

Material Safety Data Sheet acc. to ISO/DIS 11014

Printing date 10/16/2007

Reviewed on 10/16/2007

*** 1 Identification of substance**

- **Trade name:** Alka-M-Photometer
- **Product use:** Reagent for water analysis
- **Catalogue number:** RT321-0
- **Manufacturer/Supplier:**
 Orbeco-Hellige Inc.
 6456 Parkland Dr.
 Sarasota, FL 34243-4036
 USA
 phone: (941) 756-6410
 fax: (941) 727-9654
 www.orbeco.com
 Made in Germany
- **Emergency information:** Chemtrec: 800-424-9300

*** 2 Hazards identification**

- **Hazard description:** Not applicable.
- **Canadian Hazard Symbols:** Not controlled under WHMIS.
- **Information pertaining to particular dangers for man and environment:**
 The product does not have to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.
- **NFPA ratings (scale 0 - 4)**



*** 3 Composition / Data on components**

- **Description:** preparation contains organic and inorganic compounds

Composition and Information on Ingredients:		
CAS: 9999-99-9	Nonhazardous components Any ingredient(s) of this product listed as "Nonhazardous component(s)" is not considered a health hazard according to OSHA definition.	90-100%
CAS: 124-04-9 EINECS: 204-673-3 EU Number: 607-144-00-9 RTECS: AU 8400000	adipic acid Xi; R 36	5-10%

- **Additional information:** For the wording of the listed risk phrases refer to section 16.

*** 4 First aid measures**

- **General information:** Immediately remove any clothing soiled by the product.
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:** Immediately wash with water and soap and rinse thoroughly.
- **After eye contact:** Rinse opened eye for several minutes (15 min) under running water.

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- **After swallowing:**
Rinse out mouth and then drink plenty of water.
If symptoms persist consult doctor.
- **The following symptoms may occur:**
after swallowing of large amounts:
sickness
vomiting
after inhalation:
mucous membrane irritation
- **Danger:** Danger of disturbed cardiac rhythm.

* 5 Fire fighting measures

- **Suitable extinguishing agents:** Use fire fighting measures that suit the environment.
- **Special hazards caused by the material, its products of combustion or resulting gases:**
combustible
Formation of toxic gases is possible during heating or in case of fire.
- **Protective equipment:** Wear self-contained respiratory protective device.
- **Additional information**
Ambient fire may liberate hazardous vapours.
Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.
Collect contaminated fire fighting water separately. It must not enter the sewage system.

6 Accidental release measures

- **Person-related safety precautions:**
Avoid formation of dust.
Wear protective equipment. Keep unprotected persons away.
- **Measures for environmental protection:** Do not allow product to reach sewage system or any water course.
- **Measures for cleaning/collecting:**
Pick up mechanically.
Ensure adequate ventilation.
Dispose contaminated material as waste according to item 13.
- **Additional information:** No dangerous substances are released.

* 7 Handling and storage

- **Handling:**
- **Information for safe handling:** No special measures required.
- **Information about protection against explosions and fires:** No special measures required.
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** Store in a cool location.
- **Information about storage in one common storage facility:** store away from solvents
- **Further information about storage conditions:**
Protect from heat and direct sunlight.
Store in dry conditions.
Protect from humidity and water.
Protect from exposure to the light.

8 Exposure controls and personal protection

- **Additional information about design of technical systems:** No further data; see item 7.

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· Components with limit values that require monitoring at the workplace:	
124-04-9 adipic acid (5-10%)	
TLV (USA)	5 mg/m ³
EL (Canada)	5 mg/m ³
· Additional information: The lists that were valid during the creation were used as basis.	
· Personal protective equipment:	
· General protective and hygienic measures: The usual precautionary measures for handling chemicals should be followed.	
· Breathing equipment: Use respiratory protective device against the effects of fumes/dust/aerosol.	
· Protection of hands: Preventive skin protection by use of skin-protecting agents is recommended.	
· Material of gloves Nitrile rubber, NBR Recommended thickness of the material: ≥ 0.11 mm	
· Penetration time of glove material The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed. Value for the permeation: Level ≥ 6 (480 min)	
· Eye protection: Safety glasses with side-shields	
· Body protection: Protective work clothing	

9 Physical and chemical properties

· Odor Threshold:	Not applicable.
· Form:	Tablets
· Color:	Yellow
· Odor:	Odorless
· Melting point/Melting range:	Undetermined.
· Boiling point/Boiling range:	265°C (509°F)
· Freezing Point:	Not applicable.
· Flash point:	> 100°C (> 212°F)
· Flammability (solid, gaseous):	
Upper Flammable Limit:	Not applicable.
Lower Flammable Limit:	Not applicable.
· Ignition temperature:	405°C (761°F)
· Sensitivity to Mechanical Impact:	None
· Sensitivity to Static Discharge:	None
· Auto igniting:	Product is not selfigniting.
· Danger of explosion:	Product does not present an explosion hazard.
· Vapor Density:	Not applicable.
· Specific Gravity:	Not applicable.
· Density:	Not determined.
· Solubility in / Miscibility with	
Water:	Soluble.
· Coefficient of Water / Oil Distribution:	Not applicable.
· pH-value (8.8 g/l) at 20°C (68°F):	3.5
· Solvent content:	
Organic solvents:	0.0 %
· Solids content:	100.0 %

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10 Stability and reactivity

- **Thermal decomposition / conditions to be avoided:** To avoid thermal decomposition do not overheat.
- **Dangerous products of decomposition:** see chapter 5

11 Toxicological information

- **Acute toxicity:** Quantitative data on the toxicity of the preparation are not available.

· LD/LC50 values that are relevant for classification:		
124-04-9 adipic acid		
Oral	LD50	5700 mg/kg (rat)

- **Primary irritant effect:**

- **on the skin:** No irritant effect.

- **on the eye:** Irritating effect.

- **Sensitization:** No sensitizing effects known.

- **Subacute to chronic toxicity:**

CAS-No. 124-04-9:

Sensitization test (guinea pig): negative (IUCLID)

- **Additional toxicological information:**

The product is not subject to classification according to internally approved calculation methods for preparations.

When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.

The usual precautionary measures for handling chemicals should be followed.

- **Carcinogenicity:** NTP? IARC Monographs? OSHA Regulated? see chapter 8 / 15

- **Teratogenicity:** Not found.

- **Mutagenicity:** Not found.

- **Reproductive Toxicity:** Not found.

- **Synergistic Products:** None

12 Ecological information

- **Information about elimination (persistence and degradability):**

- **Other information:**

Quantitative data on the ecological effect of this preparation are not available.

The following statements refer to the individual components.

CAS-No. 124-04-9 adipic acid: 100% / 28 d

· Behavior in environmental systems:	
124-04-9 adipic acid	
log P(o/w)	0.093 (25°C) (.)

- **Ecotoxicological effects:**

· Aquatic toxicity:	
124-04-9 adipic acid	
EC50	86 mg/l/48h (Daphnia magna)
LC50	511 mg/l/48h (Leuciscus idus)
	97 mg/l/96h (Pimephales promelas)

- **Remark:**

Toxic for fish:

NH₄⁺ > 0.3 mg/l

sulfates > 7 g/l

Harmful effect due to pH shift.

- **Bacterial toxicity:** sulfates toxic > 2.5 g/l

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· **Additional ecological information:**· **BSB5-value:**

124-04-9 adipic acid

BSB5 | 0.598 g/g (-)

· **General notes:**

Water hazard class 1 (Self-assessment): slightly hazardous for water

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

Must not reach bodies of water or drainage ditch undiluted or unneutralized.

13 Disposal considerations

· **Product:**· **Recommendation:** Must not be disposed of together with household garbage. Do not allow product to reach sewage system.· **Uncleaned packagings:**· **Recommendation:** Disposal must be made according to official regulations.· **Recommended cleansing agent:** Water, if necessary with cleansing agents.

* 14 Transport information

· **DOT regulations:**· **Hazard class:** None· **Land transport ADR/RID (cross-border):**· **ADR/RID class:** None· **Maritime transport IMDG:**· **IMDG Class:** None· **Marine pollutant:** No· **Air transport ICAO-TI and IATA-DGR:**· **ICAO/IATA Class:** None· **Proper shipping name:** None· **Canadian TDG Class:** None· **Transport/Additional information:** Not dangerous according to the above specifications.

* 15 Regulations

· **Sara**· **Section 355 (Extremely hazardous substances):**

None of the ingredients is listed.

· **Section 313 (Specific toxic chemical listings):**

None of the ingredients is listed.

· **TSCA (Toxic Substances Control Act):**

124-04-9 | adipic acid

· **Proposition 65**· **Chemicals known to cause cancer:**

None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for females:**

None of the ingredients is listed.

