
SAFETY DATA SHEET

SECTION 1 Identification of the substance/mixture and of the company/undertaking**1.1 Product identifier**

- Product Name: HR TOTAL HARDNESS TABLETS
- Product Part Number: 755775 - 755779

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

- Use of the substance/mixture:
- Reagent

1.3 Details of the supplier of the safety data sheet

- Name of Supplier: Wilhelmsen Ships Service AS
- Address of Supplier: Willem Barentszstraat 50, 3165AB Rotterdam, The Netherlands
- Telephone: Telephone: +31 4877 777 Fax: +31 4877 888
-
- Head office: Wilhelmsen Ships Service AS
- Strandveien 20, N1324 Lysaker
- Norway, Tel: (47) 6349 440 35
-
-
- Other suppliers SEE SECTION 16!!!
- For quotations contact your local Customer Services
-
- Responsible Person: Product HSE Manager
- Telephone: +31 10 4877775
- Email: WSS.GLOBAL.SDSINFO@wilhelmsen.com

1.4 Emergency telephone number

- ****ONLY TO BE USED IN CASE OF AN INCIDENT****
-
- International 24hrs Emergency NCEC: +44 1865 407333
- American 24hrs Emergency CHEMTREC (800) 424 9300
- American Chemistry Council 24hrs +1 703 527 3887
- Greece: Poisoning emergency center, +30 210 7793777
- Norway: Poison information centre, +47 22591300
- Sweden: Poison information centre, +46 08 33 12 31
- China NRCC 24hrs emergency telephone number: +86-0532-8388 9090
- Wilhelmsen Ships Service, Melbourne, AUSTRALIA Emergency 24hrs: +61 3 9630 0998

SECTION 2 Hazards identification**2.1 Classification of the substance or mixture**

- Regulations 1272/2008/EEC. Classification, labeling and packing of dangerous substances and preparations
- Signal Word: Danger
- Symbols: GHS08, GHS05
- Repr. 1B
- Skin Corr. 1A
- May damage fertility or the unborn child (H360)
- Causes severe skin burns and eye damage (H314).
-
- Refer to current The Dangerous Substances Directive (67/548/EEC)
- Council Directive 1999/45/EEC Classification, packing and labelling of dangerous preparations.
-

SECTION 2 Hazards identification (....)

Symbols: T, C

- May impair fertility (R60)
- May cause harm to the unborn child (R61)
- Causes burns (R34)

2.2 Label elements

- Signal Word: Danger
- Repr. 1B
- Skin Corr. 1A
-
- Contains:
- BORIC ACID - LITHIUM HYDROXIDE
-
- Hazard phrases
 - Causes severe skin burns and eye damage (H314).
 - May damage fertility. May damage the unborn child (H360FD).
- Precautionary Phrases
 - IF SWALLOWED: rinse mouth. Do NOT induce vomiting (P301+P330+P331).
 - IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower (P303+P361+P353).
 - Immediately call a POISON CENTER or doctor/physician (P310).
 - Store locked up (P405).
 - Dispose of contents/container to an authorised waste collection point (P501)
 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing (P305+P351+P338).

2.3 Other hazards

- Not a PBT according to REACH Annex XIII
- Odour: Odourless
- Appearance: Tablets, grey

SECTION 3 Composition/information on ingredients**3.1 Mixtures**

- boric acid
 - Concentration: 10-20%
 - CAS Number: 10043-35-3
 - EC Number: 233-139-2
 - Symbols: GHS08, T
 - R/H Phrases: H360FD, R60, R61
 - Categories: Repr. 1B
 - Index No.: 005-007-00-2
 - ***SUBSTANCES OF VERY HIGH CONCERN (SVHC) ACCORDING TO REACH, ARTICLE 57***:
- lithium hydroxide
 - Concentration: 5-10%
 - CAS Number: 1310-65-2
 - EC Number: 215-183-4
 - Symbols: C, Xn - GHS06, GHS05
 - R/H Phrases: R35, R22 - H301, H314
 - Categories: Acute Tox. 3, Skin Corr. 1A

SECTION 4 First aid measures**4.1 Description of first aid measures**

- IF ON SKIN: Gently wash with plenty of soap and water (P302+P350).
- When in doubt or symptoms persist, seek medical attention
-
- IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing (P305+P351+P338).
- Seek medical attention if irritation persists
-
- IF SWALLOWED: rinse mouth. Do NOT induce vomiting (P301+P330+P331).
- When in doubt or symptoms persist, seek medical attention
-
- IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing (P304+P341).
- When in doubt or symptoms persist, seek medical attention

4.2 Most important symptoms and effects, both acute and delayed

- Possible redness and irritation of affected areas
- The ingestion of significant quantities may cause dry throat
- May cause coughing
- May cause wheeziness

4.3 Indication of any immediate medical attention and special treatment needed

- No information available
-

SECTION 5 Fire-fighting measures**5.1 Extinguishing media**

- Do not use water
- In case of fire: use dry powder/BCF for extinction (P370+P378)

5.2 Special hazards arising from the substance or mixture

- Smoke from fires is toxic. Take precautions to protect personnel from exposure
- Smoke from fires is toxic. Take precautions to protect personnel from exposure

5.3 Advice for firefighters

- Wear chemical protection suit and positive-pressure breathing apparatus
-

SECTION 6 Accidental release measures**6.1 Personal precautions, protective equipment and emergency procedures**

- Avoid raising dust
- Wear protective clothing as per section 8

6.2 Environmental Precautions

- Do not flush spilt material into any public water system
- Avoid release to the environment (P273).

