

Safety Data Sheet (SDS) DANTOIN™ BCDMH TABLETS

According to ISO &SANS 11014:2010 & SANS 10234
Revision Date: 25 November 2015

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Version: 1.0

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SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product identifier:

Identification as on the label/Trade name: Dantoin™ BCDMH Tablets

Additional information: Product Code BCDMH25

Relevant identification uses of the substance and uses advised against:

Identified uses: Water treatment applications.

Uses advised against: Anything other than water treatment applications.

Details of the supplier of the Safety Data Sheet:

Arch Water Products South Africa (Pty) Ltd.

(Reg. No. 1972/014058/07)

P O Box 150, Kempton Park, 1620

Situated At: NCP Chlookop Factory Site

Hytor Street

Chlookop

Kempton Park, 1619

Emergency telephone numbers:

Poisons Information Centre: 0861 555 777 (24 hours)
+27 11 976 2115 (Office hours only)

SECTION 2. HAZARDS IDENTIFICATION

Classification of the substances or mixture:

The mixture is classified according to:

SANS 10234:2008, Regulation EC 1272/2008 [EU-GHS/CLP]

Hazard classes/Hazard categories

Oxidising solid (Category 3)

Acute Toxicity Oral (Category 4)

Skin Corrosion (Category 1C)

Serious Eye Damage (Category 1)

Skin Sensitization (Category 1)

Aquatic Acute 1

For full text of H-Statements see section 16

Hazard statement

H272

H302

H314

H318

H317

H400

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The most important adverse effects:

The most important adverse physiochemical effects: Oxidising solid.

The most important adverse human health effects: Causes serious skin corrosion and eye damage.

Label elements:

Hazard pictograms:



Signal Words: DANGER

Hazard Statements:

H272 May intensify fire; oxidiser. H302 Harmful if swallowed. H314 Causes severe skin burns and eye damage. H317 May cause an allergic skin reaction. H400 Very toxic to aquatic life.

Supplemental Hazard Statements:

Precautionary Statements:

P210 Keep away from heat. P220 Keep/Store away from clothing/ combustible materials. P221 Take any precaution to avoid mixing with combustibles. P260 Do not breathe dust or mist. P264 Wash skin thoroughly after handling. P270 Do not eat, drink or smoke when using this product. P272 Contaminated work clothing should not be allowed out of the workplace. P280 Wear protective gloves/ protective clothing/ eye protection/ face protection. P301 + P312 + P330 IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you feel unwell. Rinse mouth. P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. P304 + P340 + P310 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER or doctor/ physician. P305 + P351 + P338 + P310 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/ physician. P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention. P363 Wash contaminated clothing before reuse. P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish. P405 Store locked up. P501 Dispose of contents/ container to an approved waste disposal plant.

Special labelling of certain mixtures: None.

Other hazards: EUH031: Contact with acids liberates toxic gas.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance/Mixture: Substance

Ingredients:

Substance name (IUPAC)	CAS-No.	Concentration % by weight	Classification EC1272/2008
	EC-No.		
Bromochloro-5,5-dimethylimidazolidine-2,4-dione	32718-18-6	90-100%	Oxidising solid (Category 2) H272, Acute Toxicity oral (Category 4) H302. Skin Corrosion (Category 1C) H314. Skin Sensitizer (Category 1) H317. Aquatic Acute 1 H400.
	251-171-5		

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available listed in Section 8.

For the full text of the H-Statements mentioned in this Section, see Section 16.

SECTION 4. FIRST AID MEASURES

Description of first aid measures:

In case of inhalation: Move to fresh air. If breathing is irregular or stopped, administer artificial respiration. Give oxygen. First aider needs to protect himself. Call a physician immediately.

In case of skin contact: Take off all contaminated clothing immediately. After contact with skin, wash immediately with plenty of soap and water. Call a physician immediately.

In case of eye contact: Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Call a physician immediately.

In case of ingestion: Call a physician immediately. Clean mouth with water and drink afterwards plenty of water. Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person.

Most important symptoms and effects, both acute and delayed:

Inhalation: Corrosive. Extremely destructive to tissues of the mucous membranes and upper respiratory tract.

Ingestion: Harmful if ingested. Corrosive. Swallowing can cause severe burns of the mouth, throat, and stomach. Can cause sore throat, vomiting, diarrhoea.

Skin Contact: Corrosive. Symptoms of redness, pain, and severe burns can occur.

Eye Contact: Corrosive. Contact can cause blurred vision, redness, pain and severe tissue burns.

Indication of any immediate medical attention and special treatment needed:

None known.

SECTION 5. FIREFIGHTING MEASURES

Extinguisher media:

Suitable extinguisher media: Dry powder, foam and water.

Unsuitable extinguishing media: None known.

Special hazards arising from the mixture:

Heating or fire can release toxic gas.

Advice for fire-fighters:

In the event of fire, wear self-contained breathing apparatus.

Further information: Use water spray to cool unopened containers.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures:

For non-emergency personnel: In the case of respirable dust and/or fumes, use self-contained breathing apparatus and dust impervious protective suit.

For emergency responders: In the case of respirable dust and/or fumes, use self-contained breathing apparatus and dust impervious protective suit.

Environmental precautions:

Do not flush into surface water or sanitary sewer system.

Methods for containment and cleaning up:

For small spills: Contain spilled material if possible. Sweep and shovel, collect with an electrically protected vacuum cleaner or by wet-brushing and place in container according to local regulations. Do not flush with water. Collect in suitable and properly labelled containers.

For large spills: Dike area to contain spill. Sweep and shovel, collect with an electrically protected vacuum cleaner or by wet-brushing and place in container according to local regulations. Do not flush with water. Collect in suitable and properly labelled containers.

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 information on disposal.