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· Chemicals known to cause reproductive toxicity for males:	
None of the ingredients is listed.	
· Chemicals known to cause developmental toxicity:	
None of the ingredients is listed.	
· Canadian Ingredient Disclosure List	
· Limit 0,1%	
None of the ingredients is listed.	
· Limit 1%	
124-04-9	adipic acid
· Canadian Domestic Substances List (DSL)	
124-04-9	adipic acid
· EPA (Environmental Protection Agency)	
None of the ingredients is listed.	
· IARC (International Agency for Research on Cancer)	
None of the ingredients is listed.	
· NTP (National Toxicology Program)	
None of the ingredients is listed.	
· NIOSH-Ca (National Institute for Occupational Safety and Health)	
None of the ingredients is listed.	
· OSHA-Ca (Occupational Safety & Health Administration)	
None of the ingredients is listed.	

· **Product related hazard informations:** The product is not subject to classification.

· **Special labeling of certain preparations:**
Safety data sheet available for professional user on request.

· **Information about limitation of use:** Not required.

· **Water hazard class:** Water hazard class 1 (Self-assessment): slightly hazardous for water.

· **CPR Classification:** None

· **MSDS discloses information elements required by the CPR .**

*16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Relevant R-phrases**

36 Irritating to eyes.

· **Contact:** Orbeco-Hellige, Inc., Quality Assurance Dept., Phone: 941-756-6410

· **Sources**

Data arise from manufacturers' data sheets, reference works and literature.
IUCLID (International Uniform Chemical Information Database)

· *** Data compared to the previous version altered.**

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* 1 Identification of the substance/mixture and of the company/undertaking

- **Product identifier** Reagent for water analysis
- **Trade name:** Calcium Hardness Tablets
- **Catalogue number:** RT519-1
- **Manufacturer/Supplier:**
Orbeco-Hellige, Inc.
6456 Parkland Drive
Sarasota, FL 34243
USA
phone: (941) 756-6410
fax: (941) 727-9654
www.orbeco.com
Made in Germany
- **Emergency telephone number:** Chemtrec: 800-424-9300

* 2 Hazards identification

- **Classification of the substance or mixture**



GHS05 Corrosion

H314 Causes severe skin burns and eye damage.



GHS07

H302 Harmful if swallowed.

- **Classification according to Directive 67/548/EEC or Directive 1999/45/EC**



C; Corrosive

R35: Causes severe burns.

- **Information concerning particular hazards for human and environment:**

The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.

- **Label elements**

· **GHS label elements** The product is classified and labelled according to the Globally Harmonized System (GHS).

· **Hazard pictograms** GHS05, GHS07

· **Signal word** Danger

- **Hazard-determining components of labelling:**

lithium hydroxide

- **Hazard statements**

H302 Harmful if swallowed.

H314 Causes severe skin burns and eye damage.

- **Precautionary statements**

P260 Do not breathe dust/fume/gas/mist/vapours/spray.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.

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P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P309+P311 IF exposed or if you feel unwell: Call a POISON CENTER or doctor/physician.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

Canadian Hazard Symbols:

WHMIS classification:

E
Corrosive material

NFPA ratings (scale 0 - 4)


Health = 3
Fire = 0
Reactivity = 0

* 3 Composition/information on ingredients

Chemical characterization: Mixtures

Description: Mixture of organic and inorganic compounds

Composition and Information on Ingredients:

CAS: 1310-65-2 EINECS: 215-183-4	lithium hydroxide C R35; Xn R22 H301; H314	10-20%
CAS: 9999-99-9	Nonhazardous components Any ingredient(s) of this product listed as "Nonhazardous component(s)" is not considered a health hazard according to OSHA definition.	80-90%

REACH - pre-registered substances All components are REACH pre-registered.

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

4 First aid measures

Description of first aid measures
General information:

Personal protection for the First Aider.
Immediately remove any clothing soiled by the product.

After inhalation:

Supply fresh air or oxygen; call for doctor.
In case of unconsciousness remove to fresh air, apply artificial respiration, and consult a physician.

After skin contact:

Wash with polyethylene glycol 400 and then rinse with copious amounts of water.
Immediate medical treatment necessary. Failure to treat burns can prevent wounds from healing.

After eye contact:

Rinse opened eye for several minutes (15 min) under running water.
Call a doctor immediately.

After swallowing:

Rinse out mouth and then drink 1-2 glasses of water.
Do not induce vomiting; immediately call for medical help.

Most important symptoms and effects, both acute and delayed

after inhalation:
coughing

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breathing difficulty
 after swallowing:
 cramps
 pain
 strong caustic effect
 damage to the affected mucous membranes

- **Danger:**

Danger of gastric perforation.
 Danger of impaired breathing.

- **Indication of any immediate medical attention and special treatment needed**

If swallowed or in case of vomiting, danger of entering the lungs.
 Later observation for pneumonia and pulmonary edema.

* 5 Firefighting measures

- **Extinguishing media**

- **Suitable extinguishing agents:** Use fire fighting measures that suit the environment.

- **For safety reasons unsuitable extinguishing agents:** Water

- **Special hazards arising from the substance or mixture**

Formation of toxic gases is possible during heating or in case of fire.

Nitrogen oxides (NO_x)

LiO_x

- **Advice for firefighters**

- **Protective equipment:**

Wear self-contained respiratory protective device.

Wear fully protective suit.

- **Additional information**

Collect contaminated fire fighting water separately. It must not enter the sewage system.

Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

Ambient fire may liberate hazardous vapours.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**

Wear protective equipment. Keep unprotected persons away.

Keep away from ignition sources

- **Environmental precautions:** Do not allow product to reach sewage system or any water course.

- **Methods and material for containment and cleaning up:**

Dispose contaminated material as waste according to item 13.

Pick up mechanically.

Ensure adequate ventilation.

- **Reference to other sections**

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

* 7 Handling and storage

- **Handling:**

- **Precautions for safe handling** Open and handle receptacle with care.

- **Information about protection against explosions and fires:** The product is not flammable.

- **Conditions for safe storage, including any incompatibilities**

- **Storage:**

- **Requirements to be met by storerooms and receptacles:** Store in a cool location.

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- **Information about storage in one common storage facility:**
 - Do not store together with acids.
 - Store away from oxidizing agents.
 - **Further information about storage conditions:**
 - Keep receptacle tightly sealed.
 - Protect from heat and direct sunlight.
 - Store in dry conditions.
 - Protect from humidity and water.
 - This product is hygroscopic.
 - Protect from exposure to the light.
 - **Recommended storage temperature:** 20°C +/- 5°C (approx. 68°F)
-

* 8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see item 7.
- **Control parameters**

- **Components with limit values that require monitoring at the workplace:**

1310-65-2 lithium hydroxide (10-20%)

WEEL (USA)	Short-term value: C 1 mg/m ³
EL (Canada)	Short-term value: C 1 mg/m ³
EV (Canada)	Short-term value: 1 mg/m ³ anhydrous

- **Additional information:** The lists that were valid during the creation were used as basis.
 - **Exposure controls**
 - **Personal protective equipment:**
 - **General protective and hygienic measures:**
 - Keep away from foodstuffs, beverages and feed.
 - Immediately remove all soiled and contaminated clothing.
 - Wash hands before breaks and at the end of work.
 - Avoid contact with the eyes and skin.
 - Do not eat, drink, smoke or sniff while working.
 - **Breathing equipment:** Use respiratory protective device against the effects of fumes/dust/aerosol.
 - **Recommended filter device for short term use:** Filter P2
 - **Protection of hands:**
 - Alkaline resistant gloves
 - Preventive skin protection by use of skin-protecting agents is recommended.
 - After use of gloves apply skin-cleaning agents and skin cosmetics.
 - **Material of gloves**
 - Nitrile rubber, NBR
 - Recommended thickness of the material: ≥ 0.11 mm
 - **Penetration time of glove material**
 - The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
 - Value for the permeation: Level ≥ 1 (10 min)
 - **Eye protection:** Tightly sealed goggles
 - **Body protection:** Alkaline resistant protective clothing
-

9 Physical and chemical properties

- **Information on basic physical and chemical properties**
 - Odor Threshold:** Not applicable.
 - Appearance:**
 - Form:** Tablets

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· Color:	Beige
· Odor:	Odorless
· pH-value (0.73 g/l) at 20°C (68°F):	11.5
· Melting point/Melting range:	Undetermined.
· Boiling point/Boiling range:	925°C (1697°F)
· Freezing Point:	Not applicable.
· Flash point:	Not applicable.
· Flammability (solid, gaseous):	
Upper Flammable Limit:	Not applicable.
Lower Flammable Limit:	Not applicable.
· Ignition temperature:	340°C (644°F)
· Sensitivity to Mechanical Impact:	None
· Sensitivity to Static Discharge:	None
· Auto igniting:	Product is not selfigniting.
· Danger of explosion:	Product does not present an explosion hazard.
· Vapor Density:	Not applicable.
· Specific Gravity:	Not applicable.
· Density:	Not determined.
· Solubility in / Miscibility with	
Water:	Partly soluble.
· Coefficient of Water / Oil Distribution:	Not applicable.
· Solvent content:	
Organic solvents:	0.0 %
Solids content:	100.0 %

*10 Stability and reactivity

- **Reactivity**
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** To avoid thermal decomposition do not overheat.
- **Possibility of hazardous reactions**
 - Reacts with metals to form nitrous fumes and hydrogen (Danger of explosion!).
 - Reacts with water.
 - > Forms heat.
 - Corrosive action on metals.
 - Corrodes aluminium and zinc.
 - Aqueous solution reacts alkaline.
 - Reacts with organic substances.
 - Reacts with light alloys to form hydrogen.
- **Incompatible materials:**
 - organic substances
 - acids
 - oxidizing agents
- **Hazardous decomposition products:**
 - hydrogen
 - see chapter 5

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*11 Toxicological information

- **Information on toxicological effects**

- **Acute toxicity:**

Quantitative data on the toxicity of the preparation are not available.

