

## 1. Product & Company Identification

Product Name: Basic Buffer Reagent

Part Number: 1404002

Supplier: Sirius Analytical Instruments Limited  
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Emergency Tel: +44 (0)1342 820720 Monday – Friday 9am – 5:30pm (Please have this document to hand)  
Outside of these hours, contact the appropriate emergency service.

## 2. Composition / Information on ingredients

Component	CAS No.	EEC No.	Conc. w/w	Classification & Risk Phrases	Exp. (see 8)
Potassium Hydroxide	1310-58-3	215-181-3	4.5%	C : R34	OES
Butylamine	109-73-9	203-699-2	1.2%	F C : R11, R20/21/22, R35	OES
Ethanolamine	141-43-5	205-483-3	1.1%	Xn : R20, R36/37/38	

## 3. Hazards Identification



Causes burns.

## 4. First Aid Measures

Eyes: Irrigate thoroughly with plenty of water for at least 10 minutes, holding the eye open. OBTAIN MEDICAL ATTENTION URGENTLY.

Skin: Wash off skin thoroughly with water. Remove contaminated clothing immediately and wash before re-use. If irritation persists or there is any sign of skin damage, seek IMMEDIATE MEDICAL ASSISTANCE.

Inhalation: Remove from exposure.

Ingestion: If conscious give plenty of water to drink. Do not induce vomiting. OBTAIN MEDICAL ATTENTION URGENTLY.

## 5. Fire Fighting Measures

Hazards: Presents no specific fire danger.

Extinguishing Media: Consider what other flammable materials are present and act accordingly.

Unsuitable Media: Nothing specified.

## 6. Accidental Release Measures

Personal Protection: Use approved personal protective equipment. Evacuate area immediately. Do not allow other people to enter area. Do not allow general use of area until it is safe to do so.

## 6. Accidental Release Measures

Environmental:	Keep non-neutralised material out of sewers, storm-drains, surface waters and soil. Notify the Environmental Agency and local Environmental Health Officer if major spillage occurs.
Major Spillage:	Contain spill with inert material. Neutralise with 5M hydrochloric acid. Wash area down with copious amounts of water.
Minor Spillage:	Wash area down with copious amounts of water.

## 7. Handling & Storage

Handling Precautions:	Avoid contact with skin and eyes. Do not breathe vapours. Do not allow to contaminate clothing.  Ensure Local Exhaust Ventilation maintains vapour concentrations below the recommended limits.
Storage Conditions:	Store in a dry place protected against moisture and water. Keep well separated from acids, metals, explosives, organic peroxides and ignitable materials.

## 8. Exposure Controls / Personal Protection

Component	CAS No.	Occupational Exposure Standard				Maximum exposure Limits			
		Long Term		Short Term		Long Term		Short Term	
		ppm	mg m <sup>-3</sup>	ppm	mg m <sup>-3</sup>	ppm	mg m <sup>-3</sup>	ppm	mg m <sup>-3</sup>
Potassium Hydroxide	1310-58-3	-	-	-	2	-	-	-	-
Butylamine	109-73-9	-	-	5	15	-	-	-	-

Respiratory:	In cases where a spray or mist may be formed, use L.E.V. or natural ventilation to maintain vapour concentrations below exposure limits. If not, use a well maintained chemical cartridge respirator, or use self contained breathing apparatus.
Hands:	Use nitrile gloves or PVC gauntlets.
Eyes:	Use chemical splash proof glasses or goggles.
Skin:	If skin contact or contamination of clothing is likely, protective clothing must be worn.

## 9. Physical & Chemical Properties

Appearance:	Clear colourless liquid.
Odour:	Ammonia like odour.
pH:	12.9 @ 20°C
Boiling Point:	Aqueous solution.
Melting Point:	Aqueous solution.
Flash Point:	Not applicable.
Upper Flammable Limit:	Not applicable.
Lower Flammable Limit:	Not applicable.
Auto Ignition:	Not applicable.
Explosive Properties:	No.
Oxidising Properties:	No.
Vapour Pressure:	Not available.
Relative Density:	Not available.
Water Solubility:	Completely soluble in water.

## 10. Stability & Reactivity

Chemical Stability:	Stable under normal conditions.
Conditions to Avoid:	No specific conditions.
Materials to Avoid:	Acids. Reacts with aluminium and zinc to produce extremely flammable hydrogen gas.
Hazardous Decomposition Products:	None unusual.

## 11. Toxicological Information

Eyes:	The liquid will cause burns. Damage can range from severe irritation and corneal scarring to permanent blindness.
Skin:	Contact with the liquid will not lead to immediate pain but damage begins at once. Severe ulceration and scarring may occur in serious cases.
LD50 Skin:	Not available.
Ingestion:	Ingestion will cause severe mouth burns, and if swallowed extensive damage to the oesophagus.
LD50 Ingestion:	Not available.
Inhalation:	Presents no significant health hazard by inhalation.
Carcinogenicity:	Not considered to be a carcinogen.
Mutagenicity:	Not considered to be a mutagen.
Reproductive Effects:	None identified.

## 12. Ecological Information

Small amounts present no specific environmental hazard. Neutralised material presents no specific environmental hazard.

## 13. Disposal Considerations

Disposal Methods:	Do not dispose of as domestic waste.
Contaminated Packaging:	Clean out with a weak hydrochloric acid solution then wash out thoroughly with water.

## 14. Transport Information

Proper Shipping Name:	Potassium hydroxide solution
UN Number:	1814
UN Classification:	8: Corrosive
Subsidiary Risk:	None.
Packing Group:	III
Marine Pollutant:	No.
ADR Hazard ID:	80
ADR Item Number:	42b

## 15. Regulatory Information

Labelling Classification: Corrosive.

Label Symbols:



Risk & Safety Phrases: R34 Causes burns. S(1/2) Keep locked up and out of the reach of children. S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. S36/37/39 Wear suitable protective clothing, gloves and eye / face protection. S45 In case of accident or if you feel unwell seek medical advice immediately (show the label where possible).

EEC Number: Not applicable.

## 16. Other Information

Revision Date: 22 May 2003

The above information is believed to be correct based on the information available to us and is intended as a guide only.

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