

Safety Data Sheet



Revision Date: 7/18/2014

SDS #: 10061

Enhance ORANGE Buffer Solution

1. PRODUCT AND COMPANY IDENTIFICATION

Product Description:

Product Code

Enhance ORANGE Buffer Solution

71-00-07

Hazardous Reagent

Enhance ORANGE 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 #: 1-800-638-3167
Fax #: 1-301-948-169
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

Contains one of Nickel sulfate Compounds:
Health and Environmental Hazard
CAS No: 7786-81-4 (anhydrous), 10101-97-0 (Hexahydrate), 10101-98-1 (heptahydrate)
INDEX No: 028-009-00-5
EC No: 232-104-9

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

Classification

Nickel sulfate
CAS No: 7786-81-4 (anhydrous), 10101-97-0 (Hexahydrate), 10101-98-1 (heptahydrate)
INDEX No: 028-009-00-5
EC No: 232-104-9
Carc. 2: Suspected of causing cancer by Inhalation
Acute Tox. 4 *: Harmful if swallowed
Resp. Sens. 1: May cause allergy or asthma symptoms or breathing difficulties if inhaled
Skin Sens. 1: May cause an allergic skin reaction
Aquatic Acute 1: Very toxic to aquatic life

Enhance ORANGE Buffer Solution

Aquatic Chronic 1: Very toxic to aquatic life with long lasting effects

Hazard Statement

H351: May cause cancer by inhalation.
 H302: Harmful if swallowed
 H334: May cause allergy or asthma symptoms or breathing difficulties if inhaled
 H317: May cause an allergic skin reaction
 H400: Very toxic to aquatic life
 H410: Very toxic to aquatic life with long lasting effects

Precautionary Statement

P201: Obtain special instructions before use.
 P202: Do not handle until all safety precautions have been read and understood.
 P281: Use personal protective equipment as required.
 P264: Wash skin thoroughly after handling.
 P270: Do not eat, drink or smoke when using this product.
 P261: Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
 P285: In case of inadequate ventilation wear respiratory protection.
 P272: Contaminated work clothing should not be allowed out of the workplace.
 P280: Wear protective gloves/protective clothing/eye protection/ face protection.
 P273: Avoid release to the environment.

Symbols of Danger

GHS08; GHS07; GHS09; Danger

**Data for 100% Hazardous Chemical**

ROUTES OF EXPOSURE: The substance can be absorbed into the body by inhalation, through the skin and by ingestion.

INHALATION RISK: Evaporation at 20°C is negligible; a harmful concentration of airborne particles can, however, be reached quickly when dispersed.

SHORT-TERM EXPOSURE: The substance is irritating to the eyes, skin and respiratory tract.

LONG-TERM EXPOSURE: Repeated or prolonged contact may cause skin sensitization. Repeated or prolonged inhalation may cause asthma. Repeated or prolonged inhalation of the aerosol may cause effects on the lungs. The substance may have effects on the nasal sinuses. This may result in inflammation and ulceration. This substance is carcinogenic to humans.

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

EYE: Redness.

SKIN: Redness.

INHALATION: Cough. Sore throat.

INGESTION: Abdominal pain. Dizziness. Headache. Nausea. Vomiting.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	CHEMICAL	% Weight	CAS #:
Enhance ORANGE Buffer Solution	Nickel Sulfate Hexahydrate	25.0%	10101-97-0
	Sodium Acetate Trihydrate	<8%	6131-90-4

Classification

Nickel sulfate
 CAS No: 7786-81-4 (anhydrous), 10101-97-0 (Hexahydrate), 10101-98-1 (heptahydrate)
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Enhance ORANGE Buffer Solution

Skin Sens. 1: May cause an allergic skin reaction
 Aquatic Acute 1: Very toxic to aquatic life
 Aquatic Chronic 1: Very toxic to aquatic life with long lasting effects

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 .
Inhalation First Aid:	Fresh air, rest. Refer for medical attention.
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 refer for medical attention.

5. FIRE FIGHTING MEASURES**Data For 100% Hazardous Chemical**

Fire Acute Hazard:	Fire Prevention:	Fire Fighting:
Not combustible. Gives off irritating or toxic fumes (or gases) in a fire.	Not Available	In case of fire in the surroundings, use appropriate extinguishing media.
Explosion Acute Hazard:		
Not Available	Not Available	Not Available
CHEMICAL DANGERS:	Decomposes at 848°C. This produces toxic fumes of sulfur trioxide and nickel monoxide. The solution in water is a weak acid.	
PHYSICAL DANGERS:	Not Available	

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions	Avoid contact with skin and clothing. Personal protection: P2 filter respirator for harmful particles.
Environmental Precautions	Do not let this chemical enter the environment.
Method of Containment	Collect leaking and spilled liquid in sealable containers as far as possible and hold for waste disposal.
Methods of Clean-up	Vacuum spilled material. Carefully collect remainder, then remove to safe place. Avoid raising dust. Ventilate area and wash spill site with copious amount of water after material pick up is complete.
Other Information	Data for 100% Nickel Sulfate Hexahydrate: Wear self contained breathing apparatus, rubber boots and heavy rubber gloves.

Data for 100% Hazardous Chemical

Spillage Disposal	Personal protection: particulate filter respirator adapted to the airborne concentration of the substance. Do NOT let this chemical enter the environment. Vacuum spilled material with specialist equipment. Carefully collect remainder. Then store and dispo
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7. HANDLING AND STORAGE

Handling:	Wear appropriate PPE. Refer to section 8.
Storage:	Store at 4°C, indoor, refrigerated.

