

# Safety Data Sheet



Revision Date: 7/31/2014

pNPP ELISA Substrate

SDS #: SDS-10242-01

## 1. PRODUCT AND COMPANY IDENTIFICATION

### Product Description:

pNPP ELISA Substrate

### Product Code

50-80-00

### Kit Components:

Phosphatase Substrate p-Nitrophenyl	50-80-01
Phosphate Hexahydrate Disodium Salt Tablets (pNPP)	
DEA Buffer Solution	50-80-02

**Recommended Use** Kit (See Attached Safety Data Sheets For Components Listed Above)

**Contact Manufacturer** KPL, Inc.  
910 Clopper Road  
Gaithersburg, Maryland 20878  
USA

**Phone #:** 1-301-948-7755  
**Fax #:** 1-301-948-0169  
**Web:** [www.kpl.com](http://www.kpl.com)  
**Email:** [kplmsds@seracare.com](mailto:kplmsds@seracare.com)

### Emergency Telephone Numbers:

AUSTRALIA – POISONS INFORMATION CENTER	Telephone: 13 11 26	Hours: 24 hours
CANADIAN TRANSPORT EMERGENCY CENTER	Telephone: (1 ) 613 996 6666	Hours: 24 hours/day, 7 days/week
UK – THE NATIONAL FOCUS	Telephone: (44) 029 2041 6388	Hours: 09:00-17:00 GMT
USA- NATIONAL RESPONSE CENTER	Telephone: (1 ) 800 424 8802	Hours: 24 hours/day, 7 days/week

### CHEMTREC:

CHEMTREC Customer Number:- CCN12505\*  
For Chemical Emergency Spill, Leak, Fire, Exposure, or Accident  
Call CHEMTREC Day or Night  
Within USA and Canada: 1-800-424-9300 CCN12505 or  
+1 703-527-3887 (collect calls accepted)

# Safety Data Sheet



Revision Date: 6/30/2014

MSDS #: 10197

## Diethanolamine Buffer Solution

### 1. PRODUCT AND COMPANY IDENTIFICATION

**Product Description:**

**Product Code**

DEA Buffer Solution

50-80-04

DEA Buffer Solution

50-80-02

**Hazardous Reagent**

Diethanolamine Buffer Solution

**Hazardous Reagent Product code**

Catalog No. listed above

**Recommended Use** Reagent

**Contact Manufacturer** KPL, Inc.  
910 Clopper Road  
Gaithersburg, Maryland 20878  
USA

**Phone #:** 1-301-948-7755  
**Fax #:** 1-301-948-0169  
**Web:** www.kpl.com  
**Email:** kplmsds@seracare.com

**Emergency Telephone Numbers:**

AUSTRALIA – POISONS INFORMATION CENTER	Telephone: 13 11 26	Hours: 24 hours
CANADIAN TRANSPORT EMERGENCY CENTER	Telephone: (1 ) 613 996 6666	Hours: 24 hours/day, 7 days/week
UK – THE NATIONAL FOCUS	Telephone: (44) 029 2041 6388	Hours: 09:00-17:00 GMT
USA- NATIONAL RESPONSE CENTER	Telephone: (1 ) 800 424 8802	Hours: 24 hours/day, 7 days/week

**CHEMTREC:** CHEMTREC Customer Number:- CCN12505\*  
For Chemical Emergency Spill, Leak, Fire, Exposure, or Accident  
Call CHEMTREC Day or Night  
Within USA and Canada: 1-800-424-9300 CCN12505 or  
+1 703-527-3887 (collect calls accepted)

### 2. HAZARD IDENTIFICATION

**Hazard Type** Health Hazard: R22 : Harmful if swallowed. R38 : Irritating to skin. R41 : Risk of serious damage to eyes. R48/22 : Harmful: danger of serious damage to health by prolonged exposure if swallowed.  
R37 : Irritating to respiratory system.

**GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)**

**Classification** Acute Tox. 4 : H302  
STOT RE 2: H373  
Skin Irrit. 2: H315  
Eye Dam. 1: H318

**Hazard Statement** H302: Harmful if swallowed  
H373: May cause damage to Skin, Eye or Gastrointestinal tract through prolonged or repeated exposure .  
H315: Causes skin irritation  
H318: Causes serious eye damage

**Precautionary Statement** P264: Wash skin thoroughly after handling. | P270: Do not eat, drink or smoke when using this product. | P301 + P312: If Swallowed Call a POISON CENTER or doctor/physician if you feel unwell. | P330 Rinse mouth.

**Symbols of Danger** GHS08; GHS05; GHS07; Danger

**Data for 100% Hazardous Chemical**

**ROUTES OF EXPOSURE:** The substance can be absorbed into the body by inhalation of its vapour and by ingestion.

**INHALATION RISK:** A harmful contamination of the air will not or will only very slowly be reached on evaporation of this substance at 20°C.

**SHORT-TERM EXPOSURE:** The substance is corrosive to the eyes.

**LONG-TERM EXPOSURE:** Repeated or prolonged contact may cause skin sensitization. The substance may have effects on the liver and kidneys .

**The product is a Mixture. It May Cause the following symptoms.**

Redness. Pain. Severe deep burns.  
 Not Available  
 Not Available  
 Abdominal pain. Burning sensation.

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

<u>Component</u>	<u>CHEMICAL</u>	<u>% Weight</u>	<u>CAS #:</u>
Diethanolamine Buffer Solution	2,2'-iminodiethanol	52.5%	111-42-2

**Classification**

Acute Tox. 4 : H302  
 STOT RE 2: H373  
 Skin Irrit. 2: H315  
 Eye Dam. 1: H318

### 4. FIRST AID MEASURES

**Data for 100% Hazardous Chemical**

**Ingestion First Aid:** Rinse mouth. Give one or two glasses of water to drink. Refer for medical attention. Rest.

**Inhalation First Aid:** Fresh air, rest.

**Skin First Aid:** Remove contaminated clothes. Rinse skin with plenty of water or shower.

**Eye First Aid:** First rinse with plenty of water for several minutes (remove contact lenses if easily possible), then take to a doctor.

### 5. FIRE FIGHTING MEASURES

**Data For 100% Hazardous Chemical**

<b>Fire Acute Hazard:</b>	<b>Fire Prevention:</b>	<b>Fire Fighting:</b>
Combustible.	NO open flames.	Powder, water spray, foam, carbon dioxide.
<b>Explosion Acute Hazard:</b>		
Not Available	Not Available	Not Available

**CHEMICAL DANGERS:** The substance decomposes on burning producing toxic fumes . The solution in water is a medium strong base. Reacts violently with strong oxidants , strong acids . Attacks copper, zinc, aluminium, and their alloys.

**PHYSICAL DANGERS:** The vapour is heavier than air.

### 6. ACCIDENTAL RELEASE MEASURES

**Diethanolamine Buffer Solution**

<b>Personal Precautions</b>	Use personal protective equipment. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. For personal protection see section 8.
<b>Environmental Precautions</b>	Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.
<b>Method of Containment</b>	Keep in suitable, closed containers for disposal.
<b>Methods of Clean-up</b>	Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal.
<b>Other Information</b>	For disposal see section 13.

**Data for 100% Hazardous Chemical**

<b>SPILLAGE DISPOSAL</b>	Sweep spilled substance into sealable containers; if appropriate, moisten first to prevent dusting. Then remove to safe place. (Extra personal protection: A/P2 filter respirator for organic vapour and harmful dust.)
--------------------------	---

**7. HANDLING AND STORAGE**

<b>Handling:</b>	Wear appropriate PPE. See section 8
<b>Storage:</b>	Separated from strong oxidants and acids. Store at 2 - 8°C.

