

# Material Safety Data Sheet

## 1. Product and company identification

Product name	Borate pH Standard Solution , pH9.18
Name of manufacturer	Bell Science Co., Ltd
Address	3-2-5, Koyata, Iruma-city, Saitama 358-0031 Japan
Name of section	Product management division
Telephone number	+81-42-960-6686
Facsimile number	+81-42-960-6687
MSDS No.	ph9004

## 2. Composition/Information on ingredients

Substance/Mixture	Substance
Chemical name or commercial name	Sodium tetraborate decahydrate
Ingredients and composition	0.38%(0.009964mol/l) Sodium tetraborate decahydrate in water
Chemical formula	Na <sub>2</sub> B <sub>4</sub> O <sub>7</sub> · 10H <sub>2</sub> O
CAS No.	1303-96-4
TSCA Inventory	Registered
EINECS No.	-

## 3. Summary of danger and Hazard

Adverse human health hazards	The chemical does not have particular human health hazards, but a large dose swallow may cause nausea, vomiting, diarrhea.
Environmental effects	Nothing particular
Physical and Chemical hazards	Noncombustible and does not have particular physical and chemical hazards.

## 4. First aid measures

Inhalation	Remove the victim to fresh air, and make him blow his nose and gargle.
Skin contact	Wash the affected areas under running water.
Eye contact	Wash the affected areas under running water.
Ingestion	Give the victim water immediately.

## 5. Fire fighting measures

Extinguishing media	This product is noncombustible.
Particular fire fighting	Move containers from fire area if it can be done without risk, if not possible, apply water from a safe distance to cool and protect surrounding area.

## 6. Accidental release measures

Cautions for personnel If necessary, wear proper protective equipment.

Cautions for environment Nothing particular

Removal measure Absorb spill with paper or cloth.

## 7. Cautions of handling and storage

## Handling

Engineering measures Avoid contact with skin.

## Storage

Adequate storage condition Store in a dark, cool place and tightly closed.

Safety adequate container materials

Glass, polyethylene, polypropylene

## 8. Exposure control/Personal protection

Engineering measures Install a local ventilation system under dense vapor or dusty condition.

Control parameters ACGIH(2002); 5mg/m<sup>3</sup>(as Sodium tetraborate decahydrate)(TLV-TWA)

## Protective equipment

Respiration protective equipment

Not necessary

Hands protective equipment If necessary, wear gloves.

Eyes protective equipment If necessary, wear goggles.

## 9. Physical and chemical properties

Appearance Liquid

Color Colorless

Odor Odorless

pH 9.18 at 25°C

Specific temperature or temperature range of physical conditions change

Boiling point Approx. 100°C

Melting point Approx. 0°C

Flash point Noncombustible

Specific gravity Approx. 1g/ml(at 20°C)

## Solubility

Solubility in solvents Water: Freely soluble

## 10. Stability and reactivity

Stability Stable under normal usage.

Incompatible conditions Light, heat

## 11. Toxicological information

Acute toxicity If swallowed a large dose, may cause disorder of liver, kidneys, and

central nerve system.

(as Sodium tetraborate decahydrate)

Rat oral LD50=2660mg/kg

Human oral LDL 0=703mg/kg

Local effect

Irritation to skin, eyes If contacted with eyes, eyes are irritated.

Allergenic and sensitizing effects

Not available

Chronic and long term toxicity Not available

Carcinogenic effects Listed on neither IARC nor NTP.

Mutagen city Not available

Teratogenic effects Not available

Effects on the reproductive system

Not available

12. Ecological information

Mobility Not available

Reliability and degradability Not available

13. Disposal consideration

Residual disposal Dilute with water and adjust pH of the solution. After that, flush in drains with plenty of water. Or consult approved disposal companies.

Containers In case of disposal of empty bottles, dispose bottles after removing the content thoroughly.

14. Transport information

UN class Not applicable

The information contained herein is based on several references and the present state of our knowledge. However the MSDS does not always cover all information about the product, handle the product carefully.

The information is intended to ordinary usage, in case of particular handling, conduct appropriate safety measurements.

The information herein is only provision of information, and it does not represent a guarantee the properties of the product.