**SECTION 1 – IDENTIFICATION**

**Product Identifier:** 10X Phosphate Buffered Saline (PBS), Premixed Powder Ultra Pure Grade

**Catalogue Number:** 2047

**Recommended use of the chemical and restrictions on use:**
Can be used for diluting substances and rinse containers containing cells, and take a reference spectrum when measuring the protein adsorption in ellipsometry. Additives can be used to add function.

For R&D use only. Not for pharmaceutical, household or other uses.

**Supplier Information:**
Axil Scientific Pte Ltd
41 Science Park Road
#04-08 The Gemini
Singapore Science Park II
Singapore 117610
Tel: +65 6775 7318
Fax: +65 6775 7211
Email: info@axilscientific.com

Apical Scientific Sdn Bhd
No 7-1 to 7-4 Jalan SP 2/7
Taman Serdang Perdana, Seksyen 2
Seri Kembangan 43300
Singapore 117610
Tel: +603 8943 3252
Fax: +603 8943 3243
Email: custcare@apicalscientific.com

**Emergency phone number:**
Monday – Friday, 8:00 a.m. to 6:00 p.m.
+65 6775 7318 (Singapore)
+603 8943 3252 (Malaysia)

**SECTION 2 – HAZARDS IDENTIFICATION**

**GHS Classification**
Not a dangerous substance or mixture according to the Globally Harmonised System (GHS).

**Other hazards** - None

**SECTION 3 – COMPOSITION/ INFORMATION ON INGREDIENTS**

**Chemical characterization:** Mixture

**Chemical Identity:** Sodium Chloride

**Synonyms:**
- Salt
- Rock Salt
- Saline
- Table Salt

**Molecular Formula:** NaCl

**Molecular Weight:** 58.44

**CAS No.:** 7647-14-5

**EC No.:** 231-598-3

**Chemical Identity:** Potassium Chloride

**Synonyms:**
- Chlorvescent
- Klotrix
- Potassium Monochloride
Potassium Muriate

Molecular Formula: KCl
Molecular Weight: 74.55
CAS No.: 7447-40-7
EC No.: 231-211-8

Chemical Identity: Sodium Phosphate
Synonyms: Dibasic sodium phosphate, Disodium hydrogen phosphate, Disodium orthophosphate, Sodium hydrogen phosphate, Disodium monohydrogen phosphate, Phosphoric acid disodium salt, Sodium monohydrogen phosphate, Disodium phosphate, Disodium hydrogen orthophosphate, Disodium phosphoric acid, DSP, Sodium acid phosphate, Soda phosphate

Molecular Formula: Na₂HPO₄
Molecular Weight: 141.96
CAS No.: 7558-79-4
EC No.: 231-448-7

Chemical Identity: Potassium Phosphate
Synonyms: Potassium acid phosphate, Potassium dihydrogenphosphate, Monopotassium phosphate

Molecular formula: KH₂PO₄
Molecular Weight: 136.08
CAS No.: 7778-77-0
EC No.: 231-913-4

SECTION 4 – FIRST-AID MEASURES

Eye Contact
Flush eyes with water as a precaution.

Skin Contact
Immediately wash skin thoroughly with soap and copious amounts of water.

Inhalation
Remove to fresh air. If not breathing, give artificial respiration or if breathing is difficult, give oxygen.

Ingestion
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 immediate medical attention and special treatment needed
Data not available.
SECTION 5 – FIRE-FIGHTING MEASURES

Extinguishing Media
Use water spray, dry chemical powder, carbon dioxide or alcohol-resistant foam.

Special Exposure Hazards
Oxides of phosphorus, Hydrogen chloride gas, Potassium oxides, Sodium oxides

Special Fire-fighting Procedures
Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

SECTION 6 – ACCIDENTAL RELEASE MEASURES

Personal Precautions
Use personal protective equipment. Prevent skin/eye contact.

Environmental Precautions
Do not allow material into sewers and drainage systems.

Methods for Cleaning Up
Clean up spills immediately, observing precautions in the safety data sheet and label. Minimize dust generation. Dispose into a chemical waste container.

SECTION 7 – HANDLING AND STORAGE

Precautions for safe handling
Use with adequate ventilation as necessary or desired. Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Follow all SDS/label precautions. Avoid contact with skin and eyes.

Conditions for safe storage, including any incompatibilities
Store in tightly closed container in a cool, dry and well-ventilated area.