**Data for 100% Hazardous Chemical**

<b>STORAGE</b>	Separated from strong oxidants, and acids. Dry.
----------------	---

**8. EXPOSURE CONTROL****Data for 100% Hazardous Chemical**

• <b>INHALATION</b>	Local exhaust or breathing protection.
• <b>EYES</b>	Safety goggles, or eye protection in combination with breathing protection.
• <b>SKIN</b>	Protective gloves. Protective clothing.
• <b>INGESTION</b>	Do not eat, drink, or smoke during work.

<b>Engineering Controls</b>	Data for 100% 2,2'-iminodiethanol: 8.6 EPA Reportable Quantity: 100 pounds EPA Pollution Category: B RCRA Waste Number: Not listed EPA FWPCA List: Not listed
-----------------------------	--

**9. PHYSICAL AND CHEMICAL PROPERTIES**

<b>Appearance</b>	Clear, Colorless solution	
<b>Physical State</b>	Liquid	<b>pH:</b> 9.3 - 9.5

**Data for 100% Hazardous Chemical**

Boiling point: °C	Melting point: 28°C	Relative density (water = 1): 1.09 (liquid)	Solubility in water:	very good	Vapour pressure, Pa at 20°C: <1
Relative vapour density (air = 1): 3.65	Flash point: 134°C o.c.	Auto-ignition temperature: 662°C	Explosive limits, vol% in air: 1.7-9.8	Octanol/water partition coefficient as log Pow: -1.43	

**10. STABILITY AND REACTIVITY**

<b>Chemical Stability</b>	Stable under normal conditions. Stability During Transport: Stable
<b>Incompatibility Materials to Avoid</b>	Potentially Incompatible Absorbents

**Diethanolamine Buffer Solution**

Use caution: Liquids with this reactive group classification have been known to react with the absorbents listed below.

- Cellulose-Based Absorbents
- Mineral-Based & Clay-Based Absorbents

**Hazardous Decomposition Products**

Flammable gaseous hydrogen is generated by amines in combination with strong reducing agents, such as hydrides.

**Hazardous Polymerization**

Polymerization: Not pertinent Inhibitor of Polymerization: Not pertinent

**Data for 100% Hazardous Chemical**

<b>CHEMICAL DANGERS:</b>	The substance decomposes on burning producing toxic fumes . The solution in water is a medium strong base. Reacts violently with strong oxidants , strong acids . Attacks copper, zinc, aluminium, and their alloys.
<b>PHYSICAL DANGERS:</b>	The vapour is heavier than air.

## 11. TOXICOLOGY MEASURES

**Acute Toxicity**

The toxicological risks are minor due to the low concentration of hazardous ingredients. The following toxicological information is for the hazardous ingredient in pure form.

<b>LD50 Oral</b>	Data for 100% 2,2'-iminodiethanol: Species Rat:  Value: 680 mg/kg Reference: National Technical Information Service. Vol. OTS0516797,
<b>LD50 Dermal</b>	Data for 100% 2,2'-iminodiethanol: Species: Rabbit Value: 8380 mg/kg Reference: National Technical Information Service. Vol. OTS0516797
<b>LC50 Inhalation</b>	Not Available

**Chronic Toxicity****Carcinogenicity**

IARC: 2B - Group 2B: Possibly carcinogenic to humans (Diethanolamine)  
NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.  
OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

**Irritation**

Data for 100% 2,2'-iminodiethanol: Skin corrosion/irritation  
Skin - rabbit  
Result: Mild skin irritation - 24 h  
(Draize Test)  
Serious eye damage/eye irritation  
Eyes - rabbit  
Result: Severe eye irritation - 24 h

**Corrosivity**

Not Available.