6.3 Methods and material for containment and cleaning up

- Sweep or shovel-up spillage and remove to a safe place
- Place in sealable container
- Seal containers and label them
- Ventilate the area and wash spill site after material pick-up is complete
- Wash thoroughly after dealing with spillage

6.4 Reference to other sections

- See Section 13
-

SECTION 7 Handling and storage

7.1 Precautions for safe handling

- Do not get in eyes, on skin, or on clothing (P262).
- Avoid breathing dust/fume/gas/mist/vapours/spray (P261).
- Eyewash bottles should be available
- Do not allow dust to accumulate on surfaces and equipment
- Ensure adequate ventilation
- See Section 8

7.2 Conditions for safe storage, including any incompatibilities

- Store at temperatures not exceeding -5/+20°C/ (P411)
- Keep in a cool, dry, well ventilated place
- Keep container tightly closed (P233).
- Keep only in original container (P234).

7.3 Specific end use(s)

- Restricted to professional users
 - Contact supplier for further information
-

SECTION 8 Exposure controls/personal protection

8.1 Control parameters

- WEL (short term) 1 mg/m³

8.2 Exposure controls

- Ensure adequate ventilation

8.3 Occupational exposure controls



- No respiratory protection is needed if ventilation/extraction is adequate, otherwise wear approved dust mask
 - Wear neoprene or nitrile gloves
 - Wear goggles giving complete eye protection
-

SECTION 9 Physical and chemical properties

9.1 Information on basic physical and chemical properties

- Odour: Odourless
- Appearance: Tablets, grey
- Boiling point ~300 °C
- Solubility in water: partly soluble in water
- pH: pH: 9.4 - 7.2 g/l at 20C\$

9.2 Other information

- None
-

SECTION 10 Stability and reactivity

10.1 Reactivity

- This article is considered stable under normal conditions

10.2 Possibility of hazardous reactions

- No hazardous reactions known if used for its intended purpose

10.3 Incompatible materials

SECTION 10 Stability and reactivity (....)

- Incompatible with alkalis (strong bases)
- 10.4 Conditions to avoid
- Keep away from heat and moisture
- 10.5 Hazardous Decomposition Products
- Decomposition products may include nitrogen oxides
-

SECTION 11 Toxicological information

- 11.1 Information on toxicological effects
- LD50 (oral,rat) (boric acid) 2660 mg/kg
 - LC50 (inhalation) : (boric acid) 2.03 mg/l/4h
 - LD50 (dermal) : (boric acid) >2000 mg/kg
 - LD50 (oral,rat) (lithium hydroxide) 210 mg/kg
- 11.2 Contact with eyes
- Causes redness and irritation
 - Can cause damage to the eyes
- 11.3 Contact with skin
- Causes redness and irritation
- 11.4 Ingestion
- The ingestion of significant quantities may cause dry throat
- 11.5 Inhalation
- In cases of severe exposure, dry throat may develop
 - May cause coughing
 - May cause wheeziness
-

SECTION 12 Ecological information

- 12.1 Toxicity
- EC50 (Daphnia magna) (boric acid) 133 mg/l (48 hr)
 - LC50 (fish) (boric acid) (oncorhynchus mykiss) 50-100 mg/l (96 hr)
- 12.2 Persistence and degradability
- No information available
- 12.3 Bioaccumulation Potential
- Log Pow 0.76 (25C) (IUCLID)
- 12.4 Mobility in soil
- Partially soluble in water.
- 12.5 Results of PBT and vPvB assessment
- Not a PBT according to REACH Annex XIII
- 12.6 Other Adverse Effects
- No information available
-

SECTION 13 Disposal considerations

- 13.1 Waste treatment methods
- Disposal should be in accordance with local, state or national legislation
 - Dispose of contents/container to an authorised waste collection point (P501)
- 13.2 Classification
- EU Waste class: 16-05-06
-

SECTION 14 Transport information**14.1 UN**

- UN No.: UN2680
- Proper Shipping Name: LITHIUM HYDROXIDE, mixture
- Hazard Class: 8
- Packing Group: II

14.2 Environmental hazards

- On available data, substance is not harmful to the environment

14.3 Special precautions for user

- When supplied as part of a kit: The kit may be transported under classification UN3316
CHEMICAL KIT

14.4 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC code

- Not applicable

14.5 Road/Rail (ADR/RID)

- ADR UN No.: UN2680
- Proper Shipping Name: LITHIUM HYDROXIDE, mixture
- ADR Hazard Class: 8
- ADR subrisk: Not applicable
- ADR Packing Group: II

