

Material Safety Data Sheet

Product name: Protein Signal Recover Buffer

Product code: R208090

Supplier: ZmTech Scientific (scientifique)
5020 Fairway street, Suit 224, Montreal, QC, Canada H8T 1B8
Emergency Tel: 1-800-424-9300 (Transportation Spill Response 24 hours)
1-613-996-6666 (National Response in Canada)

Revision date: 03/20/2011

1. Hazards identification

Physical state: Liquid.

Active ingredients and hazardous components:

CAS-No.	Einecs-No.	Name	Contents	Hazardous
1320-73-2	215-185-5	Sodium Hydroxide	2-3%	Yes
7732-18-5	---	Water	>93 %	No

Other components not listed here are not hazardous or their concentrations do not exceed the limits specified in the OSHA Hazard Communication Standard 29 CFR 1910.1200

Emergency overview: Harmful, corrosive if swallowed or inhaled. Reacts with water, acids and other materials.

Potential health effects:

Hazardous in case of inhalation (irritant), skin contact (corrosive), eye contact (corrosive), Ingestion (corrosive).

2. First aid measures

Eye Contact: Check for and remove any contact lenses. Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open. Cold water may be used. Get medical attention immediately.

Skin Contact: Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated cloth and shoes. Get medical attention if corrosion develops. Washed cloth before reuse.

Inhalation: If inhaled, remove to fresh air. If breathing is difficult, give oxygen. Get medical attention immediately.

Ingestion: Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention if symptoms appear.

Protection of first-aiders: No action shall be taken involving any personal risk or without suitable training. Perform endoscopy in all cases of suspected sodium hydroxide ingestion.

3. Fire-fighting measures

FLAMMABLE: No

FLASH POINT, °C: Not applicable

EXTINGUISHING MEDIA: Use any means suitable for extinguishing surrounding fire. Adding water generate mild heat.

SPECIAL FIRE FIGHTING PROCEDURES: Wear protective clothing and breathing equipment appropriate for the surrounding fire.

EXPLOSIVE SENSITIVITY TO: Not applicable

4. Accidental release measures

Ventilate area of leak or spill. Keep unnecessary and unprotected people away from area of spill. Wear appropriate personal protective equipment as specified in Section 8. Contain and recover liquid when possible. Do not flush caustic residues to the sewer. Diluted with water and mop up, or absorb with an inert dry material and place in an appropriate waste disposal container. Finish cleaning by spreading water on the contaminated surface and allow to evacuate through the sanitary system.

5. Handling and storage

Keep in a tightly closed container. Protect from physical damage. Store in a cool, dry, ventilated area away from sources of heat, moisture and incompatibilities. Protect from freezing. Always add the caustic to water while stirring; never the reverse. Containers of this material may be hazardous when empty since they retain product residues (vapors, liquid); observe all warnings and precautions listed for the product. Do not store with aluminum or magnesium. Do not mix with acids or organic materials.

6. Exposure controls/personal protection

Engineering Controls:

Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value. Ensure that eyewash stations and safety showers are proximal to the work-station location.

Personal Protection:

Personal Respirators (NIOSH Approved):

If the exposure limit is exceeded, a half-face dust/mist respirator may be worn for up to ten times the exposure limit or the maximum use concentration specified by the appropriate regulatory agency or respirator supplier, whichever is lowest. A full-face piece dust/mist respirator may be worn up to 50 times the exposure limit, or the maximum use concentration specified by the appropriate regulatory agency, or respirator supplier, whichever is lowest. For emergencies or instances where the exposure levels are not known, use a full-face piece positive-pressure, air-supplied respirator. **WARNING:** Air-purifying respirators do not protect workers in oxygen-deficient atmospheres.

Skin Protection: Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.

Eye Protection: Use chemical safety goggles and/or a full face shield where splashing is possible. Maintain eye wash fountain and quick-drench facilities in work area.