**Sensitization**

Not Available

**Neurological Effects**

Not Available

**Mutagenic Effects**

Not Available

**Reproductive Effects**

Not Available

**Developmental Effects**

Not Available

**Target Organ Effects**

Eyes, Skin, Gastrointestinal tract

**Other adverse effects**

Data for 100% 2,2'-iminodiethanol: - Additional Information  
RTECS: KL2975000  
To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.  
Liver - Irregularities - Based on Human Evidence  
Liver - Irregularities - Based on Human Evidence

## 12. ECOLOGICAL MEASURES

<b>Ecotoxicity</b>	Data for 100% 2,2'-iminodiethanol: LC50 Fish (96 hours)  Minimum: 100 mg/l Maximum: 4710 mg/l Median: 1480 mg/l  Study number: 5  Reference for median:  Mayes, M.A., H.C. Alexander, and D.C. Dill 1983. A Study to Assess the Influence of Age on the Response of Fathead Minnows in Static Acute Toxicity Tests. Bull.Environ.Contam.Toxicol. 31(2):139-147
<b>Persistence/Degradability</b>	Data for 100% 2,2'-iminodiethanol: TESTED FOR BIODEGRADABILITY EMPLOYING BACTERIUM ISOLATED FROM CUTTING FLUID & A SEWAGE POPULATION. SHOWED THAT DIETHANOLAMINE WAS DEGRADABLE, BEING OXIDIZED TO MEANINGFUL EXTENT. [GANNON JE ET AL; MICROBIAL DEGRADATION OF DIETHANOLAMINE AND RELATED COMPOUNDS; MICROBIS 23(91) 7 (1978)] **PEER REVIEWED**
<b>Mobility in Environmental Media</b>	Data for 100% 2,2'-iminodiethanol: A soil adsorption coefficient (Koc) of 4 was estimated for diethanolamine based on a log Kow of -1.43(1,2,SRC). This Koc value and the complete solubility of DEA in water suggests that this compound would be extremely mobile in soil and would not adsorb appreciably to suspended solids and sediments in water(3,4,SRC). However, diethanolamine is a base (pKa 8.97 at 25 deg C(5)) and may exist in the protonated form under environmental conditions (pH 5-9). Protonation may result in greater adsorption and less mobility than its water solubility or log Kow indicate. Furthermore, diethanolamine has been shown to adsorb to humic acid which may be contained in soils and sediments(6). The adsorption of diethanolamine on humic acid changed very slightly from pH 4-8, (40-45% adsorption)(6). [(1) Hansch C, Leo AJ; Medchem Project Issue no. 26 Claremont, CA: Pomona College (1985) (2) Lyman WJ et al; Handbook of Chemical Property Estimation Methods NY: McGraw-Hill p. 4-9 (1982) (3) Dow Chemical; The Alkanolamines Handbook Midland, MI: Dow Chemical (1980) (4) Swann RL et al; Res Rev 85: 17-28 (1983) (5) Chremos G, Zimmerman HJKR; Texas J Sci 11; 467-70 (1959) (6) Sithole BB, Guy RD; Environ Int 11: 499-504 (1985)] **PEER REVIEWED**
<b>Bioaccumulation/ Accumulation</b>	Data for 100% 2,2'-iminodiethanol: A bioconcentration factor (BCF) of <1 was estimated for diethanolamine (DEA) based on a log Kow of - 1.43(1,2,SRC). This BCF value and complete solubility of DEA in water suggest that this compound does not bioconcentrate significantly in aquatic organisms(3,SRC). [(1) Hansch C, Leo AJ; Medchem Project Issue no. 26 Claremont, CA: Pomona College (1985) (2) Lyman WJ et al; Handbook of Chemical Property Estimation Methods NY: McGraw-Hill p. 5-5 (1982) (3) Dow Chemical; The Alkanolamines Handbook Midland, MI: Dow Chemical (1980)] **PEER REVIEWED**