The following statements refer to the individual components.

- **LD/LC50 values that are relevant for classification:**

1310-65-2 lithium hydroxide		
Oral	LD50	210 mg/kg (rat)

- **Primary irritant effect:**

- **on the skin:** Strong caustic effect on skin and mucous membranes.

- **on the eye:** strong caustic effect

- **Sensitization:** No sensitizing effects known.

- **Subacute to chronic toxicity:**

CAS-No. 1310-65-2:

chronic: central nervous system effects

- **Experience with humans:** Can cause kidney damages.

- **Additional toxicological information:**

The product shows the following dangers according to internally approved calculation methods for preparations:

Corrosive

Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.

The following applies to lithium compounds in general:

after absorption: CNS disorders, ataxia (impaired locomotor coordination) due to disturbed electrolyte balance

- **Carcinogenicity:** NTP? IARC Monographs? OSHA Regulated? see chapter 8 / 15

- **Teratogenicity:** Not found.

- **Mutagenicity:** Not found.

- **Reproductive Toxicity:** Not found.

- **Synergistic Products:** None

*12 Ecological information

- **Toxicity**

- **Aquatic toxicity:** No further relevant information available.

- **Persistence and degradability**

- **Other information:** Quantitative data on the ecological effect of this preparation are not available.

- **Ecotoxicological effects:**

- **Remark:**

Harmful effect due to pH shift.

Forms corrosive mixtures with water even if diluted.

- **Additional ecological information:**

The following applies to lithium compounds in general:

MERCK - biological effects:

fish toxic from 100 mg/l up

Daphnia toxic from 16 mg/ up

plants toxic from 0.2 mg/l up (value calculated as Li)

- **General notes:**

Water hazard class 2 (Self-assessment): hazardous for water

Do not allow product to reach ground water, water course or sewage system.

Rinse off of bigger amounts into drains or the aquatic environment may lead to increased pH-values. A high pH-value harms aquatic organisms.

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- Results of PBT and vPvB assessment no data available

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:**
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
Hand over to hazardous waste disposers.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleansing agent:** Water, if necessary with cleansing agents.

*14 Transport information

- **TDG / DOT regulations:**



- **Hazard class:** 8
- **Identification number:** UN2680
- **Packing group:** II
- **Proper shipping name (technical name):** LITHIUM HYDROXIDE, mixture
- **Label:** 8

- **Land transport ADR/RID (cross-border):**



- **ADR/RID class:** 8 (C6) Corrosive substances
- **Danger code (Kemler):** 80
- **UN-Number:** 2680
- **Packaging group:** II
- **UN proper shipping name:** 2680 LITHIUM HYDROXIDE, mixture
- **Limited quantity (LQ):** LQ23

- **Maritime transport IMDG:**



- **IMDG Class:** 8
- **UN Number:** 2680
- **Label:** 8
- **Packaging group:** II
- **EMS Number:** F-A,S-B
- **Marine pollutant:** No
- **Segregation groups:** Alkalis

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· Proper shipping name:	LITHIUM HYDROXIDE, mixture
· Air transport ICAO-TI and IATA-DGR:	
	
· ICAO/IATA Class:	8
· UN/ID Number:	2680
· Label	8
· Packaging group:	II
· Proper shipping name:	LITHIUM HYDROXIDE, mixture
· Canadian TDG Class:	8
· UN "Model Regulation": UN2680, LITHIUM HYDROXIDE, mixture, 8, II	
· Special precautions for user Warning: Corrosive substances	

*15 Regulatory information

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

· Sara

· **Section 355 (Extremely hazardous substances):**

None of the ingredients is listed.

· **Section 313 (Specific toxic chemical listings):**

None of the ingredients is listed.

· **TSCA (Toxic Substances Control Act):**

All ingredients are listed.

· **Proposition 65**

· **Chemicals known to cause cancer:**

None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for females:**

None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for males:**

None of the ingredients is listed.

· **Chemicals known to cause developmental toxicity:**

None of the ingredients is listed.

· **Canadian Ingredient Disclosure List**

· **Limit 0,1%**

None of the ingredients is listed.

· **Limit 1%**

1310-65-2 lithium hydroxide

· **Canadian Domestic Substances List (DSL)**

All ingredients are listed.

· **EPA (Environmental Protection Agency)**

None of the ingredients is listed.

· **IARC (International Agency for Research on Cancer)**

None of the ingredients is listed.

· **NTP (National Toxicology Program)**

None of the ingredients is listed.

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· NIOSH-Ca (National Institute for Occupational Safety and Health)		
None of the ingredients is listed.		
· OSHA-Ca (Occupational Safety & Health Administration)		
None of the ingredients is listed.		
· Australian Inventory of Chemical Substances		
All ingredients are listed.		
· ENCS List (MITI):		
1310-65-2	lithium hydroxide	1-712
· European EINECS		
All ingredients are listed.		
· Standard for the Uniform Scheduling of Drugs and Poisons		
None of the ingredient is listed.		
· GHS label elements The product is classified and labelled according to the Globally Harmonized System (GHS).		
· Hazard pictograms GHS05, GHS07		
· Signal word Danger		
· Hazard-determining components of labelling: lithium hydroxide		
· Hazard statements H302 Harmful if swallowed. H314 Causes severe skin burns and eye damage.		
· Precautionary statements P260 Do not breathe dust/fume/gas/mist/vapours/spray. P280 Wear protective gloves/protective clothing/eye protection/face protection. P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P309+P311 IF exposed or if you feel unwell: Call a POISON CENTER or doctor/physician. P501 Dispose of contents/container in accordance with local/regional/national/international regulations.		
· Information about limitation of use: Employment restrictions concerning pregnant and lactating women must be observed. Employment restrictions concerning young persons must be observed.		
· Water hazard class: Water hazard class 2 (Self-assessment): hazardous for water.		
· CPR Classification: Class E		
· This product has been classified in accordance with the hazard criteria of the CPR and the MSDS contains all of the information required by the CPR		
· Chemical safety assessment: A Chemical Safety Assessment has not been carried out.		

*16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Relevant phrases**

H301 Toxic if swallowed.
H314 Causes severe skin burns and eye damage.

R22 Harmful if swallowed.
R35 Causes severe burns.

· **Recommended restriction of use:** professional/industrial use only

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USA

Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 02/09/2011

Reviewed on 02/09/2011

Trade name: Calcium Hardness Tablets

(Contd. of page 9)

· **Contact:** Orbeco-Hellige, Inc., Quality Assurance Dept., Phone: 941-756-6410

· **Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)

ICAO: International Civil Aviation Organization

ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO)

NFPA: National Fire Protection Association (USA)

WHMIS: Workplace Hazardous Materials Information System (Canada)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

· **Sources**

GESTIS-Stoffdatenbank

Data arise from manufacturers' data sheets, reference works and literature.

· *** Data compared to the previous version altered.**

USA

Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 10/02/2009

Reviewed on 10/02/2009

*** 1 Identification of substance**

- **Trade name:** Cyanuric acid Tablets
- **Product use:** Reagent for water analysis
- **Catalogue number:** RT132-0(BT), RT132-1 (RT)
- **Manufacturer/Supplier:**
 Orbeco-Hellige, Inc.
 6456 Parkland Drive
 Sarasota, FL 34243
 USA
 phone: (941) 756-6410
 fax: (941) 727-9654
 www.orbeco.com
 Made in Germany
- **Emergency information:** Chemtrec: 800-424-9300

*** 2 Hazards identification**

- **Hazard description:** Not applicable (EU)
- **Canadian Hazard Symbols:**



- **WHMIS classification:**
D2A
Very toxic material causing other toxic effects
- **Information pertaining to particular dangers for man and environment:**
The product does not have to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.
- **NFPA ratings (scale 0 - 4)**

	Health = 1 Fire = 0 Reactivity = 0
--	--

*** 3 Composition / Data on components**

- **Description:** mixture contains organic and inorganic compounds

· Composition and Information on Ingredients:		
CAS: 10043-35-3 EINECS: 233-139-2 Index number: 005-007-00-2 RTECS: ED 4550000	boric acid	85-95%
CAS: 108-78-1 EINECS: 203-615-4 RTECS: OS0700000	melamine	5-10%

(Contd. on page 2)

Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 10/02/2009

Reviewed on 10/02/2009

Trade name: Cyanuric acid Tablets

(Contd. of page 1)

· **REACH - pre-registered substances** All components are REACH pre-registered.

