

## H50V Lyse, RFID

Version 1.0      Revision Date: 03.12.2025      SDS Number: 11604507-00001      Date of last issue: -  
Date of first issue: 03.12.2025

---

### 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : H50V Lyse, RFID  
Product code : 1440110 H50V Lyse 200 mL, RFID 1440109 H50V Lyse 500 mL, RFID

#### Manufacturer or supplier's details

Company : Boule Medical AB  
Address : Domnarvsgatan 4  
Spånga 163 53  
Telephone : +46 8 7447700  
Emergency telephone number : Access Code: 60262  
(Americas Non-Specific) +1 760 476 3961  
(Middle East/Africa) +1 760 476 3959  
(Asia Pacific Non-Specific) +1 760 476 3960  
(Non-Region Specific) +1 760 476 3971

E-mail address : product-stewardship@boule.com

#### Recommended use of the chemical and restrictions on use

Recommended use : For Veterinary In Vitro Diagnostic Use  
Restrictions on use : Not applicable



---

### 2. HAZARDS IDENTIFICATION

#### GHS Classification

Skin corrosion/irritation : Category 3  
Reproductive toxicity : Category 1B  
Short-term (acute) aquatic hazard : Category 1  
Long-term (chronic) aquatic hazard : Category 2

#### GHS label elements

Hazard pictograms :  

**H50V Lyse, RFID**

Version 1.0      Revision Date: 03.12.2025      SDS Number: 11604507-00001      Date of last issue: -  
 Date of first issue: 03.12.2025

Signal word : Danger

Hazard statements : H316 Causes mild skin irritation.  
 H360FD May damage fertility. May damage the unborn child.  
 H400 Very toxic to aquatic life.  
 H411 Toxic to aquatic life with long lasting effects.

Precautionary statements : **Prevention:**  
 P203 Obtain, read and follow all safety instructions before use.  
 P273 Avoid release to the environment.  
 P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

**Response:**  
 P318 IF exposed or concerned, get medical advice.  
 P332 + P317 If skin irritation occurs: Get medical help.  
 P391 Collect spillage.

**Storage:**  
 P405 Store locked up.

**Disposal:**  
 P501 Dispose of contents/ container to an approved waste disposal plant.

**Other hazards which do not result in classification**

None known.

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

Substance / Mixture : Mixture

**Components**

Chemical name	CAS-No.	Concentration (% w/w)
Dodecyltrimethylammonium chloride	112-00-5	>= 2.5 - < 5
Boric acid	10043-35-3	>= 0.3 - < 1
Tetradonium bromide	1119-97-7	>= 0.25 - < 1
Borax	1303-96-4	>= 0.1 - < 0.3

**4. FIRST AID MEASURES**

General advice : In the case of accident or if you feel unwell, seek medical advice immediately.  
 When symptoms persist or in all cases of doubt seek medical advice.

If inhaled : If inhaled, remove to fresh air.  
 Get medical attention.

In case of skin contact : In case of contact, immediately flush skin with plenty of water.  
 Remove contaminated clothing and shoes.  
 Get medical attention.  
 Wash clothing before reuse.  
 Thoroughly clean shoes before reuse.

**H50V Lyse, RFID**

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	03.12.2025	11604507-00001	Date of first issue: 03.12.2025

---

- In case of eye contact : Flush eyes with water as a precaution.  
Get medical attention if irritation develops and persists.
- If swallowed : If swallowed, DO NOT induce vomiting.  
Get medical attention.  
Rinse mouth thoroughly with water.
- Most important symptoms and effects, both acute and delayed : Causes mild skin irritation.  
May damage fertility. May damage the unborn child.  
No information available.
- Protection of first-aiders : First Aid responders should pay attention to self-protection, and use the recommended personal protective equipment when the potential for exposure exists (see section 8).
- Notes to physician : Treat symptomatically and supportively.
- 

**5. FIREFIGHTING MEASURES**

- Suitable extinguishing media : Not applicable  
Will not burn
- Unsuitable extinguishing media : Not applicable  
Will not burn
- Specific hazards during fire-fighting : Exposure to combustion products may be a hazard to health.
- Hazardous combustion products : Carbon oxides  
Chlorine compounds  
Nitrogen oxides (NOx)
- Specific extinguishing methods : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.  
Use water spray to cool unopened containers.  
Remove undamaged containers from fire area if it is safe to do so.  
Evacuate area.
- Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus.  
Use personal protective equipment.
- 

**6. ACCIDENTAL RELEASE MEASURES**

- Personal precautions, protective equipment and emergency procedures : Use personal protective equipment.  
Follow safe handling advice (see section 7) and personal protective equipment recommendations (see section 8).

