

Material Safety Data Sheet

Section 1 Chemical Product and Company Identification

MSDS Name: 10x Phosphate Buffered Saline (PBS)
 Product Code: 20-7400
 Synonyms: None
 Company identification: Severn Biotech Limited
 Unit 2 Park Lane Industrial Estate
 Kidderminster
 Worcestershire
 DY11 6TJ

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Section 2 - Composition, Information on Ingredients

CAS	Chemical Name	%	EINECS	Risk Phrases
7647-14-5	Sodium chloride	8%	231-598-3	None listed
7447-40-7	Potassium chloride	<1%	231-211-8	None listed
13472-35-0	Monosodium phosphate	<2%	231-449-2	None listed
7778-77-0	Potassium phosphate	<1%	231-449-2	None listed
7732-18-5	Deionised water	>80%	231-791-2	None listed

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Non-specific irritant. May cause eye, skin and respiratory tract irritation.

Potential Health Effects

Eye: May cause eye irritation.
 Skin: May cause skin irritation.
 Ingestion: May cause irritation of the digestive tract.
 Inhalation: May cause irritation of the respiratory tract.
 Chronic: No information found.

Section 4 - First Aid Measures

Eye: Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. If irritation develops, get medical aid.
 Skin: Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical aid if irritation develops or persists. Wash clothing before reuse.
 Ingestion: Never give anything by mouth to an unconscious person. Do NOT induce vomiting. If conscious and alert, rinse mouth and drink 2-4 cupfuls of milk or water. Wash mouth out with water. Get medical aid if irritation or symptoms occur.
 Inhalation: Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid if cough or other symptoms appear.
 Chronic:

Notes to Physician: Treat symptomatically and supportively.

Section 5 - Fire Fighting Measures

General Information: In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full facepiece operated in the pressure

demand or other positive pressure mode. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Non-combustible, substance itself does not burn but may decompose upon heating to produce irritating, corrosive and/or toxic fumes.

Fire: Not considered to be a fire hazard.

Explosion: Not considered to be an explosion hazard.

Extinguishing Media: Substance is noncombustible; use agent most appropriate to extinguish surrounding fire.

Section 6 - Accidental Release Measures

Avoid runoff into storm sewers and ditches which lead to waterways. Clean up spills immediately, observing precautions in the Protective Equipment section. Absorb spill using an absorbent, non-combustible material such as earth, sand, or vermiculite. Do not use combustible materials such as sawdust. Provide ventilation.

Section 7 - Handling and Storage

Wash thoroughly after handling. Wash thoroughly after handling. Avoid contact with eyes, skin, and clothing. Keep container tightly closed. Avoid ingestion and inhalation. Use with adequate ventilation.

Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances. No special precautions indicated.

Section 8 - Exposure Controls, Personal Protection

Airborne Exposure Limits: None established for any component.

Ventilation System: In general, dilution ventilation is a satisfactory health hazard control for this substance. However, if conditions of use create discomfort to the worker, a local exhaust system should be considered.

Personal Respirators (NIOSH Approved): For conditions of use where exposure to dust or mist is apparent and engineering controls are not feasible, a particulate respirator (NIOSH type N95 or better filters) may be worn. If oil particles (e.g. lubricants, cutting fluids, glycerine, etc.) are present, use a NIOSH type R or P filter. For emergencies or instances where the exposure levels are not known, use a full-face positive-pressure, air-supplied respirator. WARNING: Air-purifying respirators do not protect workers in oxygen-deficient atmospheres.

Skin Protection: Wear protective gloves and clean body-covering clothing.

Eye Protection: Safety glasses. Maintain eye wash fountain and quick-drench facilities in work area.

Section 9 - Physical and Chemical Properties

Physical State:	Liquid.
Colour:	Clear, colourless.
Odour:	Weak odour.
pH:	7.0
Vapour Pressure:	Not available
Vapour Density:	>1.0
Evaporation Rate:	Not available
Viscosity:	Not available
Boiling Point:	>100 deg C
Freezing/Melting Point:	0 deg C
Decomposition Temperature:	Not available
Solubility in water:	Soluble.
Specific Gravity/Density:	Not available
Molecular Formula:	Not applicable
Molecular Weight:	Not applicable

Section 10 - Stability and Reactivity

Chemical Stability: Stable under normal temperatures and pressures.
Conditions to Avoid: Incompatible materials, excess heat.
Incompatibilities with Other Materials: Strong acids, strong bases.
Hazardous Decomposition Products: Carbon monoxide, carbon dioxide.
Hazardous Polymerization has not been reported.

Section 11 - Toxicological Information

LD50/LC50:

CAS# 7447-40-7: Draize test, rabbit, eye: 500 mg/24H Mild;
Oral, mouse: LD50 = 1500 mg/kg;
Oral, rat: LD50 = 2600 mg/kg;

CAS# 7558-79-4: Draize test, rabbit, eye: 500 mg/24H Mild;
Draize test, rabbit, skin: 500 mg/24H Mild;
Oral, rat: LD50 = 17 gm/kg;

CAS# 7647-14-5: Draize test, rabbit, eye: 100 mg Mild;
Draize test, rabbit, eye: 100 mg/24H Moderate;
Draize test, rabbit, eye: 10 mg Moderate;
Draize test, rabbit, skin: 50 mg/24H Mild;
Draize test, rabbit, skin: 500 mg/24H Mild;
Inhalation, rat: LC50 = >42 gm/m³/1H;
Oral, mouse: LD50 = 4 gm/kg;
Oral, rat: LD50 = 3000 mg/kg;
Skin, rabbit: LD50 = >10 gm/kg;

CAS# 7732-18-5: Oral, rat: LD50 = >90 ml/kg

Carcinogenicity: Potassium chloride - Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.
Monosodium phosphate - Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.
Sodium chloride - Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.
Water - Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.

Other: See actual entry in RTECS for complete information.

Section 12 - Ecological Information

Not available.

Section 13 - Disposal Considerations

Dispose of in a manner consistent with government and local regulations.

Section 14 - Transport Information

Shipping Name: Not regulated
Hazard Class: -
UN Number: -
Packing Group: -

Section 15 - Regulatory Information

European/International Regulations
European Labelling in Accordance with EC Directives
Hazard Symbols: None available
Risk Phrases:
None listed.
Safety Phrases:

A After contact with skin, wash immediately with plenty of water.

S 37 Wear suitable gloves.

S 45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

Section 16 - Other Information

MSDS Creation Date: 15/05/2006

Revision number: 1

Revision Date: 30/06/2009

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall the company be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential, or exemplary damages howsoever arising, even if the company has been advised of the possibility of such damages.