14.6 Sea (IMDG)

- IMDG UN No.: UN2680
- Proper Shipping Name: LITHIUM HYDROXIDE, mixture
- IMDG Hazard Class: 8
- IMDG subrisk: Not applicable
- IMDG Pack Group.: II
- IMDG EmS: F-A, S-B

14.7 Air (ICAO/IATA)

- ICAO UN No.: UN2680
- Proper Shipping Name: LITHIUM HYDROXIDE, mixture
- ICAO Packing Group: II
- ICAO Hazard Class: 8
- ICAO subrisk: Not applicable

14.8 DOT / CFR (US Department of Transportation)

- Identification Number: UN2680
 - DOT Proper Shipping Name: LITHIUM HYDROXIDE, mixture
 - DOT Labels: 8
 - Product RQ (lbs): Not applicable
-

SECTION 15 Regulatory information**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

- This Safety Data Sheet has been prepared in accordance with article 31 and annex II in REACH and Directive 453/2010/EU.
- This Safety Data Sheet is provided in compliance with The Dangerous Substances Directive (67/548/EEC)
- Council Directive 1999/45/EEC Classification, packing and labelling of dangerous preparations.
- Regulations 1272/2008/EEC. Classification, labeling and packing of dangerous substances and preparations
- ***SUBSTANCES OF VERY HIGH CONCERN (SVHC) ACCORDING TO REACH, ARTICLE 57***: boric acid, CAS10043-35-3

15.2 Chemical Safety Assessment

SECTION 15 Regulatory information (....)

- None

SECTION 16 Other information

Text not given with phrase codes where they are used elsewhere in this safety data sheet:- H301: Toxic if swallowed. H314: Causes severe skin burns and eye damage. H360FD: May damage fertility. May damage the unborn child. R22: Harmful if swallowed. R35: Causes severe burns. R60: May impair fertility. R61: May cause harm to the unborn child.

The data given here is based on current knowledge and experience. This Safety Data Sheet describes the product in terms of safety requirements and does not signify any warranty with regard to the product's properties

The data given here only applies when product used for proper application(s). The product is not sold as suitable for other applications - usage in such may cause risks not mentioned in this sheet. Do not use for other application(s) without seeking advice from manufacturer

The information provided about the product on this Safety Data Sheet has been compiled from knowledge of the individual constituents

The most up-to-date version of this MSDS can be found on www.wilhelmsen.com/shipsservice

OTHER CONTACT INFORMATION MAJOR CHEMICAL OFFICES

Wilhelmsen Ships Service Level 17, 636 St Kilda Road Melbourne Vic 3004 AUSTRALIA
Tel: +61 3 9630 0900 Emergency 24hrs: +61 3 9630 0998

Wilhelmsen Ships Service INC 210 Edgewater Street US-10305 Staten Island New York United States
Telephone daytime: (+1) 718 815 1310 Fax: (+1) 718 233 3268

Wilhelmsen Ships Service INC 2200 W. Pacific Coast Highway US-90810 Long Beach California, United States
Tel (+1) 562 624 8888 Fax (+1) 562 624 1011

Wilhelmsen Ships Service INC 701 Ashland Ave. Ashland Center Two, Bay 12 US- 19032 Folcroft Pennsylvania United States
Tel (+1) 610 586 7801 Fax (+1) 215 701 0646

Wilhelmsen Ships Service INC. 9400 New Century Drive US-77507 Pasadena Texas United States
Telephone daytime: (+1) 281 867 2000 Fax: (+1) 281 867 2800

Wilhelmsen Ships Service Ltd. Unit 3A NewtonsCourt Crossways DA2 6QL Dartford, Kent United Kingdom
Tel (+44) 1322 282 412 Fax (+44) 1322 284 774

Wilhelmsen Ships Service Ltda Rua Bispo Lacerda nos.61/67 Del Catilho BR 21051120 Rio de Janeiro Brazil
Tel (+55) 21 25 82 8000 Fax (+55) 21 25 82 8001

Wilhelmsen Ships Service (S) Pte Ltd 186 Pandan Loop Singapore 128376 Tel (+65) 6395 4545

Wilhelmsen Ships Service Co., Ltd 12-31 Torihama-cho Kanazawa-ku Yokohama-shi JP-236 0002, Japan
Tel (+81) 45 775 0012 Fax (+81) 45 775 0070

Wilhelmsen Ships Service Hellas SA 100, D. Moutsopoulou & Serifou str GR-185 41 Piraeus Greece
Tel (+ 30) 210 4239100 Fax (+ 30) 210 4212480

Wilhelmsen Ships Service AS U.A.E . Fl 24 Executive Heights, Tecom C Sheikh Zayed Road (East) Dubai United Arab Emirates
Tel (+971) 4 382 3888

Wilhelmsen Ships Service AS, Willem Barentszstraat 50 316 the Netherlands. Tel (+31) 10 4877 777