**H50V Lyse, RFID**

Version 1.0	Revision Date: 03.12.2025	SDS Number: 11604507-00001	Date of last issue: - Date of first issue: 03.12.2025
----------------	------------------------------	-------------------------------	--

---

- Environmental precautions : Avoid release to the environment.  
Prevent further leakage or spillage if safe to do so.  
Prevent spreading over a wide area (e.g. by containment or oil barriers).  
Retain and dispose of contaminated wash water.  
Local authorities should be advised if significant spillages cannot be contained.
  
- Methods and materials for containment and cleaning up : Soak up with inert absorbent material.  
For large spills, provide dyking or other appropriate containment to keep material from spreading. If dyked material can be pumped, store recovered material in appropriate container.  
Clean up remaining materials from spill with suitable absorbent.  
Local or national regulations may apply to releases and disposal of this material, as well as those materials and items employed in the cleanup of releases. You will need to determine which regulations are applicable.  
Sections 13 and 15 of this SDS provide information regarding certain local or national requirements.

---

**7. HANDLING AND STORAGE**

- Technical measures : See Engineering measures under EXPOSURE CONTROLS/PERSONAL PROTECTION section.
  
- Local/Total ventilation : If sufficient ventilation is unavailable, use with local exhaust ventilation.
  
- Advice on safe handling : Do not get on skin or clothing.  
Do not breathe vapours or spray mist.  
Do not swallow.  
Avoid contact with eyes.  
Handle in accordance with good industrial hygiene and safety practice, based on the results of the workplace exposure assessment  
Keep container tightly closed.  
Take care to prevent spills, waste and minimize release to the environment.
  
- Hygiene measures : If exposure to chemical is likely during typical use, provide eye flushing systems and safety showers close to the working place.  
When using do not eat, drink or smoke.  
Wash contaminated clothing before re-use.
  
- Conditions for safe storage : Keep in properly labelled containers.  
Store locked up.  
Keep tightly closed.  
Store in accordance with the particular national regulations.
  
- Materials to avoid : Do not store with the following product types:  
Strong oxidizing agents

## H50V Lyse, RFID

Version 1.0      Revision Date: 03.12.2025      SDS Number: 11604507-00001      Date of last issue: -  
Date of first issue: 03.12.2025

### 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

#### Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Boric acid	10043-35-3	TWA (Inhalable particulate matter)	2 mg/m <sup>3</sup> (Borate)	ACGIH
		STEL (Inhalable particulate matter)	6 mg/m <sup>3</sup> (Borate)	ACGIH
Borax	1303-96-4	TWA (Inhalable particulate matter)	2 mg/m <sup>3</sup> (Borate)	ACGIH
		STEL (Inhalable particulate matter)	6 mg/m <sup>3</sup> (Borate)	ACGIH

**Engineering measures** : Minimize workplace exposure concentrations.  
If sufficient ventilation is unavailable, use with local exhaust ventilation.

#### Personal protective equipment

**Respiratory protection** : If adequate local exhaust ventilation is not available or exposure assessment demonstrates exposures outside the recommended guidelines, use respiratory protection.

Filter type : Particulates type

**Hand protection**

Material : Chemical-resistant gloves

Remarks : Choose gloves to protect hands against chemicals depending on the concentration and quantity of the hazardous substance and specific to place of work. Breakthrough time is not determined for the product. Change gloves often! For special applications, we recommend clarifying the resistance to chemicals of the aforementioned protective gloves with the glove manufacturer. Wash hands before breaks and at the end of workday.

**Eye protection** : Wear the following personal protective equipment:  
Safety glasses

**Skin and body protection** : Select appropriate protective clothing based on chemical resistance data and an assessment of the local exposure potential.  
Skin contact must be avoided by using impervious protective clothing (gloves, aprons, boots, etc).

