Reflecta Laboratory Supplies
Glassware & Chemicals

RLS CHEMICALS | 149 ELSBURG ROAD - GERMISTON - JHB| +27 11 913 8060 | INFO@REFLECTASGT.CO.ZA | WWW.LABEQUIPSUPPLY.CO.ZA

Material Safety Data Sheets (MSDS)

di-Sodium Tetraborate 10 Hydrate

Identification of Product

Chemical Code: CHE-S38

Chemical Name: di-Sodium Tetraborate 10 Hydrate

Chemical Grade: AR

Chemical Formula: $Na_2B_4O_7 . 10H_2O$

Chemical Weight: 381.37 g/mol

CAS No: 1303-96-4

Chemical Synonyms: Boraxdecahydrate, Sodium borate decahydrate

Hazards Identification

REACH No: 01-2119490790-32-XXXX

Signal Word: Danger

Supplemental Hazard Information:

Additional Hazard Information: No Data Available

Hazards statements

H360FD - May damage fertility. May damage the unborn child.

Precautionary statements

P201 - Obtain special instructions before use.

P308 + P313 - IF exposed or concerned: Get medical advice/ attention.

Composition of Chemical

Chemical Formula: $Na_2B_4O_7 . 10H_2O$

EC No 1272/2008: 01-2119490790-32-XXXX

First Aid Measures

General Advice: Consult a physician. Show this safety data sheet to the doctor in attendance.

If: Inhaled: If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

If: Skin Contact: Wash off with soap and plenty of water. Consult a physician.

If: Eye Contac: Flush eyes with water as a precaution.

If: Swallowed: Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

Important Symptoms: The most important known symptoms and effects are described in the labelling.

Immediate Medical Attention: No Data Available

Firefighting Measures

Extinguishing Media: Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Hazards Arising: Borane/boron oxides, Sodium oxides

Advice for Firefighters: Wear self contained breathing apparatus for fire fighting if necessary.

Info for Firefighting: The product itself does not burn.

Accidental Release Measures

Personal Precautions: Use personal protective equipment. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.

Enviromental Precautions: Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

Method for Containment: Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

Handling and Storage

Personal Precautions: Avoid formation of dust and aerosols.Avoid exposure - obtain special instructions before use. Provide

appropriate exhaust ventilation at places where dust is formed.

Enviromental Precautions: Store in cool place. Keep container tightly closed in a dry and well-ventilated place.

Exposure Controls | Personal Protection

Derived No Effect Level (DNEL)

Workers | Application Area | Exposure Routes | Health Effect | Value

No Data Available

Consumers | Application Area | Exposure Routes | Health Effect | Value

No Data Available

Predicted No Effect Concentration (PNEC)

No Data Available

Engineering Controls: Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Eye/Face Protection: Safety glasses with side-shields conforming to EN166 Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin 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
Material tested:Dermatril® (KCL 740 / Size M)

Splash contact:
Material: Nitrile rubber
Minimum layer thickness: 0,11 mm
Break through time: 480 min
Material tested:Dermatril® (KCL 740 / Size M)
test method: EN374
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: impervious clothing, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory Protection: Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Physical and Chemical Properties

Appearance: Form: crystalline, Colour: white

Odour: No Data Available

Odour Threshold: No Data Available

pH: 9,2 at 10 g/l

Melting Point: 62 °C

Boiling Point: No Data Available

Flash Point: No Data Available

Evaporation: No Data Available

Flammability: No Data Available

Upper/Lower Flammability or Explosive Limits: No Data Available

Vapour pressure: No Data Available

Vapour density: No Data Available

Relative density: 1,73 g/cm3 at 25 °C

Water solubility: 38,1 g/l at 20 °C - completely soluble

Partition Coefficien: No Data Available

Auto-ignition Temperature: No Data Available

Decomposition Temperature: No Data Available

Viscosity: No Data Available

Explosive properties: No Data Available

Oxidizing properties: No Data Available

Other Safety Info: No Data Available

Stability and Reactivity

Reactivity: No Data Available

Chemical Stability: Stable under recommended storage conditions.

Possibility of hazardous reactions: No Data Available

Conditions to Avoid: No Data Available

Incompatible Materials: Strong oxidizing agents, Strong reducing agents

Hazardous Decomposition Products: No Data Available

Toxicological Information

Acute Toxicity: LD50 Oral - rat - 4.500 - 5.000 mg/kg
LD50 Dermal - rabbit - 10.000 mg/kg

Skin Corrosion/Irritation: No Data Available

Serious Eye damage | Eye Irritation: No Data Available

Cell Mutagenicity: No Data 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: fetotoxicity
Presumed human reproductive toxicant
Presumed human reproductive toxicant

Specific Target Organ Toxicity - Single Exposure: No Data Available

Specific Target Organ Toxicity - Repeated Exposure: No Data Available

Aspiration Hazard: No Data Available

Ecological Information

Ecological Toxicity: Toxicity to fish - LC50 - Carassius auratus (goldfish) - 178 mg/l - 72 h
Toxicity to daphnia and other aquatic invertebrates - EC50 - Daphnia magna (Water flea) - 1.085 - 1.402 mg/l - 48 h
Toxicity to algae - IC50 - Desmodesmus subspicatus (green algae) - 158 mg/l - 96 h

Ecological Persistence and degradability: No Data Available

Bioaccumulative Potential: No Data Available

Mobility in Soil: No Data Available

Results of PBT and vPvB Assessment: PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

Other Adverse Effect: No Data Available

Disposal Considerations

Waste Treatment Methods: Product - Offer surplus and non-recyclable solutions to a licensed disposal company.
Contaminated packaging - Dispose of as unused product.

Transport Information

UN Number: ADR/RID: -
IMDG: -
IATA: -

UN Shipping Hazard: ADR/RID: Not dangerous goods
IMDG: Not dangerous goods
IATA: Not dangerous goods

Transport Hazard Class: ADR/RID: -
IMDG: -
IATA: -

Packaging Group: ADR/RID: -
IMDG: -
IATA: -

Enviromental Hazards: ADR/RID: no
IMDG Marine pollutant: no
IATA: no

Special Precautions: No Data Available

Regulatory Information

Safety, Health and environmental regulations: Disodium tetraborate decahydrate - CAS-No.: 1303-96-4
Candidate List of Substances of Very High Concern for Authorisation
Toxic for reproduction (article 57c)
ED/30/2010

Disodium tetraborate decahydrate - CAS-No.: 1303-96-4
Candidate List of Substances of Very High Concern for Authorisation
Toxic for reproduction (article 57c)
ED/30/2010

Chemical Safety Assessment: For this product a chemical safety assessment was not carried out

Additional Info: Full text of H-Statements:
H360FD - May damage fertility. May damage the unborn child.
Repr. - Reproductive toxicity

Full text of R-phrases
T - Toxic
R60 - May impair fertility.
R61 - May cause harm to the unborn child.
Repr.Cat.2 - Toxic to Reproduction Category 2

Additional Information
RTECS: VZ2275000

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.