

# CHEMICAL SAFETY DATA SHEET

Buffer solution pH 4.01

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## SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

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### 1.1 Product Details

**Product name** : pH Buffer solution pH 4.01 @ 25°C  
**Trade name** : Buffer solution pH 4.01 @ 25°C  
**Chemical name** : Not applicable  
**Molecular weight** : Not applicable  
**Chemical family** : Aqueous solution  
**Manufacturer's code** : CD04-600098, CD04-600099, CD04-600100, CD04-600111, CD04-600112  
**Identified uses** : Calibrating electrodes, verify electrodes

### 1.2 Company Identification

**Manufacturer's name** : Centronics Sdn Bhd  
**Distributor's name & address** : Centronics Sdn Bhd  
 Centronics Systems & Services Sdn Bhd  
 No. 23, Jalan Sungai Jerluh 32/196  
 Seksyen 32, Bukit Kemuning  
 40460 Shah Alam, SEL  
**Emergency tel. no.** : 603-5525 2568  
**Fax. no.** : 603-5131 5668

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## SECTION 2: HAZARDS IDENTIFICATION

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### 2.1 Classification of the substance or mixture

This mixture is not classified as dangerous according to European Union legislation.

### 2.2 Label elements

#### Labelling (REGULATION (EC) No 1272/2008)

Not a hazardous substance or mixture according to Regulation (EC) No. 1272/2008.

### 2.3 Other hazards

None known

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## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

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### Mixtures

Chemical Name	CAS #	Proportion (%)
Potassium hydrogen phthalate	877-24-7	1.02
Sodium hydroxide	1310-73-2	0.09
Benzenemethanaminium, N,N-dimethyl-N-[2-[2-[4-(1,1,3,3-tetramethylbutyl)phenoxy]ethoxy]ethyl]-, chloride	121-54-0	0.01
Water, purified	7732-18-5	99.88

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## SECTION 4: FIRST AID MEASURES

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### Description of first aid measures

#### If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration.

#### In case of skin contact

Wash off with soap and plenty of water.

#### In case of eye contact

Flush eyes with water as a precaution.

#### If swallowed

Never give anything by mouth to an unconscious person. Rinse mouth with water.

#### Most important symptoms and effects, both acute and delayed

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

#### Indication of any immediate medical attention and special treatment needed

No data available

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## SECTION 5: FIREFIGHTING MEASURES

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### 5.1 Extinguishing media

#### *Suitable extinguishing media*

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

#### *Unsuitable extinguishing media*

For this substance/mixture no limitations of extinguishing agents are given.

### 5.2 Special hazards arising from the substance or mixture

Ambient fire may liberate hazardous vapours.

### 5.3 Advice for firefighters

#### *Special protective equipment for firefighters*

In the event of fire, wear self-contained breathing apparatus.

#### *Further information*

None

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## SECTION 6: ACCIDENTAL RELEASE MEASURES

Centronics – 600098, 600099, 600100, 600111, 600112

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## 6.1 Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel: Do not breathe vapours, aerosols. Evacuate the danger area, observe emergency procedures, consult an expert.

Advice for emergency responders:

Protective equipment see section 8.

## 6.2 Environmental precautions

No special precautionary measures necessary.

## 6.3 Methods and materials for containment and cleaning up

Observe possible material restrictions (see sections 7 and 10). Take up with liquid-absorbent material (e.g. Chemizorb®). Dispose of properly. Clean up affected area.

## 6.4 Reference to other sections

Indications about waste treatment see section 13.

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## SECTION 7: HANDLING AND STORAGE

### 7.1 Precautions for safe handling

*Advice on safe handling*

Observe label precautions.

*Hygiene measures*

Change contaminated clothing. Wash hands after working with substance.

### 7.2 Conditions for safe storage, including any incompatibilities

*Storage conditions*

Tightly closed.

Recommended storage temperature see product label.

### 7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated.

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## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1 Control parameters

Contains no substances with occupational exposure limit values.

### 8.2 Exposure controls

#### Engineering measures

Technical measures and appropriate working operations should be given priority over the use of personal protective equipment.

See section 7.1.

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## Individual protection measures

Protective clothing needs to be selected specifically for the workplace, depending on concentrations and quantities of the hazardous substances handled. The chemical resistance of the protective equipment should be enquired at the respective supplier.

### *Eye/face protection*

Safety glasses

### *Hand protection*

Full contact:

Glove material:	Nitrile rubber
Glove thickness:	0.11 mm
Break through time:	> 480 min

Splash contact:

Glove material:	Nitrile rubber
Glove thickness:	0.11 mm
Break through time:	> 480 min

The protective gloves to be used must comply with the specifications of EC Directive 89/686/EEC and the related standard EN374, for example KCL 741 Dermatril® L (full contact), KCL 741 Dermatril® L (splash contact).

The breakthrough times stated above were determined by KCL in laboratory tests acc. to EN374 with samples of the recommended glove types.

This recommendation applies only to the product stated in the safety data sheet (>,<) supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: [www.kcl.de](http://www.kcl.de)).

### *Respiratory protection*

Not required; except in case of aerosol formation.