**H50V Lyse, RFID**

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	03.12.2025	11604507-00001	Date of first issue: 03.12.2025

---

**9. PHYSICAL AND CHEMICAL PROPERTIES**

Appearance	:	liquid
Colour	:	transparent
Odour	:	odourless
Odour Threshold	:	No data available
pH	:	2.20 - 3.20 Concentration: 100 %
Melting point/freezing point	:	0 °C
Initial boiling point and boiling range	:	100 °C
Flash point	:	boils before flash
Evaporation rate	:	No data available
Flammability (solid, gas)	:	Not applicable
Flammability (liquids)	:	Will not burn
Upper explosion limit / Upper flammability limit	:	No data available
Lower explosion limit / Lower flammability limit	:	No data available
Vapour pressure	:	0.1 hPa
Relative vapour density	:	1.004
Relative density	:	No data available
Density	:	1.004 g/cm <sup>3</sup>
Solubility(ies) Water solubility	:	completely soluble
Partition coefficient: n-octanol/water	:	Not applicable
Auto-ignition temperature	:	No data available
Decomposition temperature	:	No data available

**H50V Lyse, RFID**

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	03.12.2025	11604507-00001	Date of first issue: 03.12.2025

---

Viscosity  
Viscosity, kinematic : No data available

Explosive properties : Not explosive

Oxidizing properties : The substance or mixture is not classified as oxidizing.

Particle characteristics  
Particle size : Not applicable

---

**10. STABILITY AND REACTIVITY**

Reactivity : Not classified as a reactivity hazard.

Chemical stability : Stable under normal conditions.

Possibility of hazardous reactions : None known.

Conditions to avoid : None known.

Incompatible materials : None.

Hazardous decomposition products : No hazardous decomposition products are known.

---

**11. TOXICOLOGICAL INFORMATION**

Information on likely routes of exposure : Inhalation  
Skin contact  
Ingestion  
Eye contact

**Acute toxicity**

Not classified based on available information.

**Product:**

Acute oral toxicity : Acute toxicity estimate: > 5,000 mg/kg  
Method: Calculation method

**Components:****Dodecyltrimethylammonium chloride:**

Acute oral toxicity : LD50 (Rat, female): 681 mg/kg  
Method: OECD Test Guideline 401  
Remarks: The test was conducted equivalent or similar to guideline

**Boric acid:**

Acute oral toxicity : LD50 (Rat): 3,450 mg/kg

**H50V Lyse, RFID**

Version 1.0      Revision Date: 03.12.2025      SDS Number: 11604507-00001      Date of last issue: -  
Date of first issue: 03.12.2025

---

Acute inhalation toxicity : LC50 (Rat): > 2.03 mg/l  
Exposure time: 4 h  
Test atmosphere: dust/mist  
Method: OECD Test Guideline 403  
Assessment: The substance or mixture has no acute inhalation toxicity

Acute dermal toxicity : LD50 (Rabbit): > 2,000 mg/kg  
Assessment: The substance or mixture has no acute dermal toxicity

**Tetradonium bromide:**

Acute oral toxicity : LD50 (Rat): 390 mg/kg  
Method: OECD Test Guideline 401  
Remarks: The test was conducted equivalent or similar to guideline

Acute dermal toxicity : LD50 (Rabbit): > 2,000 mg/kg  
Remarks: Based on data from similar materials

**Borax:**

Acute oral toxicity : LD50 (Rat): 3,450 - 4,080 mg/kg

Acute inhalation toxicity : LC50 (Rat): > 2.03 mg/l  
Exposure time: 4 h  
Test atmosphere: dust/mist  
Method: OECD Test Guideline 403

Acute dermal toxicity : LD50 (Rabbit): > 2,000 mg/kg  
Assessment: The substance or mixture has no acute dermal toxicity

**Skin corrosion/irritation**

Causes mild skin irritation.

**Components:****Dodecyltrimethylammonium chloride:**

Species : Rabbit  
Method : OECD Test Guideline 404  
Result : Skin irritation  
Remarks : The test was conducted according to guideline

**Boric acid:**

Species : Rabbit  
Result : No skin irritation

**Tetradonium bromide:**

Species : Rabbit  
Result : Skin irritation

**H50V Lyse, RFID**

Version 1.0      Revision Date: 03.12.2025      SDS Number: 11604507-00001      Date of last issue: -  
Date of first issue: 03.12.2025

---

**Borax:**

Species : Rabbit  
Result : No skin irritation

**Serious eye damage/eye irritation**

Not classified based on available information.

