Material Safety Data Sheet

SDS date: 10-04-2015 **SDS version: 1.0**

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product Identifier

Trade Name: Boracol 10Rh

1.2. Relevant identified uses of the substance or mixture and uses advised against

Recommended uses: Biocidal product. Concentrated disinfectant for wood and masonry etc.
For professional and non-professional users.

1.3. Details of the supplier of the safety data sheet

Company and address
KRS ApS
Mandal Allé 9 A
5500 Middelfart
Tlf.: +45 75 82 50 33

Contact person and E-mail:
krsis@krsis.dk

The Safety data sheet is completed and validated by:
mediator A/S, Centervej 2, DK-6000 Kolding. Consultant: DH

1.4. Emergency telephone number

Use your national or local emergency number - See section 4 “First aid measures”.

SECTION 2: Hazards identification

2.1. Classification of substance or mixture

EU (67/548 or 1999/45): -
CLP (1272/2008): Skin Irrit. 2, Eye Irrit. 2; H315, H319, EUH401.
See full text of H/R-phrases in section 16.

2.2. Label elements

CLP

Signal word:
Warning

Causes skin irritation. (H315)
Causes serious eye irritation. (H319)

If medical advice is needed, have product container or label at hand. (P101)
Keep out of reach of children. (P102)
Wear protective gloves /eye protection/face protection. (P280)
If skin irritation occurs: Get medical advice/attention. (P332+P313)
If eye irritation persists: Get medical advice/attention. (P337+P313)
Dispose of contents and container in accordance with local regulations. (P501)

2.3. Other hazards

This product contains an organic solvent. Damages on the nerves system and inner organs as the lever and kidney can occur, when repeatedly exposure to organic solvents.

Additional labelling:

To avoid risks to human health and the environment, comply with the instructions for use. (EUH401)
Included by the EU Biocides Regulation 528/2012 (EU BPR).
Contains: Boric acid 28 g/l (2,80 % w/w). Disodium tetraborate 23,5 g/l (2,35 % w/w).

Additional warnings:

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SECTION 3: Composition/information on ingredients

3.1./3.2. Substances/Mixtures

Substance	EU-Index no.	CAS / EINECS no.	DSD classification/CLP-classification	w/w %	Note
Ethylene glycol	603-027-00-1	107-21-1/ 203-473-3	Xn;R22 Acute Tox. 4	5-15	2
Boric acid	005-007-00-2	10043-35-3/ 233-139-2	Repr. Cat. 2; R60-61 Repr. 1B; H360FD	1-5	1
Disodium tetraborate	005-011-00-4	1330-43-4/ 215-540-4	Repr. Cat. 2; R60-61 Repr. 1B; H360FD	1-5	1
Benzododecinium chloride	-	139-07-1/ 205-351-5	Xn;R21/22, C;R34, NR50 Acute Tox. 4, Skin Corr. 1B, Aquatic Acute 1; H302, H312, H314, H400 M=1	1-<3	-
Miristalkonium chloride	-	139-08-2/ 205-352-0	Xn;R21/22, C;R34, NR50 Acute Tox. 4, Skin Corr. 1B, Aquatic Acute 1; H302, H312, H314, H400 M=1	0-1	-

1 = The substance is on the candidate list. 2 = The substance is an organic solvent.

For the wording of the listed risk phrases refer to section 16.

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation:	Seek fresh air. Keep victim under observation. Seek medical advice in case of persistent discomfort.
Ingestion:	Wash out mouth thoroughly and drink 1-2 glasses of water in small sips. Seek medical advice in case of discomfort.
Skin contact:	Immediately remove contaminated clothing. Wash the skin thoroughly with water and continue washing for a long time. Seek medical advice in case of persistent discomfort.
Eye contact:	Flush immediately with water (preferably using eye wash equipment) for at least 5 minutes. Open eye wide. Remove any contact lenses. Seek medical advice.
Additional information:	When obtaining medical advice, show the safety data sheet or label.

4.2. Most important symptoms and effects, both acute and delayed

Irritation effects: This product contains substances which cause irritation to skin and eyes, or when inhaled. Contact with locally irritative substances can cause the area of contact to be more prone to absorb damaging substances such as allergens.

4.3. Indication of any immediate medical attention and special treatment needed

No special immediate treatment required.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Extinguish with powder, foam, carbon dioxide or water mist. Do not use water stream, as it may spread the fire.

5.2. Special hazards arising from the substance or mixture

The product is not directly flammable. Avoid inhalation of vapour and fumes – seek fresh air. Can generate harmful flue gases containing carbon monoxide in the event of fire. Use water or water mist to cool non-ignited stock.

5.3. Advice for firefighters

Move containers from danger area if it can be done without risk. If there is a risk of exposure to vapour and flue gases, a self-contained breathing apparatus must be worn. Send contaminated extinguishing water for destruction.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Use personal protective equipment – see section 8.