* 4 First aid measures

- **General information:** Immediately remove any clothing soiled by the product.
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:** Immediately wash with water and soap and rinse thoroughly.
- **After eye contact:**
Rinse opened eye for several minutes (15 min) under running water.
Seek medical treatment.
- **After swallowing:**
Rinse out mouth and then drink 1-2 glasses of water.
If symptoms persist consult doctor.
- **The following symptoms may occur:**
after swallowing:
sickness
vomiting
diarrhoea
after swallowing of large amounts:
fatigue
cramps
ataxia (impaired locomotor coordination)
drop in temperature

5 Fire fighting measures

- **Suitable extinguishing agents:** Use fire fighting measures that suit the environment.
- **Protective equipment:** Wear self-contained respiratory protective device.
- **Additional information**
Ambient fire may liberate hazardous vapours.
Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.
Collect contaminated fire fighting water separately. It must not enter the sewage system.

6 Accidental release measures

- **Person-related safety precautions:**
Wear protective equipment. Keep unprotected persons away.
Avoid formation of dust.
- **Measures for environmental protection:** Do not allow product to reach sewage system or any water course.
- **Measures for cleaning/collecting:**
Pick up mechanically.
Ensure adequate ventilation.
Dispose contaminated material as waste according to item 13.
- **Additional information:** No dangerous substances are released.

* 7 Handling and storage

- **Handling:**
- **Information for safe handling:** Thorough dedusting.
- **Information about protection against explosions and fires:** The product is not flammable.
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** Store in a cool location.
- **Information about storage in one common storage facility:** Not required.

(Contd. on page 3)

USA

Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 10/02/2009

Reviewed on 10/02/2009

Trade name: Cyanuric acid Tablets

(Contd. of page 2)

- **Further information about storage conditions:**
Protect from heat and direct sunlight.
Store in dry conditions.
Protect from humidity and water.
Protect from exposure to the light.
- **Recommended storage temperature:** 20°C +/- 5°C (approx. 68°F)

* 8 Exposure controls and personal protection

- **Additional information about design of technical systems:** No further data; see item 7.

· Components with limit values that require monitoring at the workplace:

10043-35-3 boric acid (85-95%)

TLV (USA)	Short-term value: 6* mg/m ³ Long-term value: 2* mg/m ³ *as inhalable fraction
EL (Canada)	Short-term value: 6 mg/m ³ Long-term value: 2 mg/m ³
EV (Canada)	Short-term value: 6 mg/m ³ Long-term value: 2 mg/m ³ inorganic, inhalable

108-78-1 melamine (5-10%)

WEEL (USA)	10* 5** mg/m ³ *inhalable **respirable fraction
------------	---

- **Additional information:** The lists that were valid during the creation were used as basis.
- **Personal protective equipment:**
- **General protective and hygienic measures:** The usual precautionary measures for handling chemicals should be followed.
- **Breathing equipment:** Use respiratory protective device against the effects of fumes/dust/aerosol.
- **Recommended filter device for short term use:** Filter P2
- **Protection of hands:** Preventive skin protection by use of skin-protecting agents is recommended.
- **Material of gloves**
Nitrile rubber, NBR
Recommended thickness of the material: ≥ 0.11 mm
- **Penetration time of glove material**
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
Value for the permeation: Level ≥ 1 (10 min)
- **Eye protection:** Safety glasses with side-shields
- **Body protection:** Protective work clothing

9 Physical and chemical properties

· Odor Threshold:	Not applicable.
· Form:	Tablets
· Color:	White
· Odor:	Odorless
· Melting point/Melting range:	Undetermined.
· Boiling point/Boiling range:	300°C (572°F)
· Freezing Point:	Not applicable.
· Flash point:	Not applicable.
· Flammability (solid, gaseous): Upper Flammable Limit:	Not applicable.

(Contd. on page 4)

—USA—

Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 10/02/2009

Reviewed on 10/02/2009

Trade name: Cyanuric acid Tablets

(Contd. of page 3)

· Lower Flammable Limit:	Not applicable.
· Ignition temperature:	345.0°C (653°F)
· Sensitivity to Mechanical Impact:	None
· Sensitivity to Static Discharge:	None
· Auto igniting:	Product is not selfigniting.
· Danger of explosion:	Product does not present an explosion hazard.
· Vapor Density:	Not applicable.
· Specific Gravity:	Not applicable.
· Density at 20°C (68°F):	1.38 g/cm ³
· Solubility in / Miscibility with Water:	Soluble.
· Coefficient of Water / Oil Distribution:	Not applicable.
· pH-value (10 g/l) at 20°C (68°F):	6
· Solvent content:	
· Organic solvents:	0.0 %
· Solids content:	100.0 %

*10 Stability and reactivity

- **Thermal decomposition / conditions to be avoided:** To avoid thermal decomposition do not overheat.
- **Materials to be avoided:**
 - alkalis
 - oxidizing agents
- **Dangerous products of decomposition:** see chapter 5

*11 Toxicological information

- **Acute toxicity:** Quantitative data on the toxicity of the preparation are not available.

· **LD/LC50 values that are relevant for classification:**

10043-35-3 boric acid

Oral	LD50	2660 mg/kg (rat) (RTECS)
Dermal	LD50	> 2000 mg/kg (rat) (RTECS)

- **Primary irritant effect:**
 - **on the skin:** slight irritations possible
 - **on the eye:** Irritating effect.
- **Sensitization:** No sensitizing effects known.
- **Subacute to chronic toxicity:**
 - CAS-No. 10043-35-3:
 - MERCK: Sensitization test (guinea pig): negative (OECD 406)
- **Additional toxicological information:**
 - The product is not subject to classification according to internally approved calculation methods for preparations.
 - When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.
 - The usual precautionary measures for handling chemicals should be followed.
- **Carcinogenicity:** NTP? IARC Monographs? OSHA Regulated?
Boric acid:

(Contd. on page 5)

— USA —

Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 10/02/2009

Reviewed on 10/02/2009

Trade name: Cyanuric acid Tablets

(Contd. of page 4)

evaluation for carcinogenicity: negative in animals (NTP)

Melamine:

classified 3 (Equivocal evidence) by NTP

IARC: 3 (not classifiable for human)

· **Teratogenicity:** Not found.· **Mutagenicity:**

Boric acid:

Bacterial mutagenicity: Ames Test - negative (IUCLUD)

Mutagenicity (mammal cell test): chromosome aberration negative (NTP)

Melamine:

mutagenic for bacteria and/or yeast

· **Reproductive Toxicity:**

Boric acid / Borate may cause developmental changes based on published data, at doses many times in excess of those that could occur through inhalation of dust in occupational settings.

· **Synergistic Products:** None

*12 Ecological information

· **Information about elimination (persistence and degradability):**· **Other information:**

Quantitative data on the ecological effect of this preparation are not available.

The following statements refer to the individual components.

· **Behavior in environmental systems:****10043-35-3 boric acid**

log P(o/w)	0.76 (25°C) (.) (IUCLID)
------------	-----------------------------

108-78-1 melamine

log P(o/w)	- 1.14 (.)
------------	------------

· **Ecotoxicological effects:**· **Aquatic toxicity:****10043-35-3 boric acid**

EC50	133 mg/l/48h (Daphnia magna) (ECOTOX)
------	--

· **General notes:**

Water hazard class 1 (Self-assessment): slightly hazardous for water

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

Must not reach bodies of water or drainage ditch undiluted or unneutralized.

13 Disposal considerations

· **Product:**· **Recommendation:** Must not be disposed of together with household garbage. Do not allow product to reach sewage system.· **Uncleaned packagings:**· **Recommendation:** Disposal must be made according to official regulations.· **Recommended cleansing agent:** Water, if necessary with cleansing agents.

— USA —

(Contd. on page 6)

Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 10/02/2009

Reviewed on 10/02/2009

Trade name: Cyanuric acid Tablets

(Contd. of page 5)

* 14 Transport information

· TDG / DOT regulations:
· Hazard class: None
· Land transport ADR/RID (cross-border):
· ADR/RID class: None
· Maritime transport IMDG:
· IMDG Class: None
· Marine pollutant: No
· Air transport ICAO-TI and IATA-DGR:
· ICAO/IATA Class: None
· Proper shipping name: None
· Canadian TDG Class: None
· UN "Model Regulation": None
· Transport/Additional information: Not dangerous according to the above specifications.