**Components:****Dodecyltrimethylammonium chloride:**

Species : Rabbit  
Method : OECD Test Guideline 405  
Result : Irritation to eyes, reversing within 21 days  
Remarks : The test was conducted according to guideline

**Boric acid:**

Species : Rabbit  
Result : No eye irritation

**Tetradonium bromide:**

Species : Rabbit  
Method : OECD Test Guideline 405  
Result : Irreversible effects on the eye  
Remarks : The test was conducted according to guideline  
Based on data from similar materials

**Borax:**

Species : Rabbit  
Result : Irritation to eyes, reversing within 21 days

**Respiratory or skin sensitisation****Skin sensitisation**

Not classified based on available information.

**Respiratory sensitisation**

Not classified based on available information.

**Components:****Dodecyltrimethylammonium chloride:**

Test Type : Direct Peptide Reactivity Assay (DPRA)  
Method : OECD Test Guideline 442C  
Result : negative  
Remarks : The test was conducted according to guideline

Test Type : KeratinoSens assay  
Method : OECD Test Guideline 442D  
Result : negative  
Remarks : The test was conducted according to guideline

**Boric acid:**

**H50V Lyse, RFID**

Version 1.0      Revision Date: 03.12.2025      SDS Number: 11604507-00001      Date of last issue: -  
Date of first issue: 03.12.2025

---

Test Type : Buehler Test  
Exposure routes : Skin contact  
Species : Guinea pig  
Method : OECD Test Guideline 406  
Result : negative

**Tetradonium bromide:**

Test Type : Maximisation Test  
Exposure routes : Skin contact  
Species : Guinea pig  
Method : OECD Test Guideline 406  
Result : negative  
Remarks : The test was conducted according to guideline  
Based on data from similar materials

**Borax:**

Test Type : Buehler Test  
Exposure routes : Skin contact  
Species : Guinea pig  
Method : OECD Test Guideline 406  
Result : negative

**Germ cell mutagenicity**

Not classified based on available information.

**Components:****Dodecyltrimethylammonium chloride:**

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)  
Method: OECD Test Guideline 471  
Result: negative  
Remarks: The test was conducted equivalent or similar to guideline

Test Type: In vitro mammalian cell gene mutation test  
Result: negative

Test Type: DNA damage and repair, unscheduled DNA synthesis in mammalian cells (in vitro)  
Result: negative

**Boric acid:**

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)  
Result: negative

Test Type: In vitro mammalian cell gene mutation test  
Result: equivocal

Test Type: Chromosome aberration test in vitro  
Result: negative

Genotoxicity in vivo : Test Type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay)

**H50V Lyse, RFID**

Version 1.0      Revision Date: 03.12.2025      SDS Number: 11604507-00001      Date of last issue: -  
Date of first issue: 03.12.2025

---

Species: Mouse  
Application Route: Ingestion  
Result: negative

**Tetradonium bromide:**

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)  
Method: OECD Test Guideline 471  
Result: negative  
Remarks: The test was conducted according to guideline  
Based on data from similar materials

Test Type: In vitro mammalian cell gene mutation test  
Method: OECD Test Guideline 476  
Result: negative  
Remarks: The test was conducted according to guideline  
Based on data from similar materials

**Borax:**

Genotoxicity in vitro : Test Type: In vitro sister chromatid exchange assay in mam-  
malian cells  
Result: negative  
Remarks: Based on data from similar materials

Genotoxicity in vivo : Test Type: Mammalian erythrocyte micronucleus test (in vivo  
cytogenetic assay)  
Species: Mouse  
Application Route: Ingestion  
Result: negative  
Remarks: Based on data from similar materials

**Carcinogenicity**

Not classified based on available information.

**Components:****Boric acid:**

Species : Mouse  
Application Route : Ingestion  
Exposure time : 103 weeks  
Result : negative

**Borax:**

Species : Mouse  
Application Route : Ingestion  
Exposure time : 2 Years  
Result : negative  
Remarks : Based on data from similar materials

**H50V Lyse, RFID**

Version 1.0      Revision Date: 03.12.2025      SDS Number: 11604507-00001      Date of last issue: -  
Date of first issue: 03.12.2025

---

**Reproductive toxicity**

May damage fertility. May damage the unborn child.