Exposure Limits:

Airborne Exposure Limits:

Sodium hydroxide:

-OSHA Permissible Exposure Limit (PEL): 2 mg/m3 Ceiling

-ACGIH Threshold Limit Value (TLV): 2 mg/m3 Ceiling

7. Physical and chemical properties

Physical state and appearance: Clear, colorless liquid

Odor: Odorless

Solubility: Miscible in water

pH: 13.0.

Boiling point: 102 °C (216°F) - closed cup

Melting point: -4 °C (25°F)

Evaporation rate (BuAc=1): Not available

Ionicity (in Water): Not available.

8. Stability and reactivity

Stability: Stable under normal conditions.

Materials to avoid: Sodium hydroxide in contact with acids and organic halogen compounds, especially trichloroethylene, may cause violent reactions. Contact with nitromethane and other similar nitro compounds causes formation of shock-sensitive salts. Contact with metals such as aluminum, magnesium, tin, and zinc cause formation of flammable hydrogen gas. Sodium hydroxide, even in fairly dilute solution, reacts readily with various sugars to produce carbon monoxide. Precautions should be taken including monitoring the tank atmosphere for carbon monoxide to ensure safety of personnel before vessel entry.

Conditions to avoid: Heat, moisture, incompatibles.

Hazardous decomposition products: No information available

Polymerization: Hazardous polymerization does not occur.

9. Toxicological information

Toxicity data: skin, rabbit: 500 mg/24H severe; eye rabbit: 50 ug/24H severe. Investigated as a mutagen.

Ingredient	---NTP Carcinogen---		IARC Category
	Known	Anticipated	
Sodium Hydroxide (1310-73-2)	No	No	None
Water (7732-18-5)	No	No	None

10. Ecological information

Ecotoxicity: Not available.

BOD5 and COD: Not available.

Environmental Fate: No information found.

11. Disposal considerations

Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste facility. Although not a listed RCRA hazardous waste, this material may exhibit one or more characteristics of a hazardous waste and require appropriate analysis to determine specific disposal requirements. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.

12. Transport information

Domestic (Land, D.O.T.)

Proper Shipping Name: Protein signal recover buffer

Hazard Class: 8
UN/NA: UN1824
Packing Group: II

International (Water, I.M.O.)
Proper Shipping Name: Protein signal recover buffer
Hazard Class: 8
UN/NA: UN1824
Packing Group: II

13. Regulatory information

-----\Chemical Inventory Status - Part 1\-----

Ingredient	TSCA	EC	Japan	Australia
Sodium Hydroxide (1310-73-2)	Yes	Yes	Yes	Yes
Water (7732-18-5)	Yes	Yes	Yes	Yes

-----\Chemical Inventory Status - Part 2\-----

Ingredient	--Canada--			
	Korea	DSL	NDSL	Phil.
Sodium Hydroxide (1310-73-2)	Yes	Yes	No	Yes
Water (7732-18-5)	Yes	Yes	No	Yes

-----\Federal, State & International Regulations - Part 1\-----

Ingredient	-SARA 302-		-----SARA 313-----	
	RQ	TPQ	List	Chemical Catg.
Sodium Hydroxide (1310-73-2)	No	No	No	No
Water (7732-18-5)	No	No	No	No

-----\Federal, State & International Regulations - Part 2\-----

Ingredient	-RCRA-	-TSCA-
	CERCLA	261.33 8(d)
Sodium Hydroxide (1310-73-2)	1000	No
Water (7732-18-5)	No	No

Chemical Weapons Convention: No TSCA 12(b): No CDTA: No
 SARA 311/312: Acute: Yes Chronic: No Fire: No Pressure: No
 Reactivity: No (Pure / Liquid)

NFPA Ratings: Health: **3** Flammability: **0** Reactivity: **0**

Label Hazard Warning: DANGER! CORROSIVE. HARMFUL IF SWALLOWED OR INHALED. CAUSES BURNS TO ANY AREA OF CONTACT. REACTS WITH WATER, ACIDS AND OTHER MATERIALS.



Labeling:

Protective Equipment:

Gloves (impervious). Synthetic apron. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate. Safety glasses.

WHMIS: This MSDS has been prepared according to the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

Notice to reader

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