



04/05/2010

**Kit Components**

| Product code    | Description                                |
|-----------------|--|
| <b>532-5057</b> | <b>PKU Accessory Pack<br/>Obsolete Kit</b> |

Components:

|          |   |
|----------|---|
| FPK-U810 | 3%(w/v) Trichloroacetic Acid Obsolete Product |
|----------|---|

**Material Safety Data Sheet**

Printing date 04/05/2010

Reviewed on 10/21/2009

**1 Identification of substance:**

- **Product details:**
- **Trade name:** 3%(w/v) Trichloroacetic Acid
- **Catalog or product number:** FPK-U810
- **Application of the substance / the preparation** In-vitro laboratory reagent or component
- **Manufacturer/Supplier:**  
Bio-Rad Laboratories, Diagnostic Group  
4000 Alfred Nobel Drive  
Hercules, California 94547 1(510)724-7000
- **Information department:** Technical services, customer support.
- **Emergency information:**  
1(800) 424-9300 Use only in the event of a CHEMICAL EMERGENCY involving a SPILL, LEAK, FIRE, EXPLOSION, or ACCIDENT.

**2 Composition/Information on components:**

- **Chemical characterization:**
- **CAS No. Description:**  
7732-18-5 water
- **Identification number(s):**
- **EINECS Number:** 231-791-2
- **Additional information:** For the wording of the listed risk phrases refer to section 15.
- **Chemical characterization**

· **Listing of dangerous and non-hazardous components:**

|         |                      |                  |        |
|---------|----------------------|------------------|--------|
| 76-03-9 | trichloroacetic acid | C, N; R 35-50/53 | 2.5-5% |
|---------|----------------------|------------------|--------|

**3 Hazards identification**

- **Emergency overview:**  
Corrosive.  
May cause irreversible eye damage.  
C Corrosive
- **Information pertaining to particular dangers for man and environment**  
R 34 Causes burns.
- **Classification system**  
The classification was made according to OSHA 29CFR 1910.1200 and 1910.1030, and is expanded upon from company and/or literature information.
- **NFPA ratings (scale 0-4)**  
Health = 3  
Fire = 0  
Reactivity = 0

**4 First aid measures**

- **General information** Immediately remove any clothing soiled by the product.
- **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. Then consult a doctor.

(Contd. on page 2)

## Material Safety Data Sheet

Printing date 04/05/2010

Reviewed on 10/21/2009

Trade name: 3%(w/v) Trichloroacetic Acid

(Contd. of page 1)

- **After swallowing** Drink copious amounts of water and provide fresh air. Immediately call a doctor.

## 5 Fire fighting measures

- **Suitable extinguishing agents**  
CO<sub>2</sub>, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **Protective equipment:** No special measures required.

## 6 Accidental release measures

- **Person-related safety precautions:** Wear protective equipment (See section 8). Keep unprotected persons away.
- **Measures for environmental protection:**  
Dilute with plenty of water.  
Do not allow to enter sewers/ surface or ground water.
- **Measures for cleaning/collecting:**  
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).  
Use neutralizing agent.  
Dispose contaminated material as waste according to item 13.  
Ensure adequate ventilation.

## 7 Handling and storage

- **Handling**
- **Information for safe handling:**  
No special measures required.  
No special precautions are necessary if used correctly.
- **Information about protection against explosions and fires:** No special measures required.
- **Storage**
- **Requirements to be met by storerooms and receptacles:** According to product specification
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Keep receptacle tightly sealed.

## 8 Exposure controls and personal protection

- **Additional information about design of technical systems:** No further data; see item 7.

- **Components with limit values that require monitoring at the workplace:**

### 76-03-9 trichloroacetic acid

|                     |                               |
|---------------------|-------------------------------|
| REL (United States) | 7 mg/m <sup>3</sup> , 1 ppm   |
| TLV (United States) | 6.7 mg/m <sup>3</sup> , 1 ppm |

- **Additional information:** The lists that were valid during the creation were used as basis.
- **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.  
Avoid contact with the eyes and skin.
- **Breathing equipment:** Not required.

(Contd. on page 3)

**Material Safety Data Sheet**

Printing date 04/05/2010

Reviewed on 10/21/2009

**Trade name: 3%(w/v) Trichloroacetic Acid**

(Contd. of page 2)

- **Protection of hands:** Protective gloves.
- **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.  
Synthetic gloves
- **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:**  
Safety glasses  
Tightly sealed goggles.

**9 Physical and chemical properties:**

· **General Information**

|               |           |
|---------------|-----------|
| <b>Form:</b>  | Liquid    |
| <b>Color:</b> | Colorless |
| <b>Odor:</b>  | Odorless  |

· **Change in condition**

**Melting point/Melting range:** 0°C  
**Boiling point/Boiling range:** 100°C

· **Flash point:** Not applicable

· **Danger of explosion:** Product does not present an explosion hazard.