**Components:****Dodecyltrimethylammonium chloride:**

Effects on foetal development : Test Type: Embryo-foetal development  
Species: Rabbit  
Application Route: Ingestion  
Result: negative

**Boric acid:**

Effects on fertility : Test Type: Three-generation reproduction toxicity study  
Species: Rat  
Application Route: Ingestion  
Result: positive

Effects on foetal development : Test Type: Embryo-foetal development  
Species: Rabbit  
Application Route: Ingestion  
Result: positive

Reproductive toxicity - Assessment : Clear evidence of adverse effects on sexual function and fertility, based on animal experiments., Clear evidence of adverse effects on development, based on animal experiments.

**Tetradonium bromide:**

Effects on fertility : Test Type: Combined repeated dose toxicity study with the reproduction/developmental toxicity screening test  
Species: Rat  
Application Route: Ingestion  
Method: OECD Test Guideline 422  
Result: negative  
Remarks: Based on data from similar materials

Effects on foetal development : Test Type: Combined repeated dose toxicity study with the reproduction/developmental toxicity screening test  
Species: Rat  
Application Route: Ingestion  
Method: OECD Test Guideline 422  
Result: negative  
Remarks: Based on data from similar materials

**Borax:**

Effects on fertility : Test Type: Three-generation reproduction toxicity study  
Species: Rat  
Application Route: Ingestion  
Result: positive

Effects on foetal development : Test Type: Embryo-foetal development  
Species: Rat  
Application Route: Ingestion  
Result: positive

**H50V Lyse, RFID**

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	03.12.2025	11604507-00001	Date of first issue: 03.12.2025

---

Reproductive toxicity - Assessment : Clear evidence of adverse effects on development, based on animal experiments., Clear evidence of adverse effects on sexual function and fertility, based on animal experiments.

**STOT - single exposure**

Not classified based on available information.

**Components:****Tetradonium bromide:**

Assessment : May cause drowsiness or dizziness.  
Remarks : Based on data from similar materials

**STOT - repeated exposure**

Not classified based on available information.

**Components:****Tetradonium bromide:**

Target Organs : Gastrointestinal tract  
Assessment : Shown to produce significant health effects in animals at concentrations of >10 to 100 mg/kg bw.

Exposure routes : Ingestion  
Target Organs : Gastrointestinal tract  
Assessment : Shown to produce significant health effects in animals at concentrations of >10 to 100 mg/kg bw.

**Repeated dose toxicity****Components:****Dodecyltrimethylammonium chloride:**

Species : Rat  
LOAEL : > 25 mg/kg  
Application Route : Ingestion  
Exposure time : 1 yr  
Remarks : No test guideline followed  
Based on data from similar materials

**Boric acid:**

Species : Rat  
NOAEL : 100 mg/kg  
LOAEL : 334 mg/kg  
Application Route : Ingestion  
Exposure time : 2 yr

**Tetradonium bromide:**

Species : Rat  
NOAEL : > 30 - 300 mg/kg  
Application Route : Skin contact  
Exposure time : 28 Days

**H50V Lyse, RFID**

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	03.12.2025	11604507-00001	Date of first issue: 03.12.2025

---

Method : Regulation (EC) No. 440/2008, Annex, B.7  
 Remarks : The test was conducted according to guideline  
 Based on data from similar materials

**Borax:**

Species : Rat  
 NOAEL : 100 mg/kg  
 LOAEL : 334 mg/kg  
 Application Route : Ingestion  
 Exposure time : 2 yr

**Aspiration toxicity**

Not classified based on available information.

---

**12. ECOLOGICAL INFORMATION****Ecotoxicity****Components:****Dodecyltrimethylammonium chloride:**

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): > 0.1 - 1 mg/l  
 Exposure time: 96 h  
 Method: OECD Test Guideline 203  
 Remarks: The test was conducted equivalent or similar to guideline  
 Based on data from similar materials

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 0.46 mg/l  
 Exposure time: 48 h

Toxicity to algae/aquatic plants : ErC50 ( Scenedesmus capricornutum (fresh water algae)): 0.036 mg/l  
 Exposure time: 72 h  
 Method: OECD Test Guideline 201  
 Remarks: The test was conducted according to guideline