SECTION 8 – EXPOSURE CONTROLS/ PERSONAL PROTECTION

Occupational Exposure Limits
We are not aware of any national exposure limit.

Appropriate engineering controls
Handle in accordance with good industrial hygiene and safety practice.

Eye/ Face Protection
Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin/ Hand Protection
Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.
The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.
Full contact  
Material: Nitrile rubber  
Minimum layer thickness: 0.11 mm  
Break through time: 480 min  

Splash contact  
Material: Nitrile rubber  
Minimum layer thickness: 0.11 mm  
Break through time: 480 min  

If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.  

Body protection  
Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific workplace. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.  

Respiratory Protection  
Respiratory protection is not required. Where protection from nuisance levels of dusts are desired, use type N95 (US) or type P1 (EN 143) dust masks. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).  

Control of environmental exposure  
Do not let product enter drains.  

## SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES  

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) Appearance</td>
<td>Powder Mixture</td>
</tr>
<tr>
<td>b) Odour</td>
<td>Not available</td>
</tr>
<tr>
<td>c) Odour Threshold</td>
<td>Not available</td>
</tr>
<tr>
<td>d) pH</td>
<td>6.5 – 6.9 (Neat, 25 °C)</td>
</tr>
<tr>
<td>e) Melting/freezing point</td>
<td>Not available</td>
</tr>
<tr>
<td>f) Initial boiling point and boiling range</td>
<td>Not available</td>
</tr>
<tr>
<td>g) Flash point</td>
<td>Not available</td>
</tr>
<tr>
<td>h) Evaporation rate</td>
<td>Not available</td>
</tr>
<tr>
<td>i) Flammability (solid, gas)</td>
<td>Not available</td>
</tr>
<tr>
<td>j) Upper/lower flammability or explosive limits</td>
<td>Not available</td>
</tr>
</tbody>
</table>
k) Vapour pressure (mm Hg)  Not available
l) Vapour density  Not available
m) Relative density  Not available
n) Water solubility  Not available
o) Partition coefficient: n-octanol/water  Not available
p) Autoignition temperature  Not available
q) Decomposition temperature  Not available
r) Viscosity  Not available

**SECTION 10 – STABILITY AND REACTIVITY**

Reactivity
Data not available.

Chemical stability
Stable.

Possibility of hazardous reactions
Data not available.

Conditions to avoid
Data not available.

Incompatible material
Data not available.

Hazardous decomposition products
Data not available.

**SECTION 11 – TOXICOLOGICAL INFORMATION**

Acute toxicity
Data not available.

Skin corrosion/irritation
Data not available.

Serious eye damage/eye irritation
Data not available.

Respiratory or skin sensitization
Data not available.
Germ cell mutagenicity
Data not available.

Carcinogenicity
IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

Reproductive toxicity
Data not available.

Specific target organ toxicity – single exposure
Data not available.

Specific target organ toxicity – repeated exposure
Data not available.

Aspiration hazard
Data not available.

Other information
RTECS: Data not available

### SECTION 12 – ECOLOGICAL INFORMATION

Toxicity
Data not available.

Persistence and degradability
Data not available.

Bioaccumulative potential
Data not available.

Mobility in soil
Data not available.

Other adverse effect
Data not available.

### SECTION 13 – DISPOSAL CONSIDERATIONS

Product
Offer surplus and non-recyclable solutions to a licensed disposal company.

Contaminated packaging
Dispose off as unused product.

### SECTION 14 – TRANSPORT INFORMATION

UN Number
ADR/RID: -  IMDG: -  IATA-DGR: -
UN Proper Shipping Name:
ADR/RID: Not dangerous goods
IMDG: Not dangerous goods
IATA-DGR: Not dangerous goods

Transport Hazard Class(es)
ADR/RID: -
IMDG: -
IATA-DGR: -

Packing Group
ADR/RID: -
IMDG: -
IATA-DGR: -

Environmental Hazards
ADR/RID: no
IMDG: marine pollutant: no
IATA-DGR: no

Special Precaution for Users
Data not available

SECTION 15 – REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance or mixture
Data not available

SECTION 16 – OTHER INFORMATION

Date of Issue: JULY 11, 2008
Date of Revision: MAY 07, 2017

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. Axil Scientific Pte Ltd shall not be held liable for any damage resulting from handling or from contact with the above product.