* 15 Regulations

· Sara
· Section 355 (Extremely hazardous substances):
None of the ingredients is listed.
· Section 313 (Specific toxic chemical listings):
None of the ingredients is listed.
· TSCA (Toxic Substances Control Act):
All ingredients are listed.
· Proposition 65
· Chemicals known to cause cancer:
None of the ingredients is listed.
· Chemicals known to cause reproductive toxicity for females:
None of the ingredients is listed.
· Chemicals known to cause reproductive toxicity for males:
None of the ingredients is listed.
· Chemicals known to cause developmental toxicity:
None of the ingredients is listed.
· Canadian Ingredient Disclosure List
· Limit 0,1%
None of the ingredients is listed.
· Limit 1%
10043-35-3 boric acid
108-78-1 melamine
· Canadian Domestic Substances List (DSL)
All ingredients are listed.
· EPA (Environmental Protection Agency)
None of the ingredients is listed.
· IARC (International Agency for Research on Cancer)
108-78-1 melamine

3

(Contd. on page 7)

— USA —

Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 10/02/2009

Reviewed on 10/02/2009

Trade name: Cyanuric acid Tablets

(Contd. of page 6)

· NTP (National Toxicology Program)		
108-78-1	melamine	3 (equivocal evidence)
· NIOSH-Ca (National Institute for Occupational Safety and Health)		
None of the ingredients is listed.		
· OSHA-Ca (Occupational Safety & Health Administration)		
None of the ingredients is listed.		
· ENCS List (MITI):		
10043-35-3	boric acid	1-63
108-78-1	melamine	5-1024
· Standard for the Uniform Scheduling of Drugs and Poisons		
10043-35-3	boric acid	S5

- **Information about limitation of use:** Not required.
- **Water hazard class:** Water hazard class 1 (Self-assessment): slightly hazardous for water.
- **CPR Classification:** Class D, Division 2A
- **This product has been classified in accordance with the hazard criteria of the CPR and the MSDS contains all of the information required by the CPR**

* 16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Contact:** Orbeco-Hellige, Inc., Quality Assurance Dept., Phone: 941-756-6410

· **Sources**

IUCLID (International Uniform Chemical Information Database)
 ECOTOX Database
 International Chemical Safety Cards (ICSCs)

· *** Data compared to the previous version altered.**

Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 06/15/2009

Reviewed on 09/21/2007

*** 1 Identification of substance**

- **Trade name:** DPD No.1 Rapid Tablets
- **Product use:** Reagent for water analysis
- **Catalogue number:** RT131-0(BT), RT131-1(BT), RT131-2(BT), RT131-3
- **Manufacturer/Supplier:**
 Orbeco-Hellige, Inc.
 6456 Parkland Drive
 Sarasota, FL 34243
 USA
 phone: (941) 756-6410
 fax: (941) 727-9654
 www.orbeco.com
 Made in Germany
- **Emergency information:** Chemtrec: 800-424-9300

2 Hazards identification

- **Hazard description:** Not applicable.
- **Canadian Hazard Symbols:** Not controlled under WHMIS.
- **Information pertaining to particular dangers for man and environment:**
 The product does not have to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.
- **Classification system:**
 The classification was made according to the latest editions of international substances lists, and expanded upon from company and literature data.
- **NFPA ratings (scale 0 - 4)**



3 Composition / Data on components

- **Description:** preparation contains organic and inorganic compounds

Composition and Information on Ingredients:

CAS: 6283-63-2	N,N-diethylbenzene-1,4-diammonium sulphate	0.1-1.0%
EINECS: 228-500-6	☒ Xn, ☒ Xi; R 20/21/22-36	
RTECS: SS 9625000		
CAS: 9999-99-9	Nonhazardous components Any ingredient(s) of this product listed as "Nonhazardous component(s)" is not considered a health hazard according to OSHA definition.	> 99%

- **Additional information:** For the wording of the listed risk phrases refer to section 16.

4 First aid measures

- **General information:** No special measures required.
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.

(Contd. on page 2)

Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 06/15/2009

Reviewed on 09/21/2007

Trade name: DPD No.1 Rapid Tablets

(Contd. of page 1)

- **After skin contact:** Immediately rinse with water.
- **After eye contact:** Rinse opened eye for several minutes (15 min) under running water.
- **After swallowing:**
Drink copious amounts of water, induce vomiting.
If symptoms persist consult doctor.
- **The following symptoms may occur:**
after swallowing of large amounts:
sickness
vomiting
gastric pain
general feeling of sickness

5 Fire fighting measures

- **Suitable extinguishing agents:** Use fire fighting measures that suit the environment.
- **Special hazards caused by the material, its products of combustion or resulting gases:**
Formation of toxic gases is possible during heating or in case of fire.
phosphorus oxides (PxOx)
potassium oxide
- **Protective equipment:**
Wear self-contained respiratory protective device.
Wear fully protective suit.
- **Additional information**
Collect contaminated fire fighting water separately. It must not enter the sewage system.
Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.
Ambient fire may liberate hazardous vapours.

6 Accidental release measures

- **Person-related safety precautions:**
Wear protective equipment. Keep unprotected persons away.
Avoid formation of dust.
- **Measures for environmental protection:** Do not allow product to reach sewage system or any water course.
- **Measures for cleaning/collecting:**
Pick up mechanically.
Ensure adequate ventilation.
Dispose contaminated material as waste according to item 13.
- **Additional information:** No dangerous substances are released.

7 Handling and storage

- **Handling:**
- **Information for safe handling:** No special measures required.
- **Information about protection against explosions and fires:** The product is not flammable.
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** Store in a cool location.
- **Information about storage in one common storage facility:**
Store away from oxidizing agents.
store away from solvents
- **Further information about storage conditions:**
Protect from heat and direct sunlight.
Store in dry conditions.
Protect from humidity and water.

(Contd. on page 3)

— USA —

Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 06/15/2009

Reviewed on 09/21/2007

Trade name: **DPD No.1 Rapid Tablets**

(Contd. of page 2)

Protect from exposure to the light.

8 Exposure controls and personal protection

- **Additional information about design of technical systems:** No further data; see item 7.

- **Components with limit values that require monitoring at the workplace:**

10043-35-3 boric acid, crude natural, containing not more than 85 per cent of H3BO3 calculated on the dry weight

TLV (USA)	Short-term value: 6 I mg/m ³ Long-term value: 2 I mg/m ³
EL (Canada)	Short-term value: 6 mg/m ³ Long-term value: 2 mg/m ³

- **Additional information:** The lists that were valid during the creation were used as basis.

- **Personal protective equipment:**

- **General protective and hygienic measures:**

Wash hands before breaks and at the end of work.
Do not eat, drink, smoke or sniff while working.

- **Breathing equipment:** Use respiratory protective device against the effects of fumes/dust/aerosol.

- **Recommended filter device for short term use:** Filter P2

- **Protection of hands:** Preventive skin protection by use of skin-protecting agents is recommended.

- **Material of gloves**

Nitrile rubber, NBR

Recommended thickness of the material: ≥ 0.11 mm

- **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

Value for the permeation: Level ≥ 6 (480 min)

- **Eye protection:** Safety glasses with side-shields

- **Body protection:** Protective work clothing

9 Physical and chemical properties

- **Odor Threshold:** Not applicable.

- **Form:** Tablets

- **Color:** White

- **Odor:** Odorless

- **Melting point/Melting range:** Undetermined.

- **Boiling point/Boiling range:**

Freezing Point: Not applicable.

- **Flash point:** Not applicable.

- **Flammability (solid, gaseous):**

Upper Flammable Limit: Not applicable.

Lower Flammable Limit: Not applicable.

- **Ignition temperature:** 420.0°C (788°F)

- **Sensitivity to Mechanical Impact:** None

- **Sensitivity to Static Discharge:** None

- **Auto igniting:** Product is not selfigniting.

- **Danger of explosion:** Product does not present an explosion hazard.

- **Vapor Pressure:** Undetermined.

- **Vapor Density:** Not applicable.

- **Specific Gravity:** Not applicable.

(Contd. on page 4)

— USA —

Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 06/15/2009

Reviewed on 09/21/2007

Trade name: **DPD No.1 Rapid Tablets**

(Contd. of page 3)

· Density:	Not determined.
· Solubility in / Miscibility with Water:	Soluble.
· Coefficient of Water / Oil Distribution:	Not applicable.
· pH-value (10 g/l) at 20°C (68°F):	6.3
· Solvent content:	
Organic solvents:	0.0 %
· Solids content:	100.0 %

10 Stability and reactivity

- **Thermal decomposition / conditions to be avoided:** To avoid thermal decomposition do not overheat.
- **Materials to be avoided:**
 - metals
 - oxidizing agents
- **Dangerous products of decomposition:** see chapter 5

11 Toxicological information

- **Acute toxicity:** Quantitative data on the toxicity of the preparation are not available.