NOEC ( Scenedesmus capricornutum (fresh water algae)): 0.01 mg/l  
 Exposure time: 72 h  
 Method: OECD Test Guideline 201  
 Remarks: The test was conducted according to guideline

M-Factor (Acute aquatic toxicity) : 10

Toxicity to microorganisms : EC50 (activated sludge): > 10 - 100 mg/l  
 Exposure time: 3 h  
 Method: OECD Test Guideline 209  
 Remarks: The test was conducted according to guideline  
 Based on data from similar materials

M-Factor (Chronic aquatic) : 1

**H50V Lyse, RFID**

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	03.12.2025	11604507-00001	Date of first issue: 03.12.2025

---

toxicity)

**Boric acid:**

- Toxicity to fish : LC50 (Pimephales promelas (fathead minnow)): 74 mg/l  
Exposure time: 96 h
- Toxicity to daphnia and other aquatic invertebrates : EC50 (Ceriodaphnia dubia (water flea)): 102 mg/l  
Exposure time: 48 h
- Toxicity to algae/aquatic plants : EC50 ( Pseudokirchneriella subcapitata (green algae)): 52.4 mg/l  
Exposure time: 72 h  
Method: OECD Test Guideline 201
- NOEC ( Pseudokirchneriella subcapitata (green algae)): 17.5 mg/l  
Exposure time: 72 h  
Method: OECD Test Guideline 201
- Toxicity to microorganisms : EC10: 35.4 mg/l  
Exposure time: 3 h  
Method: OECD Test Guideline 209
- Toxicity to fish (Chronic toxicity) : NOEC: 6.4 mg/l  
Exposure time: 34 d  
Species: Danio rerio (zebra fish)  
Method: OECD Test Guideline 210
- Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC: 10.8 mg/l  
Exposure time: 21 d  
Species: Daphnia magna (Water flea)

**Tetradonium bromide:**

- Toxicity to fish : LC50 (Danio rerio (zebra fish)): > 1.81 mg/l  
Exposure time: 96 h  
Method: OECD Test Guideline 203  
Remarks: The test was conducted according to guideline
- Toxicity to daphnia and other aquatic invertebrates : LC50 (Daphnia magna (Water flea)): 22 µg/l  
Exposure time: 48 h  
Method: OECD Test Guideline 202  
Remarks: The test was conducted according to guideline
- Toxicity to algae/aquatic plants : EC10 ( Raphidocelis subcapitata (freshwater green alga)): 2.16 µg/l  
Exposure time: 72 h  
Method: OECD Test Guideline 201  
Remarks: The test was conducted according to guideline
- ErC50 ( Raphidocelis subcapitata (freshwater green alga)): 5.38 µg/l  
Exposure time: 72 h  
Method: OECD Test Guideline 201  
Remarks: The test was conducted according to guideline

**H50V Lyse, RFID**

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	03.12.2025	11604507-00001	Date of first issue: 03.12.2025

---

M-Factor (Acute aquatic toxicity) : 100

Toxicity to microorganisms : EC50 (Photobacterium phosphoreum): 0.28 mg/l  
Exposure time: 30 min

M-Factor (Chronic aquatic toxicity) : 1

**Borax:**

Toxicity to fish : LC50 (Oncorhynchus kisutch (coho salmon)): 447 mg/l  
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 133 mg/l  
Exposure time: 48 h

Toxicity to algae/aquatic plants : NOEC ( Dunaliella tertiolecta (marine algae)): 50 mg/l  
Exposure time: 10 d

Toxicity to microorganisms : EC50: > 175 mg/l  
Exposure time: 3 h  
Method: OECD Test Guideline 209

Toxicity to fish (Chronic toxicity) : NOEC: 13 mg/l  
Exposure time: 96 d  
Species: Danio rerio (zebra fish)

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC: 18 mg/l  
Exposure time: 14 d  
Species: Daphnia magna (Water flea)

**Persistence and degradability****Components:****Dodecyltrimethylammonium chloride:**

Biodegradability : Result: Readily biodegradable.  
Biodegradation: 64.5 %  
Exposure time: 28 d  
Method: OECD Test Guideline 301B  
Remarks: The test was conducted equivalent or similar to guideline

**Tetradonium bromide:**

Biodegradability : Result: Readily biodegradable.  
Remarks: Based on data from similar materials