· **Vapor pressure at 20°C:** 23 hPa

· **Density at 20°C:** 1 g/cm<sup>3</sup>

· **Solubility in / Miscibility with**

**Water:** Fully miscible

· **pH-value at 20°C:** 1

· **Organic solvents:** 0.0 %

· **Water:** 97.0 %

· **Solids content:** 3.0 %

**10 Stability and reactivity**

- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Materials to be avoided:**
- **Dangerous reactions** No dangerous reactions known
- **Dangerous products of decomposition:** No dangerous decomposition products known

**11 Toxicological information**

- **Acute toxicity:**
- **Primary irritant effect:**
- **on the skin:** Caustic effect on skin and mucous membranes.
- **on the eye:** Strong caustic effect.

(Contd. on page 4)

**Material Safety Data Sheet**

Printing date 04/05/2010

Reviewed on 10/21/2009

**Trade name: 3%(w/v) Trichloroacetic Acid**

(Contd. of page 3)

- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**  
Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.
- **Target organs:** Skin.

**12 Ecological information:**

- **Additional ecological information:**
- **General notes:**  
Water hazard class 1 (German Regulation) (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.  
Must not reach bodies of water or drainage ditch undiluted or unneutralized.  
Rinse off of bigger amounts into drains or the aquatic environment may lead to decreased pH-values. A low pH-value harms aquatic organisms. In the dilution of the use-level the pH-value is considerably increased, so that after the use of the product the aqueous waste, emptied into drains, is only low water-dangerous.

**13 Disposal considerations**

- **Product:**
- **Recommendation**  
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.  
Hand over to hazardous waste disposers.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleansing agent:** Water, if necessary with cleansing agents.

**14 Transport information**

- **DOT regulations:**
- **Hazard class:** 8
- **Identification number:** UN2564
- **Packing group:** III
- **Proper shipping name (technical name):** TRICHLOROACETIC ACID SOLUTION
- **Label:** 8
- **Land transport ADR/RID (cross-border)**
- **ADR/RID class:** 8 Corrosive substances
- **Danger code (Kemler):** 80
- **UN-Number:** 2564
- **Packing group:** III
- **Label:** 8
- **Special marking:** Symbol (fish and tree)
- **Description of goods:** 2564 TRICHLOROACETIC ACID SOLUTION
- **Maritime transport IMDG:**
- **IMDG Class:** 8
- **UN Number:** 2564
- **Label:** 8

(Contd. on page 5)

**Material Safety Data Sheet**

Printing date 04/05/2010

Reviewed on 10/21/2009

**Trade name: 3%(w/v) Trichloroacetic Acid**

(Contd. of page 4)

· **Packing group:** III  
 · **EMS Number:** F-A,S-B  
 · **Marine pollutant:** No  
 · **Proper shipping name:** TRICHLOROACETIC ACID SOLUTION

· **Air transport ICAO-TI and IATA-DGR:**  
 · **ICAO/IATA Class:** 8  
 · **UN/ID Number:** 2564  
 · **Label:** 8  
 · **Packing group:** III  
 · **Proper shipping name:** TRICHLOROACETIC ACID SOLUTION

**15 Regulations**

· **SARA (Superfund Amendants and Reauthorization Act of 1986 - USA)**

· **Section 302/304 (40CFR355.30 / 40CFR355.40):**

Substance not listed.

· **Section 313 (40CFR372.65):**

Substance is not listed.

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

Substance is listed.

· **Carcinogenic categories**

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

76-03-9 trichloroacetic acid

3

· **NTP (National Toxicology Program)**

Substance is not listed.

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

Substance is not listed.

· **Markings according to EU guidelines:**

The product has been classified and marked in accordance with EU Directives / Ordinance on Hazardous Materials

· **Code letter and hazard designation of product:**

C Corrosive

· **Risk phrases:**

34 Causes burns.

· **Safety phrases:**

20 When using do not eat or drink.

25 Avoid contact with eyes.

26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

36/37/39 Wear suitable protective clothing, gloves and eye/face protection.

45 In case of accident or if you feel unwell, seek medical advice immediately.

(Contd. on page 6)

**Material Safety Data Sheet**

Printing date 04/05/2010

Reviewed on 10/21/2009

**Trade name: 3%(w/v) Trichloroacetic Acid**

(Contd. of page 5)

- **National regulations**
- **Water hazard class:** Water hazard class 1 (Self-assessment): slightly hazardous for water.

**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 MSDS:** Environmental Health and Safety.
- **Contact:**  
Life Science Group, Environmental Health and Safety, 2000 Alfred Nobel Drive, Hercules, California, 94547: 1(510) 741-1000
- **Diagnostic Group, Environmental Health and Safety, 4000 Alfred Nobel Drive, Hercules, California, 94547: 1(510) 724-7000**
- **\* Data compared to the previous version altered.**

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