous Substance List (NJ-RTK)

| Name of substance | CAS No    | Remarks | Classifications |
|-------------------|-----------|---------|-----------------|
| sodium hydroxide  | 1310-73-2 |         | CO<br>R1        |

Legend

CO Corrosive

R1 Reactive - First Degree

**California Environmental Protection Agency (Cal/EPA): Proposition 65 - Safe Drinking Water and Toxic Enforcement Act of 1987**

none of the ingredients are listed

**Industry or sector specific available guidance(s)****NPCA-HMIS® III**

Hazardous Materials Identification System. American Coatings Association.

| Category            | Rating | Description  |
|---------------------|--------|--|
| Chronic             | /      | none   |
| Health              | 2      | temporary or minor injury may occur  |
| Flammability        | 1      | material that must be preheated before ignition can occur  |
| Physical hazard     | 0      | material that is normally stable, even under fire conditions, and will not react with water, polymerize, decompose, condense, or self-react. Non-explosive |
| Personal protection | -      |  |

**NFPA® 704**

National Fire Protection Association: Standard System for the Identification of the Hazards of Materials for Emergency Response (United States).

| Category       | Degree of hazard | Description  |
|----------------|------------------|--|
| Flammability   | 1                | material that must be preheated before ignition can occur  |
| Health         | 2                | material that, under emergency conditions, can cause temporary incapacitation or residual injury |
| Instability    | 0                | material that is normally stable, even under fire conditions                                     |
| Special hazard |                  |  |

### National inventories

| Country | Inventory  | Status                         |
|---------|------------|--------------------------------|
| AU      | AICS       | all ingredients are listed     |
| CA      | DSL        | all ingredients are listed     |
| CN      | IECSC      | not all ingredients are listed |
| EU      | ECSI       | all ingredients are listed     |
| EU      | REACH Reg. | all ingredients are listed     |
| JP      | CSCL-ENCS  | all ingredients are listed     |
| KR      | KECI       | not all ingredients are listed |
| MX      | INSQ       | not all ingredients are listed |
| NZ      | NZIoC      | all ingredients are listed     |
| PH      | PICCS      | all ingredients are listed     |
| TR      | CICR       | not all ingredients are listed |
| TW      | TCSI       | all ingredients are listed     |
| US      | TSCA       | all ingredients are listed     |

#### Legend

|            |   |
|------------|---|
| AICS       | Australian Inventory of Chemical Substances                             |
| CICR       | Chemical Inventory and Control Regulation                               |
| CSCL-ENCS  | List of Existing and New Chemical Substances (CSCL-ENCS)                |
| DSL        | Domestic Substances List (DSL)  |
| ECSI       | EC Substance Inventory (EINECS, ELINCS, NLP)                            |
| IECSC      | Inventory of Existing Chemical Substances Produced or Imported in China |
| INSQ       | National Inventory of Chemical Substances                               |
| KECI       | Korea Existing Chemicals Inventory                                      |
| NZIoC      | New Zealand Inventory of Chemicals                                      |
| PICCS      | Philippine Inventory of Chemicals and Chemical Substances (PICCS)       |
| REACH Reg. | REACH registered substances   |
| TCSI       | Taiwan Chemical Substance Inventory                                     |
| TSCA       | Toxic Substance Control Act   |

## 15.2 Chemical Safety Assessment

Chemical safety assessments for substances in this mixture were not carried out.

**SECTION 16: Other information, including date of preparation or last revision****Key literature references and sources for data**

OSHA Hazard Communication Standard (HCS), 29 CFR 1910.1200.

Transport of dangerous goods by road or rail (49 CFR US DOT). International Maritime Dangerous Goods Code (IMDG). Dangerous Goods Regulations (DGR) for the air transport (IATA).

**Classification procedure**

Physical and chemical properties: The classification is based on tested mixture.

Health hazards, Environmental hazards: The method for classification of the mixture is based on ingredients of the mixture (additivity formula).

**List of relevant phrases (code and full text as stated in chapter 2 and 3)**

| Code | Text                                     |
|------|--|
| H314 | Causes severe skin burns and eye damage. |
| H315 | Causes skin irritation.                  |
| H318 | Causes serious eye damage.               |
| H319 | Causes serious eye irritation.           |
| H331 | Toxic if inhaled.                        |

**Disclaimer**

This information is based upon the present state of our knowledge. This SDS has been compiled and is solely intended for this product.