**Bioaccumulative potential****Components:****Dodecyltrimethylammonium chloride:**

**H50V Lyse, RFID**

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	03.12.2025	11604507-00001	Date of first issue: 03.12.2025

---

Bioaccumulation : Species: Oncorhynchus mykiss (rainbow trout)  
 Bioconcentration factor (BCF): < 500  
 Remarks: No test guideline followed  
 Based on data from similar materials

Partition coefficient: n-octanol/water : log Pow: 1.22  
 Remarks: Calculation

**Boric acid:**

Bioaccumulation : Species: Cyprinus carpio (Carp)  
 Bioconcentration factor (BCF): <= 3.2  
 Method: OECD Test Guideline 305

Partition coefficient: n-octanol/water : log Pow: -1.09

**Tetradonium bromide:**

Partition coefficient: n-octanol/water : log Pow: 2.2  
 Remarks: Calculation

**Borax:**

Partition coefficient: n-octanol/water : log Pow: -1.53

**Mobility in soil**

No data available

**Other adverse effects**

No data available

**13. DISPOSAL CONSIDERATIONS****Disposal methods**

Waste from residues : Do not dispose of waste into sewer.  
 Dispose of in accordance with local regulations.

Contaminated packaging : Empty containers should be taken to an approved waste handling site for recycling or disposal.  
 If not otherwise specified: Dispose of as unused product.

**14. TRANSPORT INFORMATION****International Regulations****UNRTDG**

UN number : UN 3082  
 Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.  
 (Dodecyltrimethylammonium chloride, Tetradonium bromide)  
 Class : 9

**H50V Lyse, RFID**

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	03.12.2025	11604507-00001	Date of first issue: 03.12.2025

---

Packing group : III  
Labels : 9  
Environmentally hazardous : yes

**IATA-DGR**

UN/ID No. : UN 3082  
Proper shipping name : Environmentally hazardous substance, liquid, n.o.s.  
(Dodecyltrimethylammonium chloride, Tetradonium bromide)  
Class : 9  
Packing group : III  
Labels : Miscellaneous  
Packing instruction (cargo aircraft) : 964  
Packing instruction (passenger aircraft) : 964  
Environmentally hazardous : yes

**IMDG-Code**

UN number : UN 3082  
Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.  
(Dodecyltrimethylammonium chloride, Tetradonium bromide)  
Class : 9  
Packing group : III  
Labels : 9  
EmS Code : F-A, S-F  
Marine pollutant : yes

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code**

Not applicable for product as supplied.

**National Regulations****Special precautions for user**

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

---

**15. REGULATORY INFORMATION**

**Safety, health and environmental regulations/legislation specific for the substance or mixture**

---

**16. OTHER INFORMATION**

Revision Date : 03.12.2025

**Further information**

Sources of key data used to compile the Safety Data Sheet : Internal technical data, data from raw material SDSs, OECD eChem Portal search results and European Chemicals Agency, <http://echa.europa.eu/>

Date format : dd.mm.yyyy

**H50V Lyse, RFID**

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	03.12.2025	11604507-00001	Date of first issue: 03.12.2025

---

**Full text of other abbreviations**

ACGIH : USA. ACGIH Threshold Limit Values (TLV)

ACGIH / TWA : 8-hour, time-weighted average

ACGIH / STEL : Short-term exposure limit

AIIC - Australian Inventory of Industrial Chemicals; ANTT - National Agency for Transport by Land of Brazil; ASTM - American Society for the Testing of Materials; bw - Body weight; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonised System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organisation; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardisation; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; MERCOSUR - The Agreement for the Facilitation of the Transport of Dangerous Goods; n.o.s. - Not Otherwise Specified; Nch - Chilean Norm; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NOM - Official Mexican Norm; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organisation for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TDG - Transportation of Dangerous Goods; TECl - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative; WHMIS - Workplace Hazardous Materials Information System

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and shall not be considered a warranty or quality specification of any type. The information provided relates only to the specific material identified at the top of this SDS and may not be valid when the SDS material is used in combination with any other materials or in any process, unless specified in the text. Material users should review the information and recommendations in the specific context of their intended manner of handling, use, processing and storage, including an assessment of the appropriateness of the SDS material in the user's end product, if applicable.

PG / EN