## Environmental exposure controls

No special precautionary measures necessary.

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## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

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### 9.1 Information on basic physical and chemical properties

<b>Appearance</b>	Form: clear, liquid
	Colour: colourless
<b>Odour</b>	: Odourless
<b>Odour Threshold</b>	: No data available
<b>pH</b>	: 4.01 at 25°C
<b>Boiling Point</b>	: 109°C at 1,013 hPa
<b>Flash Point</b>	: No data available
<b>Evaporation Rate</b>	: No data available
<b>Flammability (solid, gas)</b>	: No data available
<b>Lower Explosion Limit</b>	: No data available

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<b>Upper Explosion Limit</b>	: No data available
<b>Vapour Pressure</b>	: No data available
<b>Relative Vapour Density</b>	: No data available
<b>Density</b>	: 1.01 g/cm <sup>3</sup> at 25°C
<b>Relative Density</b>	: No data available
<b>Water Solubility</b>	: Soluble at 25°C
<b>Partition coefficient: n-octanol/water</b>	: No data available
<b>Auto-ignition Temperature</b>	: No data available
<b>Decomposition Temperature</b>	: No data available
<b>Viscosity, dynamic</b>	: No data available
<b>Explosive properties</b>	: No data available
<b>Oxidizing properties</b>	: Not classified as explosive
	: None

## 9.2 Other data

None

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## SECTION 10: STABILITY AND REACTIVITY

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### 10.1 Reactivity

See section 10.3

### 10.2 Chemical stability

The product is chemically stable under standard ambient conditions (room temperature) .

### 10.3 Possibility of hazardous reactions

The generally known reaction partners of water.  
 Violent reactions possible with:

### 10.4 Conditions to avoid

No information available

### 10.5 Incompatible materials

No information available

### 10.6 Hazardous decomposition products

No information available

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## SECTION 11: TOXICOLOGICAL INFORMATION

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### 11.1 Information on toxicological effects

#### Mixture

##### *Acute oral toxicity*

This information is not available.

##### *Acute inhalation toxicity*

This information is not available.

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*Acute dermal toxicity*

This information is not available.

*Skin irritation*

This information is not available.

*Eye irritation*

This information is not available.

*Sensitisation*

This information is not available.

*Germ cell mutagenicity*

This information is not available.

*Carcinogenicity*

This information is not available.

*Reproductive toxicity*

This information is not available.

*Teratogenicity*

This information is not available.

*Specific target organ toxicity - single exposure*

This information is not available.

*Specific target organ toxicity - repeated exposure*

This information is not available.

*Aspiration hazard*

This information is not available.

## 11.2 Further information

Hazardous properties cannot be excluded but are unlikely when the product is handled appropriately.

Handle in accordance with good industrial hygiene and safety practice.

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## SECTION 12: ECOLOGICAL INFORMATION

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### Mixture

#### 12.1 Toxicity

No information available.

#### 12.2 Persistence and degradability

No information available.

#### 12.3 Bioaccumulative potential

No information available.

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## 12.4 Mobility in soil

No information available.

## 12.5 Results of PBT and vPvB assessment

Substance(s) in the mixture do(es) not meet the criteria for PBT or vPvB according to Regulation (EC) No 1907/2006, Annex XIII, or a PBT/vPvB assessment was not conducted.

## 12.6 Other adverse effects

### *Additional ecological information*

Depending on the concentration, phosphates may contribute to the eutrophication of water supplies.

No ecological problems are to be expected when the product is handled and used with due care and attention.

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## SECTION 13: DISPOSAL CONSIDERATIONS

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### *Waste treatment methods*

Waste material must be disposed of in accordance with the national and local regulations. Leave chemicals in original containers. No mixing with other waste. Handle uncleaned containers like the product itself.

According to Quality Environment Regulation (Scheduled Waste) 2005, waste need to be sent to designated premise for recycle, treatment or disposal. Please contact Kualiti Alam for waste classification and correct disposal method.

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## SECTION 14: TRANSPORT INFORMATION

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### Land transport (ADR/RID)

14.1 - 14.6 Not classified as dangerous in the meaning of transport regulations.

### Inland waterway transport (ADN)

Not relevant

### Air transport (IATA)

14.1 - 14.6 Not classified as dangerous in the meaning of transport regulations.

### Sea transport (IMDG)

14.1 - 14.6 Not classified as dangerous in the meaning of transport regulations.

### 14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not relevant

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## SECTION 15: REGULATORY INFORMATION

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## 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

*National legislation*

Storage class 10 – 13

## 15.2 Chemical Safety Assessment

For this product a chemical safety assessment was not carried out.

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## SECTION 16: OTHER INFORMATION

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### Training advice

Provide adequate information, instruction and training for operators.

### Labelling (67/548/EEC or 1999/45/EC)

The product does not need to be labelled in accordance with EC directives or respective national laws.

### Key or legend to abbreviations and acronyms used in the safety data sheet

Used abbreviations and acronyms can be looked up at [www.wikipedia.org](http://www.wikipedia.org).

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**END OF SAFETY DATASHEET**