## 13. DISPOSAL MEASURES

<b>Waste Disposal Method:</b>	Observe all Federal, State and Local laws concerning health and pollution. SMALL DRY SPILL: With clean shovel place material into clean, dry container and cover loosely; move containers from spill area.  SMALL SPILL: Take up with sand or other non-combustible absorbent material and place into containers for later disposal.  LARGE SPILL: Dike far ahead of liquid spill for later disposal. Cover powder spill with plastic sheet or tarp to minimize spreading. Prevent entry into waterways, sewers, basements or confined areas.
<b>Contaminated Packaging:</b>	Observe all Federal, State and Local laws concerning health and pollution. Do not touch or walk through spilled material. Stop leak if you can do it without risk.
<b>US EPA Waste Number:</b>	Data for 100% 2,2'-iminodiethanol: EPA Reportable Quantity: 100 pounds EPA Pollution Category: B RCRA Waste Number: Not listed EPA FWPCA List: Not listed

## 14. TRANSPORTATION MEASURES

**DOT:** Data for 100% 2,2'-iminodiethanol: DOT (US)  
 UN number: 3077 Class: 9 Packing group: III  
 Proper shipping name: Environmentally hazardous  
 substance, solid, n.o.s. (Diethanolamine)  
 Reportable Quantity (RQ): 100 lbs  
 Marine pollutant: No  
 Poison Inhalation Hazard: No

**IATA:** Not Available

**ADR (road)/ RID (rail):** Not Available

**IMDG (sea):** Not Available

**General Transport Regulations** Not Applicable

## 15. REGULATORY MEASURES

**This product is a mixture that may contain one or more hazardous chemicals. The hazardous ingredients listed are only those as required by 29 CFR 1910.1200 q 2.C1.**

### **SARA 313**

SARA 302 Components

SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). SARA 313

Components

The following components are subject to reporting levels established by SARA Title III, Section 313:

Diethanolamine CAS-No. 111-42-2 Revision Date 2011-07-01

### **Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (See 40 CFR 61)**

Listed: Diethanolamine CAS-No. 111-42-2

### **State Regulations**

#### **California Proposition 65:**

This product contains the following Proposition 65 chemicals: Diethanolamine

Type of Toxicity: Cancer

CAS NO. 111-42-2

Date Listed: June 22, 2012

### **State Right to Know Act**

**Chemical Name** 2,2'-iminodiethanol

**Massachusetts** Listed

**New Jersey** Listed

**Pennsylvania** Listed

**New York** Listed

**Rhode Island** Listed

### **International Inventories**

**Chemical Name** 2,2'-iminodiethanol

#### **TSCA**

**DSL** Listed

**NDSL** Not Listed

**EINECS** Listed

**CHINA** Listed

**KECL** Listed

**JAPAN:** Listed

**AICS** Listed

### **EU Regulations**

<b>Annex I Index#</b>	603-070-00-6
<b>Classification</b>	Acute Tox. 4 : H302 STOT RE 2: H373 Skin Irrit. 2: H315 Eye Dam. 1: H318
<b>Risk Phrases</b>	H302: Harmful if swallowed H373: May cause damage to Skin, Eye or Gastrointestinal tract through prolonged or repeated exposure . H315: Causes skin irritation H318: Causes serious eye damage
<b>Safety Phrases</b>	P264: Wash skin thoroughly after handling.   P270: Do not eat, drink or smoke when using this product.   P301 + P312: If Swallowed Call a POISON CENTER or doctor/physician if you feel unwell.   P330 Rinse mouth.
<b>Symbols and Indications of Danger</b>	GHS08; GHS05; GHS07; Danger
<b>Specific Concentration Limits</b>	Not Available
<b>Export and Import</b>	This substance is not listed in the Annex I of Regulation (EC) No 649/2012.
<b>European Priority List</b>	This substance is not listed in a priority list (as foreseen under Council Regulation (EEC) No 793/93 on the evaluation and control of the risks of existing substances.).

## 16. OTHER INFORMATION

The above information is believed to be correct, but does not purport to be all inclusive and shall be used only as a guide. KPL shall not be held liable for any damage resulting from handling or from contact with the above product. Users should make their own investigations to determine the suitability of the information for their particular purposes. This material is sold for research purposes and is intended as laboratory reagents only. It is not intended for food, drug, household, agricultural or cosmetic use. Its use must be supervised by a technically qualified individual experienced in handling potentially hazardous chemicals.

