HURST SCIENTIFIC

Safety Data Sheet
Sodium Tetraborate

SECTION 1: Identification

GHS Product identifier

Product name	Sodium Tetraborate
Product number	SODTBO-500G
Brand	Hurstchem

Other means of identification

Sodium Borate

Recommended use of the chemical and restrictions on use

Laboratory Reagent

Supplier's details

Name	Hurst Scientific
Address	2/36 Hensbrook Loop 6112 Forrestdale WA Australia
Telephone	1300 778 068
email	sales@hurstscientific.com.au

Emergency phone number

Australian Poisons Information Centre 131 126
Australian Emergency Services 000

SECTION 2: Hazard identification

General hazard statement

Classified as a **Hazardous** substance according to the Globally Harmonised System of Classification and Labelling of Chemicals (GHS) and Safe Work Australia criteria.

Classification of the substance or mixture

GHS classification in accordance with: UN GHS revision 7

- Serious eye damage/eye irritation, Cat. 2A

- Toxic to reproduction, Cat. 1

GHS label elements, including precautionary statements

Pictograms

1. Health hazard; 2. Exclamation mark

Signal word	**Warning**

Hazard statement(s)

H319	Causes serious eye irritation
H360	May damage fertility or the unborn child [effect, route]

Precautionary statement(s)

P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P264	Wash … thoroughly after handling.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308+P313	IF exposed or concerned: Get medical advice/attention.
P337+P313	If eye irritation persists: Get medical advice/attention.
P405	Store locked up.
P501	Dispose of contents/container to …

SECTION 3: Composition/information on ingredients

Mixtures

Hazardous components

1. Disodium tetraborate, anhydrous

Concentration	100 %
CAS no.	1303-96-4

SECTION 4: First-aid measures

Description of necessary first-aid measures

General advice	Show this material safety data sheet to the doctor in attendance
If inhaled	After inhalation: fresh air. Call in physician.
In case of skin contact	In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower. Consult a physician.
In case of eye contact	After eye contact: rinse out with plenty of water. Call in ophthalmologist. Remove contact lenses.

If swallowed	After swallowing: immediately make victim drink water (two glasses at most). Consult a physician.

Most important symptoms/effects, acute and delayed
The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

Indication of immediate medical attention and special treatment needed, if necessary
No data available

SECTION 5: Fire-fighting measures

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

Specific hazards arising from the chemical
Borane/boron oxides
Sodium oxides
Not combustible.
Ambient fire may liberate hazardous vapours.

Special protective actions for fire-fighters
Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

Further information
Suppress (knock down) gases/vapors/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system.

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures
Advice for non-emergency personnel: Avoid inhalation of dusts. Avoid substance contact.
Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert.
For personal protection see section 8.

Environmental precautions
Do not let product enter drains.

Methods and materials for containment and cleaning up
Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up carefully. Dispose of properly. Clean up affected area. Avoid generation of dusts.

Reference to other sections
For disposal see section 13.

SECTION 7: Handling and storage

Precautions for safe handling
Work under hood. Do not inhale substance/mixture.Hygiene measures
Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance.
For precautions see section 2.2.

Conditions for safe storage, including any incompatibilities
Store in a cool, dry, well-ventilated area away from incompatibles. Keep containers tightly closed.Storage class
Storage class (TRGS 510): 6.1D: Non-combustible, acute toxic Cat.3 / toxic hazardous materials or hazardous materials causing chronic effects

Specific end use(s)
Apart from the uses mentioned in section 1.3 no other specific uses are stipulated.

SECTION 8: Exposure controls/personal protection

Control parameters

CAS: 1303-96-4
Disodium tetraborate, anhydrous
AU/SWA (Australia): 5 mg/m3 TWA inhalation

Appropriate engineering controls
Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance.

Individual protection measures, such as personal protective equipment (PPE)

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

Skin protection
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).
Full contact
Material: Nitrile rubber
Minimum layer thickness: 0.11 mm
Break through time: 480 min
Material tested:KCL 741 Dermatril® L
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).
Splash contact
Material: Nitrile rubber
Minimum layer thickness: 0.11 mm
Break through time: 480 min
Material tested:KCL 741 Dermatril® L

Body protection
protective clothing

Respiratory protection
required when dusts are generated.

Our recommendations on filtering respiratory protection are based on the following standards: DIN EN 143, DIN 14387 and other accompanying standards relating to the used respiratory protection system.

Environmental exposure controls
Do not let product enter drains.