· LD/LC50 values that are relevant for classification:		
10043-35-3 boric acid, crude natural, containing not more than 85 per cent of H3BO3 calculated on the dry weight		
Oral	LD50	2660 mg/kg (rat)
Dermal	LD50	> 2000 mg/kg (rat)
7778-77-0 potassium dihydrogenorthophosphate		
Oral	LD50	7100 mg/kg (rat)
	LDLo	4640 mg/kg (rat)
6283-63-2 N,N-diethylbenzene-1,4-diammonium sulphate		
Oral	LD50	497 mg/kg (rat)

- **Primary irritant effect:**
- **on the skin:** No irritant effect.
- **on the eye:** Irritating effect.
- **Sensitization:** No sensitizing effects known.
- **Subacute to chronic toxicity:**
 - CAS-No. 10043-35-3:
 - MERCK: Sensitization test (guinea pig): negative (OECD 406)
- **Additional toxicological information:**
 - The product is not subject to classification according to internally approved calculation methods for preparations.
 - When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.
 - The usual precautionary measures for handling chemicals should be followed.
- **Carcinogenicity:** NTP? IARC Monographs? OSHA Regulated? see chapter 8 / 15
- **Teratogenicity:** Not found.
- **Mutagenicity:** Not found.
- **Reproductive Toxicity:** Not found.
- **Synergistic Products:** None

— USA —

(Contd. on page 5)

Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 06/15/2009

Reviewed on 09/21/2007

Trade name: **DPD No.1 Rapid Tablets**

(Contd. of page 4)

12 Ecological information

· **Information about elimination (persistence and degradability):**

· **Other information:** Quantitative data on the ecological effect of this preparation are not available.

· **Behavior in environmental systems:**

10043-35-3 boric acid, crude natural, containing not more than 85 per cent of H₃BO₃ calculated on the dry weight

log P(o/w)	0.76 (25°C) (.)
------------	-----------------

· **Mobility and bioaccumulation potential:**

Depending on the concentration, phosphorus compounds may contribute to the eutrophication of water supplies.

· **Ecotoxicological effects:**

· **Aquatic toxicity:**

10043-35-3 boric acid, crude natural, containing not more than 85 per cent of H₃BO₃ calculated on the dry weight

EC50	133 mg/l/48h (Daphnia magna)
------	------------------------------

LC50	5600 mg/l/96h (Gambusia affinis)
------	----------------------------------

· **Remark:**

Toxic for fish:
sulfates > 7 g/l

· **Bacterial toxicity:** sulfates toxic > 2.5 g/l

· **General notes:**

Water hazard class 2 (Self-assessment): hazardous for water

Do not allow product to reach ground water, water course or sewage system.

13 Disposal considerations

· **Product:**

· **Recommendation:** Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

· **Uncleaned packagings:**

· **Recommendation:** Disposal must be made according to official regulations.

· **Recommended cleansing agent:** Water, if necessary with cleansing agents.

14 Transport information

· **DOT regulations:**

· **Hazard class:** None

· **Land transport ADR/RID (cross-border):**

· **ADR/RID class:** None

· **Maritime transport IMDG:**

· **IMDG Class:** None

· **Marine pollutant:** No

· **Air transport ICAO-TI and IATA-DGR:**

· **ICAO/IATA Class:** None

· **Proper shipping name:** None

· **Canadian TDG Class:** None

· **Transport/Additional information:** Not dangerous according to the above specifications.

— USA —

(Contd. on page 6)

Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 06/15/2009

Reviewed on 09/21/2007

Trade name: **DPD No.1 Rapid Tablets**

(Contd. of page 5)

15 Regulations

- Sara

- **Section 355 (Extremely hazardous substances):**

None of the ingredients is listed.

- **Section 313 (Specific toxic chemical listings):**

None of the ingredients is listed.

- **TSCA (Toxic Substances Control Act):**

10043-35-3 boric acid, crude natural, containing not more than 85 per cent of H₃BO₃ calculated on the dry weight

7778-77-0 potassium dihydrogenorthophosphate

- **Proposition 65**

- **Chemicals known to cause cancer:**

None of the ingredients is listed.

- **Chemicals known to cause reproductive toxicity for females:**

None of the ingredients is listed.

- **Chemicals known to cause reproductive toxicity for males:**

None of the ingredients is listed.

- **Chemicals known to cause developmental toxicity:**

None of the ingredients is listed.

- **Canadian Ingredient Disclosure List**

- **Limit 0,1%**

None of the ingredients is listed.

- **Limit 1%**

10043-35-3 boric acid, crude natural, containing not more than 85 per cent of H₃BO₃ calculated on the dry weight

- **Canadian Domestic Substances List (DSL)** All ingredients are listed.

- **EPA (Environmental Protection Agency)**

None of the ingredients is listed.

- **IARC (International Agency for Research on Cancer)**

None of the ingredients is listed.

- **NTP (National Toxicology Program)**

None of the ingredients is listed.

- **NIOSH-Ca (National Institute for Occupational Safety and Health)**

None of the ingredients is listed.

- **OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients is listed.

- **Product related hazard informations:**

The product is not subject to identification regulations according to directives on hazardous materials.

- **Special labeling of certain preparations:**

Safety data sheet available for professional user on request.

- **Technical instructions (air):**

Class	Share in %
I	0,1-1,0

- **Water hazard class:** Water hazard class 2 (Self-assessment): hazardous for water.

- **CPR Classification:** None

(Contd. on page 7)

— USA —

Material Safety Data Sheet

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Reviewed on 09/21/2007

Trade name: DPD No.1 Rapid Tablets

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· **MSDS discloses information elements required by the CPR .**

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Relevant R-phrases**

20/21/22 Harmful by inhalation, in contact with skin and if swallowed.

36 Irritating to eyes.

· **Contact:** Orbeco-Hellige, Inc., Quality Assurance Dept., Phone: 941-756-6410

· *** Data compared to the previous version altered.**

—USA—

Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 06/15/2009

Reviewed on 09/21/2007

*** 1 Identification of substance**

- **Trade name:** DPD No.3 Rapid Tablets
- **Product use:** Reagent for water analysis
- **Catalogue number:** RT129-0(BT), RT129-1(BT), RT129-2(BT), RT129-3
- **Manufacturer/Supplier:**
 Orbeco-Hellige, Inc.
 6456 Parkland Drive
 Sarasota, FL 34243
 USA
 phone: (941) 756-6410
 fax: (941) 727-9654
 www.orbeco.com
 Made in Germany
- **Emergency information:** Chemtrec: 800-424-9300

2 Hazards identification

- **Hazard description:** Not applicable.
- **Canadian Hazard Symbols:** Not controlled under WHMIS.
- **Information pertaining to particular dangers for man and environment:**
 The product does not have to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.
- **NFPA ratings (scale 0 - 4)**



3 Composition / Data on components

- **Description:** preparation contains organic and inorganic compounds

· Composition and Information on Ingredients:		
CAS: 9999-99-9	Nonhazardous components Any ingredient(s) of this product listed as "Nonhazardous component(s)" is not considered a health hazard according to OSHA definition.	80-90%
CAS: 7681-11-0 EINECS: 231-659-4 RTECS: TT2975000	potassium iodide	10-20%
CAS: 9004-34-6 EINECS: 232-674-9	cellulose	0.1-1.0%

4 First aid measures

- **General information:** No special measures required.
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:** Immediately rinse with water.

(Contd. on page 2)

Material Safety Data Sheet

acc. to ISO/DIS 11014

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Reviewed on 09/21/2007

Trade name: DPD No.3 Rapid Tablets

(Contd. of page 1)

- **After eye contact:** Rinse opened eye for several minutes (15 min) under running water.
 - **After swallowing:**
Rinse out mouth and then drink plenty of water.
If symptoms persist consult doctor.
 - **The following symptoms may occur:**
after swallowing of large amounts:
sickness
vomiting
drop in blood pressure
resorption
 - **Danger:** Danger of disturbed cardiac rhythm.
-

5 Fire fighting measures

- **Suitable extinguishing agents:** Use fire fighting measures that suit the environment.
 - **Special hazards caused by the material, its products of combustion or resulting gases:**
Formation of toxic gases is possible during heating or in case of fire.
Hydrogen chloride (HCl)
potassium oxide
 - **Protective equipment:**
Wear self-contained respiratory protective device.
Wear fully protective suit.
 - **Additional information**
Ambient fire may liberate hazardous vapours.
Collect contaminated fire fighting water separately. It must not enter the sewage system.
Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.
-

6 Accidental release measures

- **Person-related safety precautions:**
Wear protective equipment. Keep unprotected persons away.
Avoid formation of dust.
 - **Measures for environmental protection:** Do not allow product to reach sewage system or any water course.
 - **Measures for cleaning/collecting:**
Pick up mechanically.
Ensure adequate ventilation.
Dispose contaminated material as waste according to item 13.
 - **Additional information:** No dangerous substances are released.
-

7 Handling and storage

- **Handling:**
 - **Information for safe handling:** No special measures required.
 - **Information about protection against explosions and fires:** The product is not flammable.
 - **Storage:**
 - **Requirements to be met by storerooms and receptacles:** Store in a cool location.
 - **Information about storage in one common storage facility:** Store away from oxidizing agents.
 - **Further information about storage conditions:**
Protect from heat and direct sunlight.
Store in dry conditions.
Protect from humidity and water.
Protect from exposure to the light.
-

— USA —

(Contd. on page 3)

Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 06/15/2009

Reviewed on 09/21/2007

Trade name: **DPD No.3 Rapid Tablets**

(Contd. of page 2)

8 Exposure controls and personal protection

· **Additional information about design of technical systems:** No further data; see item 7.