6.2. Environmental precautions

Do not discharge large quantities of concentrated spills and residue into drains.

6.3. Methods and material for containment and cleaning up

Contain and absorb spill with sand or other absorbent material and transfer to suitable waste containers. Further handling of waste – see section 13.

6.4. Reference to other sections

See above.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

See section 8 for information about precautions for use and personal protective equipment. Smoking and naked flames prohibited. Running water and eye wash equipment should be available.

7.2. Conditions for safe storage, including any incompatibilities

Keep in tightly closed original packaging. Store in a dry area.

7.3. Specific end use(s)

See section 1.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits:

Substance	Long-term exposure limit	Short-term exposure limit	Note
Ethylene glycol - particulates	10 mg/m^3	-	Sk
Ethylene glycol - vapour	20 ppm – 52 mg/m^3	40 ppm – 104 mg/m^3	Sk
Disodium tetraborate	1 mg/m^3	-	-

Sk = Can be absorbed through the skin.

DNEL and PNEC values:

DNEL - Ethylene glycol:

Dermal	Long Term	Systemic effects	Workers	106 mg/kg bw/day
Inhalation	Long Term	Local effects	Workers	35 mg/m³
Dermal	Long Term	Systemic effects	General population	53 mg/kg bw/day
Inhalation	Long Term	Local effects	General population	7 mg/m³

DNEL - Boric acid:

Dermal	Long Term	Systemic effects	Workers	392 mg/kg bw/day
Inhalation	Long Term	Systemic effects	Workers	8.3 mg/m³
Oral	Short term	Systemic effects	General population	0.98 mg/kg bw/day
Oral	Long Term	Systemic effects	General population	0.98 mg/kg bw/day
Dermal	Long Term	Systemic effects	General population	196 mg/kg bw/day
Inhalation	Long Term	Systemic effects	General population	4.15 mg/m³

DNEL - Disodium tetraborate:

Inhalation	Short term	Local effects	Workers	11.7 mg/m³
Dermal	Long Term	Systemic effects	Workers	316.4 mg/kg bw/day
Inhalation	Long Term	Systemic effects	Workers	6.7 mg/m³
Inhalation	Long Term	Local effects	Workers	11.7 mg/m³
Oral	Short term	Systemic effects	General population	0.79 mg/kg bw/day
Inhalation	Short term	Local effects	General population	11.7 mg/m³
Oral	Long Term	Systemic effects	General population	0.79 mg/kg bw/day
Dermal	Long Term	Systemic effects	General population	159.5 mg/kg bw/day
Inhalation	Long Term	Systemic effects	General population	3.4 mg/m³
Inhalation	Long Term	Local effects	General population	11.7 mg/m³

PNEC - Ethylene glycol:

Water	Fresh	10 mg/L
Water	Marine	1 mg/L
Water	Intermittent releases	10 mg/L
Soil	-	1.53 mg/kg soil dw

PNEC - Boric acid:

Water	Fresh	2.02 mg/L
Water	Marine	2.02 mg/L
Water	Intermittent releases	13.7 mg/L
Soil	-	5.4 mg/kg soil dw

PNEC - Disodium tetraborate:

Water	Fresh	2.9 mg/L
Water	Marine	2.9 mg/L
Water	Intermittent releases	13.7 mg/L
Soil	-	5.7 mg/kg soil dw

8.2. Exposure controls

There are no exposure scenarios for this product.

Appropriate engineering controls:

Wash hands before breaks, before using restroom facilities, and at the end of the work. Wear personal protective equipment specified in below section.

Personal protective equipment:

Breathing equipment:	Not required.
Hand protection:	For work with the concentrated product: Wear protective gloves made of nitrile- or butyl rubber.
Eye protection:	For work with the concentrated product: Wear safety goggles if there is a risk of eye splash.
Body and skin protection:	Not required.

Environmental exposure controls:

Ensure compliance with local regulations for emissions.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Form:	Liquid
Colour:	Yellow
Odor:	-
pH:	7 (concentrate)
Melting point/ Freezing Point (°C):	-
Initial boiling point(°C):	-
Decomposition temperature (°C):	101
Flash point (°C):	> 150
Evaporation speed:	-
Ignition (°C):	-
Upper / lower Flammability or Explosion limits (vol-%):	-
Vapour pressure (mbar, 25 °C):	-
Vapour density (air=1)	-
Density (g/ml):	1,0427
Solubility in/ Miscibility with:	Soluble in water
Partition coefficient [n-octanol/water], Log K_{OW}:	-
Autoignition temperature (°C):	-
Evaporation rate (nBuAc=1):	-
Viscosity:	-
Flammability:	-
Oxidizing properties:	-