SECTION 9: Physical and chemical properties

Basic physical and chemical properties

Appearance	Crystalline
Color	White
Odor	Odourless
Melting point/freezing point	75 °C - Elimination of water of crystallization
Boiling point or initial boiling point and boiling range	No data available
Flammability	The product is not flammable
Lower and upper explosion limit/flammability limit	No data available
Flash point	Not applicable
Auto-ignition temperature	No data available
Decomposition temperature	No data available
pH	9.0 - 9.5 at 38.1 g/l at 25 °C
Kinematic viscosity	No data available
Solubility	38.1 g/l at 20 °C - completely soluble
Partition coefficient n-octanol/water (log value)	Not applicable for inorganic substances
Vapor pressure	0.213 hPa at 20 °C
Density and/or relative density	1.73 g/cm3 at 25 °C - lit.
Relative vapor density	No data available

SECTION 10: Stability and reactivity

Reactivity
No data available

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

Possibility of hazardous reactions
Violent reactions possible with:
strong oxidising agents, Acids, metallic salts

Conditions to avoid
no information available

Incompatible materials
No data available

Hazardous decomposition products
In the event of fire: see section 5

SECTION 11: Toxicological information

Information on toxicological effects

Acute toxicity
LD50 Oral - Rat - male - > 2,500 mg/kg
(OECD Test Guideline 401)
LC50 Inhalation - Rat - male and female - 4 h - > 2.12 mg/l - dust/mist
(OECD Test Guideline 403)
Remarks: The value is given in analogy to the following substances: boric acid
LD50 Dermal - Rabbit - male and female - > 2,000 mg/kg
Remarks: (ECHA)
The value is given in analogy to the following substances: disodium tetraborate pentahydrate

Skin corrosion/irritation
Skin - Rabbit
Result: No skin irritation - 24 h
Remarks: (ECHA)
The value is given in analogy to the following substances: disodium tetraborate pentahydrate

Serious eye damage/irritation
Eyes - Rabbit
Result: Causes serious eye irritation. - 14 Days

Respiratory or skin sensitization
Buehler Test - Guinea pig
Result: negative

Germ cell mutagenicity
Test Type: sister chromatid exchange assay Test system: Chinese hamster ovary cells Metabolic activation: with and without metabolic activation
Result: negative
Remarks: (in analogy to similar products)
Test Type: Ames test
Test system: S. typhimurium
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 471
Result: negative
Test Type: In vitro mammalian cell gene mutation test
Test system: mouse lymphoma cells
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 476
Result: negative
Test Type: Micronucleus test
Species: Mouse
Application Route: Oral
Method: OECD Test Guideline 474
Result: negative

Carcinogenicity
No data available

Reproductive toxicity
May damage the unborn child. May damage fertility.

Specific target organ toxicity (STOT) - single exposure

No data available

Specific target organ toxicity (STOT) - repeated exposure
No data available

Aspiration hazard
No data available

Additional information
Repeated dose toxicity - Rat - male and female - Oral - 2 yr - NOAEL (No observed adverse effect level) - 100 mg/kg - LOAEL (Lowest observed adverse effect level) - 334 mg/kg
Remarks: (ECHA)
Animal feeding studies in rat, mouse and dog, at high doses, have demonstrated effects on fertility and testes. Studies with the chemically related boric acid in the rat, mouse and rabbit, at high doses, demonstrate developmental effects on the fetus, including fetal weight loss and minor skeletal variations. The doses administered were many times in excess of those to which humans would normally be exposed. Human epidemiological studies show no increase in pulmonary disease in occupational populations with cronic exposures to boric acid dust and sodium borate dust. A recent epidemiological study under the conditions of normal occupational eposure to borate dusts indicated no effect on fertility.

SECTION 12: Ecological information

Toxicity
No data available

Persistence and degradability
No data available

Bioaccumulative potential
Not expected to bio-accumulate.

Mobility in soil
No data available

Other adverse effects
Environmental fate (exposure) Do not contaminate drains and waterways.

SECTION 13: Disposal considerations

Product disposal
Dispose of in accordance with local authority guidelines.

Packaging disposal
Dispose of in accordance with local authority guidelines.

Other disposal recommendations
Special precautions Nil.

SECTION 14: Transport information

UN Number	None
UN Proper Shipping Name	None
Transport hazard class(es)	None

Packing group	None
Environmental hazards	None
Special precautions for user	None
Transport in bulk according to IMO instruments	None

SECTION 15: Regulatory information

Chemical Safety Assessment
 Poison Schedule: Not scheduled.

SECTION 16: Other information

Further information/disclaimer
This SDS is prepared in accordance with the Safe Work Australia, Preparation of Safety Data Sheets for Hazardous Chemicals Code of Practice, (2011). The information contained within is believed to be accurate at the date of preparation/review. Hurst Scientific makes no claims of the accuracy or completeness of the information and excludes all liability for any loss or damage related to the supply or use of the information in this material safety data sheet. It is recommended the user make their own determinations as to the suitability of the information provided to the application in which the product is to be used.

Preparation information
References
1. Safe Work Australia, Preparation of Safety Data Sheets for Hazardous Chemicals Code of Practice, (2011).
2. Safe Work Australia, National Code of Practice for the Labelling of Workplace Hazardous Chemicals (2015).
3. Safe Work Australia, Workplace Exposure Standards for Airborne Contaminants (2013)
4. National Transport Commission Australian Code for the Transport of Dangerous Goods by Road and Rail (ADG Code); Canprint: Canberra (2007), Volume 1, 7th Edition.
5. Standards Australia, Dangerous Goods Initial Emergency Response Guide: Australian Handbook (SAA/SNZ HB76); Homebush (2004).