· **Components with limit values that require monitoring at the workplace:**

9004-34-6 cellulose

PEL (USA)	15* 5** mg/m ³ *total dust **respirable fraction
REL (USA)	10* 5** mg/m ³ *total dust **respirable fraction
TLV (USA)	10 mg/m ³
EL (Canada)	10 mg/m ³

· **Additional information:** The lists that were valid during the creation were used as basis.

· **Personal protective equipment:**

· **General protective and hygienic measures:**

Do not eat, drink, smoke or sniff while working.
Wash hands before breaks and at the end of work.

· **Breathing equipment:** Use respiratory protective device against the effects of fumes/dust/aerosol.

· **Recommended filter device for short term use:** Filter P1

· **Protection of hands:** Preventive skin protection by use of skin-protecting agents is recommended.

· **Material of gloves**

Nitrile rubber, NBR

Recommended thickness of the material: ≥ 0.11 mm

· **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

Value for the permeation: Level ≥ 6 (480 min)

· **Eye protection:** Safety glasses with side-shields

· **Body protection:** Protective work clothing

9 Physical and chemical properties

· **Odor Threshold:** Not applicable.

· **Form:** Tablets

· **Color:** White

· **Odor:** Odorless

· **Melting point/Melting range:** 773°C (1423°F)

· **Boiling point/Boiling range:**

Freezing Point: Not applicable.

· **Flash point:** Not applicable.

· **Flammability (solid, gaseous):**

Upper Flammable Limit: Not applicable.

Lower Flammable Limit: Not applicable.

· **Ignition temperature:** Undetermined.

· **Sensitivity to Mechanical Impact:** None

· **Sensitivity to Static Discharge:** None

· **Auto igniting:** Product is not selfigniting.

· **Danger of explosion:** Product does not present an explosion hazard.

· **Vapor Density:** Not applicable.

· **Specific Gravity:** Not applicable.

· **Density at 20°C (68°F):** 2.163 g/cm³

· **Solubility in / Miscibility with**

Water: Partly soluble.

· **Coefficient of Water / Oil Distribution:** Not applicable.

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Material Safety Data Sheet

acc. to ISO/DIS 11014

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Trade name: **DPD No.3 Rapid Tablets**

(Contd. of page 3)

· pH-value (12.5 g/l) at 20°C (68°F):	6.3
· Solvent content:	
Organic solvents:	0.0 %
· Solids content:	100.0 %

10 Stability and reactivity

- **Thermal decomposition / conditions to be avoided:** To avoid thermal decomposition do not overheat.
- **Materials to be avoided:**
 - alkali metals
 - acids
 - oxidizing agents
 - > Forms heat.
- **Dangerous products of decomposition:** see chapter 5

11 Toxicological information

- **Acute toxicity:** Quantitative data on the toxicity of the preparation are not available.

· LD/LC50 values that are relevant for classification:		
7681-11-0 potassium iodide		
Oral	LD50	2779 mg/kg (rat)

- **Primary irritant effect:**
- **on the skin:** No irritant effect.
- **on the eye:** Irritating effect.
- **Sensitization:** Sensitizing effect by skin contact is possible with prolonged exposure.
- **Additional toxicological information:**
 - The product is not subject to classification according to internally approved calculation methods for preparations.
 - When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.
 - The usual precautionary measures for handling chemicals should be followed.
- **Carcinogenicity:** NTP? IARC Monographs? OSHA Regulated? see chapter 8 / 15
- **Teratogenicity:** Not found.
- **Mutagenicity:** Not found.
- **Reproductive Toxicity:** Not found.
- **Synergistic Products:** None

12 Ecological information

- **Information about elimination (persistence and degradability):**
- **Other information:** Quantitative data on the ecological effect of this preparation are not available.
- **Ecotoxicological effects:**

· Aquatic toxicity:		
7681-11-0 potassium iodide		
Daphnia EC50		2.7 mg/l/24h (Daphnia magna)

- **Remark:**
- **Protozoen:** CAS-No. 7681-11-0: E. sulcatum toxic > 40 mg/l
- **General notes:**
 - Water hazard class 1 (Self-assessment): slightly hazardous for water
 - Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

(Contd. on page 5)

Material Safety Data Sheet

acc. to ISO/DIS 11014

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Reviewed on 09/21/2007

Trade name: **DPD No.3 Rapid Tablets**

(Contd. of page 4)

Must not reach bodies of water or drainage ditch undiluted or unneutralized.

13 Disposal considerations

- **Product:**
- **Recommendation:** Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleansing agent:** Water, if necessary with cleansing agents.

14 Transport information

- **DOT regulations:**
- **Hazard class:** -
None
- **Land transport ADR/RID (cross-border):**
- **ADR/RID class:** -
- **Maritime transport IMDG:**
- **IMDG Class:** -
- **Marine pollutant:** No
- **Air transport ICAO-TI and IATA-DGR:**
- **ICAO/IATA Class:** -
- **Proper shipping name:** None
- **Canadian TDG Class:** None

- **Transport/Additional information:** Not dangerous according to the above specifications.

15 Regulations

- **Sara**

- **Section 355 (Extremely hazardous substances):**

None of the ingredients is listed.

- **Section 313 (Specific toxic chemical listings):**

None of the ingredients is listed.

- **TSCA (Toxic Substances Control Act):** All ingredients are listed.

- **Proposition 65**

- **Chemicals known to cause cancer:**

None of the ingredients is listed.

- **Chemicals known to cause reproductive toxicity for females:**

None of the ingredients is listed.

- **Chemicals known to cause reproductive toxicity for males:**

None of the ingredients is listed.

- **Chemicals known to cause developmental toxicity:**

None of the ingredients is listed.

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Material Safety Data Sheet

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Printing date 06/15/2009

Reviewed on 09/21/2007

Trade name: DPD No.3 Rapid Tablets

(Contd. of page 5)

- **Canadian Ingredient Disclosure List**

- **Limit 0,1%**

None of the ingredients is listed.

- **Limit 1%**

7681-11-0 | potassium iodide

- **Canadian Domestic Substances List (DSL)** All ingredients are listed.

- **EPA (Environmental Protection Agency)**

None of the ingredients is listed.

- **IARC (International Agency for Research on Cancer)**

None of the ingredients is listed.

- **NTP (National Toxicology Program)**

None of the ingredients is listed.

- **NIOSH-Ca (National Institute for Occupational Safety and Health)**

None of the ingredients is listed.

- **OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients is listed.

- **Product related hazard informations:**

The product is not subject to identification regulations according to directives on hazardous materials.

- **Water hazard class:** Water hazard class 1 (Self-assessment): slightly hazardous for water.

- **CPR Classification:** None

- **MSDS discloses information elements required by the CPR .**

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Contact:** Orbeco-Hellige, Inc., Quality Assurance Dept., Phone: 941-756-6410

- *** Data compared to the previous version altered.**

Material Safety Data Sheet acc. to ISO/DIS 11014

Printing date 11/07/2008

Reviewed on 11/07/2008

* 1 Identification of substance

- **Trade name:** Phenol Red Rapid Tablets
- **Product use:** Reagent for water analysis
- **Catalogue number:** RT179-0(BT), RT179-1(BT), RT179-2(BT), RT179-3
- **Manufacturer/Supplier:**
Orbeco-Hellige, Inc.
6456 Parkland Drive
Sarasota, FL 34243
USA
phone: (941) 756-6410
fax: (941) 727-9654
www.orbeco.com
Made in Germany
- **Emergency information:** Chemtrec: 800-424-9300

2 Hazards identification

- **Hazard description:** Not applicable (EU)
- **Canadian Hazard Symbols:** Not controlled under WHMIS.
- **Information pertaining to particular dangers for man and environment:**
The product does not have to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.
- **NFPA ratings (scale 0 - 4)**



3 Composition / Data on components

- **Chemical characterization:**
- **CAS No. Description**
7647-14-5 sodium chloride
- **Identification number(s)**
- **EINECS Number:** 231-598-3

* 4 First aid measures

- **General information:** No special measures required.
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:** Immediately wash with water and soap and rinse thoroughly.
- **After eye contact:** Rinse opened eye for several minutes (15 min) under running water.
- **After swallowing:**
Rinse out mouth and then drink plenty of water.
If symptoms persist consult doctor.
- **The following symptoms may occur:**
after swallowing of large amounts:
sickness