9.2. Other information

Solubility in fat:	-
Surface tension (mN/m, 25 °C):	-

SECTION 10: Stability and reactivity

10.1. Reactivity
Non-reactive.
10.2. Chemical stability
The product is stable when used in accordance with the supplier's directions.
10.3. Possibility of hazardous reactions
No risks of hazardous reactions.
10.4. Conditions to avoid
None known.
10.5. Incompatible materials
Avoid contact with strong oxidising agents.
10.6. Hazardous decomposition products
Product decomposes in fire conditions or when heated to high temperatures, and toxic gases may be released.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Substance	Route of exposure	Species	Test	Result
Ethylene glycol	Oral	rat	LD50	7712 mg/kg bw
Ethylene glycol	Dermal	mouse	LD50	> 3500 mg/kg bw
Ethylene glycol	Inhalation	rat	LC50 / 6h	> 2.5 mg/L air
Boric acid	Oral	rat	LD50	> 2600 mg/kg bw
Boric acid	Inhalation	rat	LC50 / 5 h	> 2.03 mg/L air
Boric acid	Dermal	rabbit	LD50	> 2000 mg/kg bw
Disodium tetraborate	Oral	Rat	LD50	3450 mg/kg bw
Disodium tetraborate	Inhalation	Rat	LC50 / 5 h	> 2.03 mg/L air
Disodium tetraborate	Dermal	Rabbit	LD50	> 2000 mg/kg bw

Symptoms:

Inhalation: The product releases organic solvent vapours which may cause lethargy and dizziness. At high concentrations, the vapours may cause headache and intoxication.

Skin: Irritating to skin – may cause reddening. Can be absorbed through the skin causing symptoms such as dizziness and headache.

Eyes: Irritating to eyes. Causes a burning sensation and tearing.

Ingestion: Ingestion may cause nausea, discomfort and vomiting.

Long term effects:

Prolonged or repeated exposure by skin contact or inhalation of vapours may cause damage to the central nervous system.

The product contains a small amount of boric acid and disodium tetraborate, which is a suspected reproductive hazard.

SECTION 12: Ecological information

12.1. Toxicity

Substance	Test duration	Species	Test	Result
Ethylene glycol	96 h	Fish	LC50	72860 mg/L
Ethylene glycol	48 h	Daphnia	EC50	> 100 mg/L
Ethylene glycol	96 h	Algae	EC50	6500 - 13000 mg/L
Boric acid	96 h	Fish	LC50	74 mg/L
Boric acid	48 h	Daphnia	LC50	133 mg/L
Boric acid	21 days	Algae	LC50	53.2 mg/L
Disodium tetraborate	96 h	Fish	LC50	74 mg/L
Disodium tetraborate	48 h	Daphnia	LC50	81 mg/L
Disodium tetraborate	72 h	Algae	EC50	40.2 mg/L

12.2. Persistence and degradability

Substance	Biodegradability	Test	Result
No data	-	-	-

12.3. Bioaccumulative potential

Substance	Potential bioaccumulation	LogPow	BCF
Ethylene glycol	No	-1,36	-
Boric acid	No	-1,09	-
Disodium tetraborate	No	-1,53	-

12.4. Mobility in soil

-

12.5. Results of PBT and vPvB assessment

The mixture does not meet the criteria for PBT or vPvB.

12.6. Other adverse effects

None.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Contact the local authorities.

EWC Code

16 05 09

Specific labelling

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Contaminated packaging:

Uncleansed packaging is to be disposed of via the local waste-removal scheme.

SECTION 14: Transport information

The product is not covered by the rules for transport of dangerous goods by road and sea according to ADR and IMDG.

14.1 -14.4.

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14.5. Environmental hazards

-

14.6. Special precautions for user

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

Not relevant.

SECTION 15: Regulatory information

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

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Restrictions for application:

-

Demands for specific education:

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Additional labelling:

To avoid risks to human health and the environment, comply with the instructions for use. (EUH401)
Included by the EU Biocides Regulation 528/2012 (EU BPR).
Contains: Boric acid 28 g/l (2,80 % w/w). Disodium tetraborate 23,5 g/l (2,35 % w/w).

15.2. Chemical safety assessment

Chemical safety assessment has not been performed.

SECTION 16: Other information

Other information:
Sources:
EC regulation 1907/2006 (REACH)
Directive 2000/532/EC
EC Regulation 1272/2008 (CLP)
EU Biocides Regulation 528/2012 (EU BPR).
EH40/2005 WELs (United Kingdom (UK), 8/2007).
Full text of H/R-phrases as mentioned in section 2+3:
R21/22 - Harmful in contact with skin and if swallowed.
R34 - Causes burns.
R50 - Very toxic to aquatic organisms.
R60 - May impair fertility.
R61 - May cause harm to the unborn child.
H302 - Harmful if swallowed.
H312 - Harmful in contact with skin.
H314 - Causes severe skin burns and eye damage.
H360FD - May damage fertility. May damage the unborn child.
H400 - Very toxic to aquatic life.
Other
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Minor changes have been made in following sections:
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This material safety data sheet replaces version:
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