

Material Safety Data Sheet

Section 1 Chemical Product and Company Identification

MSDS Name: 1x Phosphate Buffered Saline (PBS) w/v 0.1% sodium azide
 Product Code: 20-7430
 Synonyms: None
 Company identification: Severn Biotech Limited
 Unit 2 Park Lane Industrial Estate
 Kidderminster
 Worcestershire
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Section 2 - Composition, Information on Ingredients

CAS	Chemical Name	%	EINECS	Risk Phrases
7647-14-5	Sodium chloride	0.8%	231-598-3	None listed
7447-40-7	Potassium chloride	<0.1%	231-211-8	None listed
13472-35-0	Monosodium phosphate	<0.2%	231-449-2	None listed
7778-77-0	Potassium phosphate	<0.1%	231-449-2	None listed
26628-22-8	Sodium azide	0.1%	247-852-1	28 32 50/53
7732-18-5	Deionised water	>95%	231-791-2	None listed

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Harmful if swallowed. Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Potential Health Effects

Eye: Moderate eye irritant.

Skin: Skin irritant. Sodium azide may be absorbed through the skin with systemic toxicity.

Ingestion: Neurological toxin with hypotensive, visual, and acute cerebral effects.

Inhalation: Respiratory tract and mucous membrane irritant, with symptoms similar to those by ingestion. Prolonged or repeated exposure to sodium azide solution aerosols may result in permanent neurological damage, collapse, or death.

Chronic: DANGER!!! Effects of over exposure are headache, nausea, vomiting and severe damage to the retina and optic nerve of the eyes. POISONOUS!!! May be fatal if inhaled, swallowed or absorbed through the skin. May cause severe burns to skin, eyes and mucous membranes. May cause breathlessness and collapse from respiratory failure.

Section 4 - First Aid Measures

Eye: Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Seek medical attention.

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: If swallowed, induce vomiting immediately after giving two glasses of water. Never give anything by mouth to an unconscious person. Seek medical attention.

- 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: Seek medical attention immediately and show this MSDS to the attending physician.

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, the 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

Use personal protective equipment. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Do not let product enter drains. Discharge into the environment must be avoided. Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal.

Section 7 - Handling and Storage

Avoid inhalation of vapour or mist. Normal measures for preventive fire protection. Store in cool place. Keep container tightly closed in a dry and well-ventilated place.

Recommended storage temperature: 2 - 8 °C.

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:	7.4
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

CAS# 26628-22-8: LD50, oral, rat: 27 mg/kg
 LD50, oral, mouse: 27 mg/kg
 LC50, inhalation, rat: 37 mg/m³
 LC50, inhalation, mouse: 32.4 mg/m³
 LD50, skin, rat: 50 mg/kg
 LD50, skin, rabbit: 20 mg/kg
 Sodium azide has been investigated as a Mutagen and Tumorigen

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.
 Sodium azide - Unknown.

Other: See actual entry in RTECS for complete information.

Section 12 - Ecological Information

Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Ecotoxicity: - calculated for a 2 % by weight aqueous sodium azide solution

LC50 Rainbow Trout 0.04 - 0.08 ml product/l test water (96 H, 13 deg C)

LC50, Bluegill/Sunfish 0.035 - 0.04 ml product/l test water (96 H, 18 deg C)

Aquatic fate: Initially, photolysis of sodium azide will result in the formation of metallic nitrides with metals found in natural waters. These nitrides will decompose over time into nitrogen gas and free metals.

Section 13 - Disposal Considerations

DProducts containing sodium azide may not be disposed to an industrial sewer system, and must be disposed in a manner consistent with governmental 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: T+, N

Risk Phrases:

R28 - R32 - R50/53

Safety Phrases:

S1/2, S28, S45

Section 16 - Other Information

MSDS Creation Date: 15/04/2006

Revision number: 1

Revision Date: 20/07/2009

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