Revision Date: 6/30/2014



# Safety Data Sheet

Revision Date: 7/5/2014

SDS #: 10198

Phosphatase Substrate p-Nitrophenyl Phosphate Hexahydrate Disodium Salt  
Tablets (pNPP)

## 1. PRODUCT AND COMPANY IDENTIFICATION

### Product Description:

Phosphatase Substrate p-Nitrophenyl  
Phosphate Hexahydrate Disodium Salt Tablets  
(pNPP)

### Product Code

50-80-01

### Hazardous Reagent

None

### Hazardous Reagent Product code

None

### Recommended Use

**Contact Manufacturer** KPL, Inc.  
910 Clopper Road  
Gaithersburg, Maryland 20878  
USA

**Phone #:** 1-301-948-7755  
**Fax #:** 1-301-948-0169  
**Web:** www.kpl.com  
**Email:** kplmsds@seracare.com

### Emergency Telephone Numbers:

AUSTRALIA – POISONS INFORMATION CENTER	Telephone: 13 11 26	Hours: 24 hours
CANADIAN TRANSPORT EMERGENCY CENTER	Telephone: (1 ) 613 996 6666	Hours: 24 hours/day, 7 days/week
UK – THE NATIONAL FOCUS	Telephone: (44) 029 2041 6388	Hours: 09:00-17:00 GMT
USA- NATIONAL RESPONSE CENTER	Telephone: (1 ) 800 424 8802	Hours: 24 hours/day, 7 days/week

**CHEMTREC:** CHEMTREC Customer Number:- CCN12505\*  
For Chemical Emergency Spill, Leak, Fire, Exposure, or Accident  
Call CHEMTREC Day or Night  
Within USA and Canada: 1-800-424-9300 CCN12505 or  
+1 703-527-3887 (collect calls accepted)

## 2. HAZARD IDENTIFICATION

<b>Hazard Type</b>	GHS Classification in accordance with 29 CFR 1910 (OSHA HCS): The product contains no substances which at their given concentration, are considered to be hazardous to health or the environment.
<b>Principle Route of Exposure</b>	Not Available
<b>Acute Effects: Eye:</b>	May cause redness and irritation
<b>Acute Effects: Skin:</b>	Prolonged and repeated contact with product may cause skin irritation.

SDS #: 10198

Phosphatase Substrate p-Nitrophenyl Phosphate Hexahydrate Disodium Salt  
Tablets (pNPP)

**Acute Effects: Inhalation:** May cause irritation to the respiratory tract.  
**Acute Effects: Ingestion:** May be harmful if swallowed.  
**Chronic Effects:** Not Available  
**Additional Information** None Available

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

<u>Component</u>	<u>CHEMICAL</u>	<u>% Weight</u>	<u>CAS #:</u>
Phosphatase Substrate p-Nitrophenyl Phosphate Hexahydrate Disodium Salt	Sodium Chloride	<10%	7647-14-5
<b>GHS Classification</b>	EC# : 231-598-3 CAS# : 7647-14-5 Substance Name : sodium chloride Molecular Formula : ClNa Not Classified		

### 4. FIRST AID MEASURES

**General Advice** Wash contaminated clothing before reuse. Consult a physician if irritation persists  
**Oral Exposure** Rinse mouth. Refer for medical attention.  
**Inhalation Exposure** Remove subject to fresh air. Seek medical attention if necessary.  
**Skin Exposure** Rinse skin with plenty of water or shower. Remove all contaminated clothes and shoes.  
**Eye Exposure** First rinse with plenty of water for several minutes (remove contact lenses if easily possible), then take to a doctor.

### 5. FIRE FIGHTING MEASURES

**Extinguishing media** Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Water spray. Alcohol-resistant foam. Dry powder. Carbon dioxide.