(Contd. on page 2)

— USA —

Material Safety Data Sheet

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Reviewed on 11/07/2008

Trade name: Phenol Red Rapid Tablets

(Contd. of page 1)

vomiting
breathing difficulty
cramps

5 Fire fighting measures

- **Suitable extinguishing agents:** Use fire fighting measures that suit the environment.
 - **Special hazards caused by the material, its products of combustion or resulting gases:**
Formation of toxic gases is possible during heating or in case of fire.
Hydrogen chloride (HCl)
 - **Protective equipment:** Wear self-contained respiratory protective device.
 - **Additional information**
Ambient fire may liberate hazardous vapours.
Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.
Collect contaminated fire fighting water separately. It must not enter the sewage system.
-

6 Accidental release measures

- **Person-related safety precautions:** Avoid formation of dust.
 - **Measures for environmental protection:** Do not allow product to reach sewage system or any water course.
 - **Measures for cleaning/collecting:**
Dispose contaminated material as waste according to item 13.
Pick up mechanically.
Ensure adequate ventilation.
 - **Additional information:** No dangerous substances are released.
-

* 7 Handling and storage

- **Handling:**
 - **Information for safe handling:** No special measures required.
 - **Information about protection against explosions and fires:** The product is not flammable.
 - **Storage:**
 - **Requirements to be met by storerooms and receptacles:** Store in a cool location.
 - **Information about storage in one common storage facility:** Not required.
 - **Further information about storage conditions:**
Protect from heat and direct sunlight.
Store in dry conditions.
Protect from humidity and water.
Protect from exposure to the light.
 - **Recommended storage temperature:** 20°C +/- 5°C (approx. 68°F)
-

8 Exposure controls and personal protection

- **Additional information about design of technical systems:** No further data; see item 7.
- **Components with limit values that require monitoring at the workplace:** Not required.
- **Additional information:** The lists that were valid during the creation were used as basis.
- **Personal protective equipment:**
- **General protective and hygienic measures:** Do not eat, drink, smoke or sniff while working.
- **Breathing equipment:** Use respiratory protective device against the effects of fumes/dust/aerosol.
- **Recommended filter device for short term use:** Filter P1

(Contd. on page 3)

— USA —

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Reviewed on 11/07/2008

Trade name: Phenol Red Rapid Tablets

(Contd. of page 2)

- **Protection of hands:**

After use of gloves apply skin-cleaning agents and skin cosmetics.
Preventive skin protection by use of skin-protecting agents is recommended.

- **Material of gloves**

Nitrile rubber, NBR
Recommended thickness of the material: ≥ 0.11 mm

- **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
Value for the permeation: Level ≥ 1 (10 min)

- **Eye protection:** Safety glasses with side-shields

- **Body protection:** Protective work clothing

9 Physical and chemical properties

· Odor Threshold:	Not applicable.
· Form:	Tablets
· Color:	Orange
· Odor:	Odorless
· Melting point/Melting range:	801°C (1474°F)
· Boiling point/Boiling range:	1461°C (2662°F)
· Freezing Point:	Not applicable.
· Flash point:	Not applicable.
· Flammability (solid, gaseous):	Product is not flammable.
· Upper Flammable Limit:	Not applicable.
· Lower Flammable Limit:	Not applicable.
· Ignition temperature:	Undetermined.
· Sensitivity to Mechanical Impact:	None
· Sensitivity to Static Discharge:	None
· Danger of explosion:	Product does not present an explosion hazard.
· Vapor Density:	Not applicable.
· Specific Gravity:	Not applicable.
· Density at 20°C (68°F):	2.16 g/cm ³
· Bulk density at 20°C (68°F):	~ 1140 kg/m ³
· Solubility in / Miscibility with	
Water at 20°C (68°F):	358 g/l
· Coefficient of Water / Oil Distribution:	Not applicable.
· pH-value (12.8 g/l) at 20°C (68°F):	5.2
· Organic solvents:	0.0 %
· Solids content:	100.0 %

10 Stability and reactivity

- **Thermal decomposition / conditions to be avoided:** To avoid thermal decomposition do not overheat.

- **Materials to be avoided:**

alkali metals
--> Forms heat.

- **Dangerous reactions** Reacts with acids, alkalis and oxidizing agents.

(Contd. on page 4)

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Reviewed on 11/07/2008

Trade name: Phenol Red Rapid Tablets

(Contd. of page 3)

· **Dangerous products of decomposition:** see chapter 5

11 Toxicological information

· **Acute toxicity:**· **LD/LC50 values that are relevant for classification:**

7647-14-5 sodium chloride

Oral	LD	12 mg/kg (child)
	LD50	3000 mg/kg (rat) (RTCES)
Dermal	LD50	> 10000 mg/kg (rabbit) (RTECS)

· **Primary irritant effect:**· **on the skin:** temporary erythema possible· **on the eye:** Irritating effect.· **Sensitization:** No sensitizing effects known.· **Subacute to chronic toxicity:** repeated skin exposure can produce local skin destruction or dermatitis· **Additional toxicological information:**

When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.

The substance is not subject to classification.

The usual precautionary measures for handling chemicals should be followed.

· **Carcinogenicity:** NTP? IARC Monographs? OSHA Regulated? see chapter 8 / 15· **Teratogenicity:** Not found.· **Mutagenicity:** Not found.· **Reproductive Toxicity:** Not found.· **Synergistic Products:** None

12 Ecological information

· **Information about elimination (persistence and degradability):**· **Other information:** Methods for the determination of biodegradability are not applicable to inorganic substances.· **Ecotoxicological effects:**· **Aquatic toxicity:**

7647-14-5 sodium chloride

EC50	1000 mg/l/48h (Daphnia magna) (IUCLID)
LC50	7650 mg/l/96h (Pimephales promelas) (IUCLID)

· **General notes:**

Water hazard class 1 (Assessment by list): slightly hazardous for water

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

Must not reach bodies of water or drainage ditch undiluted or unneutralized.

—USA—

(Contd. on page 5)

Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 11/07/2008

Reviewed on 11/07/2008

Trade name: Phenol Red Rapid Tablets

(Contd. of page 4)

13 Disposal considerations

- **Product:**
- **Recommendation:**
Small amounts may be diluted with plenty of water and washed away. Dispose of bigger amounts in accordance with Local Authority requirements.
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleansing agent:** Water, if necessary with cleansing agents.

14 Transport information

- **TDG / DOT regulations:**
- **Hazard class:** None
- **Land transport ADR/RID (cross-border):**
- **ADR/RID class:** None
- **Maritime transport IMDG:**
- **IMDG Class:** None
- **Marine pollutant:** No
- **Air transport ICAO-TI and IATA-DGR:**
- **ICAO/IATA Class:** None
- **Proper shipping name:** None
- **Canadian TDG Class:** None
- **UN "Model Regulation":** None
- **Transport/Additional information:** Not dangerous according to the above specifications.

*15 Regulations

· Sara

· **Section 355 (Extremely hazardous substances):**

Substance is not listed.

· **Section 313 (Specific toxic chemical listings):**

Substance is not listed.

· **TSCA (Toxic Substances Control Act):** All ingredients are listed.· **Proposition 65**· **Chemicals known to cause cancer:**

Substance is not listed.

· **Chemicals known to cause reproductive toxicity for females:**

Substance is not listed.

· **Chemicals known to cause reproductive toxicity for males:**

Substance is not listed.

· **Chemicals known to cause developmental toxicity:**

Substance is not listed.

(Contd. on page 6)

—USA—

Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 11/07/2008

Reviewed on 11/07/2008

Trade name: Phenol Red Rapid Tablets

(Contd. of page 5)

· Canadian Ingredient Disclosure List
· Limit 0,1%

Substance is not listed.

· Limit 1%

Substance is not listed.

· Canadian Domestic Substances List (DSL) All ingredients are listed.

· EPA (Environmental Protection Agency)

Substance is not listed.

· IARC (International Agency for Research on Cancer)

Substance is not listed.

· NTP (National Toxicology Program)

Substance is not listed.

· NIOSH-Ca (National Institute for Occupational Safety and Health)

Substance is not listed.

· OSHA-Ca (Occupational Safety & Health Administration)

Substance is not listed.

· ENCS List (MITI):

7647-14-5 sodium chloride

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· Product related hazard informations:

The product is not subject to identification regulations according to (EU) directives on hazardous materials.

· Information about limitation of use: Not required.

· Water hazard class: Water hazard class 1 (Assessment by list): slightly hazardous for water.

· CPR Classification: Not applicable.

· This product has been classified in accordance with the hazard criteria of the CPR and the MSDS contains all of the information required by the CPR

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· Contact: Orbeco-Hellige, Inc., Quality Assurance Dept., Phone: 941-756-6410

· Sources

NTP (National Toxicology Program)

IUCLID (International Uniform Chemical Information Database)

GESTIS-Stoffdatenbank

· * Data compared to the previous version altered.