Data for 100% Hazardous Chemical

Storage	Not Available
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8. EXPOSURE CONTROL**Data for 100% Hazardous Chemical**

INHALATION	Use ventilation (not if powder), local exhaust or breathing protection.
EYE	Wear safety spectacles, face shield or eye protection in combination with breathing protection if powder.
SKIN	Protective gloves. Protective clothing.
INGESTION	Do not eat, drink, or smoke during work.

Engineering Controls Not Available

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Clear and light green in color.	
Physical State	Liquid	pH: Not Available

Data for 100% Hazardous Chemical

Decomposes at
840°C
Density: 3.7
g/cm³
Solubility in
water, g/100ml at 0°C:
29.3

10. STABILITY AND REACTIVITY

Chemical Stability	Stable
Incompatibility Materials to Avoid	Strong oxidizing agents
Hazardous Decomposition Products	Carbon monoxide, carbon dioxide and sulfur oxides
Hazardous Polymerization	Will not occur

Data for 100% Hazardous Chemical

CHEMICAL DANGERS:	Decomposes at 848°C. This produces toxic fumes of sulfur trioxide and nickel monoxide. The solution in water is a weak acid.
PHYSICAL DANGERS:	Not Available

11. TOXICOLOGY MEASURES

Acute Toxicity Data for 100% Nickel S

The following toxicological information is for the hazardous ingredient in pure form.

LD50 Oral Data for 100% Nickel Sulphate Hexahydrate: Rat- 264 mg/kg

LD50 Dermal Not Available

LC50 Inhalation Not Available

Chronic Toxicity

Carcinogenicity Data for 100% Nickel Sulphate Hexahydrate: May cause cancer by inhalation

Irritation Not Available

Corrosivity Not Available

Sensitization Not Available

Neurological Effects Not Available

Mutagenic Effects Data for 100% Nickel Sulphate Hexahydrate: Possible risk of irreversible effects

Reproductive Effects Data for 100% Nickel Sulphate Hexahydrate: May cause harm to the unborn child

Developmental Effects Not Available

Target Organ Effects

Data for 100% Nickel Sulphate Hexahydrate: Lungs

Other adverse effects

12. ECOLOGICAL MEASURES

Ecotoxicity	Data for 100% Nickel Sulfate Hexahydrate: Ecotoxic in the aquatic environment
Persistence/Degradability	Data for 100% Nickel Sulfate Hexahydrate: ND
Mobility in Environmental Media	Not Available
Bioaccumulation/ Accumulation	Data for 100% Nickel Sulfate Hexahydrate: ND

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 is subject to SARA section 313 reporting requirements :
 Nickel Compounds | CAS/313 Category Codes: N495 | CERCLA RQ: & (Indicates that no RQ is assigned to this generic or broad class, although the class is a CERCLA hazardous substance. See 50 Federal Register 13456 (April 4, 1985).) | Section 313: 313

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

Listed as Chemical: NICKEL COMPOUNDS CAS Number: NDB000

State Regulations**California Proposition 65:**

This product contains the following Proposition 65 chemicals: Nickel Compounds | Type of Toxicity: cancer | CAS No. --- | Date Listed: May 7, 2004

State Right to Know Act

Chemical Name	Nickel Sulfate Hexahydrate	Sodium Acetate Trihydrate
Massachusetts	Not Listed	Not Listed
New Jersey	Listed	Not Listed
Pennsylvania	Not Listed	Not Listed
New York	Not Listed	Not Listed
Rhode Island	Not Listed	Not Listed

International Inventories

Chemical Name	Nickel Sulfate Hexahydrate	Sodium Acetate Trihydrate
TSCA	Not Listed	Not Listed
DSL	Not Listed	Not Listed
NDSL	Not Listed	Not Listed
EINECS	Not Listed	Not Listed
CHINA	Listed	Listed
KECL	Listed	Listed
JAPAN:	Listed	Listed
AICS	Not Listed	Listed

EU Regulations

Annex I Index#	Data for 100% Nickel Sulfate CAS# 7786-81-4: 028-009-00-5
Classification	Nickel sulfate CAS No: 7786-81-4 (anhydrous), 10101-97-0 (Hexahydrate), 10101-98-1 (heptahydrate) INDEX No: 028-009-00-5 EC No: 232-104-9 Carc. 2: Suspected of causing cancer by Inhalation Acute Tox. 4 *: Harmful if swallowed Resp. Sens. 1: May cause allergy or asthma symptoms or breathing difficulties if inhaled Skin Sens. 1: May cause an allergic skin reaction Aquatic Acute 1: Very toxic to aquatic life Aquatic Chronic 1: Very toxic to aquatic life with long lasting effects
Risk Phrases	H351: May cause cancer by inhalation. H302: Harmful if swallowed H334: May cause allergy or asthma symptoms or breathing difficulties if inhaled H317: May cause an allergic skin reaction H400: Very toxic to aquatic life H410: Very toxic to aquatic life with long lasting effects
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Symbols and Indications of Danger	GHS08; GHS07; GHS09; Danger
Specific Concentration Limits	2,5 % ≤ C < 20 % - T, N; R49-61-42/43-48/23-68-51/53
Export and Import	This substance is not listed in the Annex I of Regulation (EC) No 689/2008.
European Priority List	Data for 100% Nickel Sulfate: Rapporteur : Denmark Priority List# : 3 ECB# : 312

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.

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