**Unusual Fire and Explosive Hazards** Not Available

**Flash Point** Not Available

**Autoignition Temperature** Not Available

**Flammability Statement** Not Available

**Specific hazards arising from the chemical** Not Available

**Protective equipment and precautions for firefighters** In case of fire: keep drums, etc., cool by spraying with water. Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

### 6. ACCIDENTAL RELEASE MEASURES

SDS #: 10198

Phosphatase Substrate p-Nitrophenyl Phosphate Hexahydrate Disodium Salt  
Tablets (pNPP)

<b>Personal Precautions</b>	Wear appropriate personal protective clothing to prevent skin contact.
<b>Environmental Precautions</b>	Not Available
<b>Method of Containment</b>	Collect leaking and spilled liquid in sealable containers as far as possible.
<b>Methods of Clean-up</b>	Wash away remainder with plenty of water.
<b>Other Information</b>	Not Available

## 7. HANDLING AND STORAGE

<b>Handling:</b>	Handle in accordance with good industrial hygiene and safety practice. Avoid dust formation in confined areas. Ensure adequate ventilation.
<b>Storage:</b>	Keep container tightly closed in a dry and well-ventilated place. Keep away from Bromine Trifluoride and Lithium.

## 8. EXPOSURE CONTROL

<b>Respiratory Protection</b>	None required if good ventilation is maintained. Otherwise wear MSHA/NIOSH approved respirator suitable for vapor or mist concentrations encountered.
<b>Eye Protection</b>	Direct contact with product may result in eye irritation.
<b>Skin Protection</b>	Prolonged and repeated contact with product may cause skin irritation.
<b>Ingestion</b>	Do not eat, drink, or smoke during work.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Appearance</b>	Powder
<b>Physical State</b>	Solid
<b>Odor</b>	Not Available
<b>Odor Threshold</b>	Not Available
<b>pH</b>	Not Available
<b>Boiling Point</b>	Not Available
<b>Evaporation Rate</b>	Not Available
<b>Vapor Density</b>	Not Available
<b>Vapor Pressure</b>	Not Available
<b>Relative Density</b>	Not Available
<b>Auto-Ignition Temperature</b>	Not Available
<b>Water Solubility</b>	Dilutable
<b>Flammability</b>	Not Available
<b>Flash Point</b>	Not Available
<b>Viscosity</b>	Not Available
<b>Oxidizing Properties</b>	Not Available
<b>Explosive Properties</b>	Not Available
<b>Additional Parameters</b>	Not Available

## 10. STABILITY AND REACTIVITY

<b>Chemical Stability</b>	Stable under normal conditions
---------------------------	--------------------------------

SDS #: 10198

**Phosphatase Substrate p-Nitrophenyl Phosphate Hexahydrate Disodium Salt  
Tablets (pNPP)**

<b>Conditions to avoid</b>	Protect from moisture . Light Sensitive.
<b>Incompatibility Materials to Avoid</b>	Strong oxidizing agents. Strong acids.
<b>Hazardous Decomposition Products</b>	Not Available
<b>Hazardous Polymerization</b>	Will not occur
<b>Possibility of hazardous reactions</b>	Reacts Violently with Bromine Trifluoride and Lithium.

## 11. TOXICOLOGY MEASURES

### Acute Toxicity

The toxicological risks are minor due to the low concentration of hazardous ingredients. The following toxicological information is for the hazardous ingredient in pure form.

**LD50 Oral** Oral: Acutely Toxic  
SPECIES: Rat  
ENDPOINT: LD50  
VALUE: 3000 mg/kg  
REFERENCE SOURCE:(1971), [Toxicology and Applied Pharmacology. (Academic Press, Inc., 1 E. First St., Duluth,MN 55802) V.1- 1959- (20,57,1971)] [RTECS TOMES]

**LD50 Dermal** Not Available

**LC50 Inhalation** Not Available

### Chronic Toxicity

**Carcinogenicity** There are no known carcinogenic chemicals in this product.

**Irritation** Irritating to the Eye: SPECIES: Rabbit  
RESULT: Moderately irritating.  
REFERENCE SOURCE: Solvay S.A. Bruxelles (1980), Toxicology and Applied Pharmacology, 55, p. 501 [iuclid 2000]

**Corrosivity** Not Available

**Sensitization** Not Available

**Neurological Effects** Not Available

**Mutagenic Effects** Not Available

**Reproductive Effects** Not Available

**Developmental Effects** Not Available

**Target Organ Effects** May be harmful by Inhalation, Ingestion, Eye Exposure or Skin Absorption

**Other adverse effects** Not Available

## 12. ECOLOGICAL MEASURES

**Ecotoxicity** Not Available

**Persistence/Degradability** Not Available

**Mobility in Environmental Media** Not Available

SDS #: 10198

Phosphatase Substrate p-Nitrophenyl Phosphate Hexahydrate Disodium Salt  
Tablets (pNPP)

Bioaccumulation/  
Accumulation Not Available

### 13. DISPOSAL MEASURES

**Waste Disposal Method:** Observe all Federal, State and Local laws concerning health and pollution.

**Contaminated Packaging:** Avoid contact with skin and clothing. Place contaminated packaging in a break proof outer vessel and dispose on in compliance with national and local regulations.

**US EPA Waste Number:** Not Available

### 14. TRANSPORTATION MEASURES

**DOT:** Not Regulated

**IATA:** Not Regulated

**ADR (road)/ RID (rail):** Not Regulated

**IMDG (sea):** Not Regulated

**General Transport Regulations** Not Available

### 15. REGULATORY MEASURES

**This product is a mixture that may contain one or more hazardous chemicals. The hazardous ingredients listed are only those as required by 29 CFR 1910.1200 (OSHA HCS).**

**SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains no chemical or chemicals which are subject to the reporting requirements of the Act and and Title 40n of the Code of Federal Regulations, Part 372.

**Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (See 40 CFR 61)**

Not Listed

**State Regulations**

**California Proposition 65:**

This product contains the following Proposition 65 chemicals: Not Listed

**State Right to Know Act**

**Chemical Name Sodium Chloride**

**Massachusetts** Not Listed  
**New Jersey** Not Listed  
**Pennsylvania** Not Listed  
**New York** Not Listed  
**Rhode Island** Not Listed

**International Inventories**

**Chemical Name Sodium Chloride**

SDS #: 10198

Phosphatase Substrate p-Nitrophenyl Phosphate Hexahydrate Disodium Salt  
Tablets (pNPP)

TSCA	Listed
DSL	Listed
NDSL	Not Listed
EINECS	Listed
CHINA	Listed
KECL	Listed
JAPAN:	Listed
AICS	Listed

**EU Regulations**

<b>Annex I Index#</b>	Not Available
<b>Classification</b>	EC# : 231-598-3 CAS# : 7647-14-5 Substance Name : sodium chloride Molecular Formula : C1Na Not Classified
<b>Risk Phrases</b>	Not Available
<b>Safety Phrases</b>	Not Available
<b>Symbols and Indications of Danger</b>	Not Available
<b>Specific Concentration Limits</b>	Not Available
<b>Export and Import</b>	This substance is not listed in the Annex I of Regulation (EC) No 689/2008.
<b>European Priority List</b>	This substance is not listed in a priority list (as foreseen under Council Regulation (EEC) No 793/93 on the evaluation and control of the risks of existing substances.).

**16. OTHER INFORMATION**

The above information is believed to be correct, but does not purport to be all inclusive and shall be used only as a guide. KPL shall not be held liable for any damage resulting from handling or from contact with the above product. Users should make their own investigations to determine the suitability of the information for their particular purposes. This material is sold for research purposes and is intended as laboratory reagents only. It is not intended for food, drug, household, agricultural or cosmetic use. Its use must be supervised by a technically qualified individual experienced in handling potentially hazardous chemicals.

Revision Date: 7/5/2014