Additional information:

None known.

SECTION 7. HANDLING AND STORAGE

Precautions for safe handling:

Protective measures: Observe directions on label and instructions for use. Avoid contact with skin and eyes. Avoid formation of dust and aerosol. Provide appropriate exhaust ventilation at places where dust is formed.

Advice on general occupational hygiene: Observe directions on label and instructions for use. Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed.

Advice on safe handling: Provide sufficient air exchange and/or exhaust in work rooms. Avoid contact with skin and eyes. Avoid formation of respirable particles.

Advice on protection against fire and explosion: Avoid dust formation. Take precautionary measures against static discharges.

Conditions for safe storage, including incompatibilities:

Keep container tightly closed. To maintain product quality, do not store in heat or direct sunlight. Keep in a dry, cool and well-ventilated place.

Incompatible with oxidizing agents.

Specific end uses:

Use only as directed.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters:

Occupational exposure limits: No data available.

Biological exposure indices (BEI): No data available.

Additional exposure limits under the conditions of use: No data available.

Exposure control:

Appropriate engineering controls: Avoid inhalation. Use in well ventilated areas. Where an inhalation risk exists, mechanical extraction ventilation is recommended. Maintain dust levels below the recommended exposure standard.

Individual protection measures, such as personal protective equipment:

Eye/face protection: Use safety glasses. If there is a potential for exposure to particles which could cause eye discomfort, wear chemical goggles.

Hand protection: Use chemical resistant gloves. Examples of preferred glove barrier materials include: Butyl rubber, Neoprene, Nitrile/butadiene rubber, Polyethylene, Ethyl vinyl alcohol laminate, polyvinyl alcohol, Polyvinyl chloride.

Body protection: Not necessary under normal use.

Respiratory protection: At high dust levels, if discomfort is experienced, use an approved air-purifying respirator. Respiratory protection should be worn when there is a potential to exceed the exposure limit requirements or guidelines.

Environmental exposure controls: General advice: Do not flush into surface water or sanitary sewer system.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance (form): Tablet.

Colour: White.

Odour: Odourless.

Odour threshold: Not known.

pH: Not known.

Melting point/range (°C): 156 - 162 °C (decomposes) Method: OECD Test Guideline 102

Boiling point/range (°C): Decomposition: yes not applicable

Flash point (°C): 142 °C

Evaporation rate: Not known.

Flammability (solid, gas): Does not ignite.

Ignition temperature (°C): Not known.

Upper/lower flammability/explosive limits: Not known.

Vapour pressure: 3.8 mPa (25 °C) Method: OECD Test Guideline 104

Vapour density: Not known.

Relative density: 1.87 (23 °C) Method: OECD Test Guideline 109

Water solubility (g/l): Hydrolyses Method: OECD Test Guideline 105

n-Octanol/ Water partition coefficient: Not known.

Auto-ignition temperature: Not known.

Decomposition temperature: Not known.

Viscosity, dynamic (mPa s): Not known.

Physical hazards:

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Oxidizing properties: Oxidiser.

Other information:

Volatiles by volume @ 21°C (70°F): 0 %

Fat solubility (solvent-oil to be specified): Not known.

Bulk density: Not known.

Dissociation constant in water (p Ka): Not known.

Oxidation-reduction potential: Not known.

SECTION 10. STABILITY AND REACTIVITY

Reactivity:

Product is not sensitive to mechanical shock or impact.

Chemical stability:

Stable under recommended conditions of storage. Product will not undergo hazardous polymerization.

Conditions to avoid:

Elevated temperature and impurities (alkalis). Protect from moisture.

Incompatible materials:

Bases, strong acids and oxidising agents. Combustible materials.

Hazardous decomposition products:

Bromine, chlorine, nitrogen oxides (NO_x) and carbon oxides.

SECTION 11. TOXICOLOGICAL INFORMATION

Toxicokinetics, metabolism and distribution:

Non-human toxicological data: No data available.

Method: No data available.

Dosage: No data available.

Routes of administration: No data available.

Results: No data available.

Absorption: No data available.

Distribution: No data available.

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Metabolism: No data available.

Excretion: No data available.

Information on toxicological effects

Acute oral toxicity:

Bromochloro-5, 5-dimethylimidazolidine-2,4-dione (BCDMH)

Acute oral toxicity LD₅₀ for rat 485 mg/kg

LD₅₀ for mouse 700 mg/kg.

Dermal toxicity LD₅₀ for rabbit > 2 000 mg/kg.

Skin irritation: Corrosive for rabbit (4 h) Method: OECD Test Guideline 404

Eye irritation: Corrosive for rabbit Method: FIFRA

Sensitisation: Sensitising for guinea pig, Buehler Test

Germ cell mutagenicity:

Genotoxicity in vitro: Positive Ames test, Salmonella typhimurium. Method: OECD 471

Positive Gene mutation, mouse lymphoma cells. Method: OECD 476

Genotoxicity in vivo: Negative Mutagenicity (micronucleus test) Species: Mouse. Method: OEC 474. Negative Test UDS in vivo Species: Rat. Method: OECD 486.

SECTION 12. ECOLOGICAL INFORMATION

Toxicity:

Toxicity to fish: LC₅₀ (96 h) for *Oncorhynchus mykiss* (Rainbow trout) 065 mg/L.

Toxicity to daphnia: EC₅₀ (48 h) for *Daphnia magna* (Water flea) 0.87 mg/L.

Toxicity to algae: ErC₅₀ (72 h) for *Desmodesmus subspicatus* (Green algae) 2 mg/L.

Toxicity to bacteria: EC₅₀ (3 h) activated sludge 20 mg/L respiration inhibition

Persistence and degradability:

Stability in water hydrolytically degradable Degradation half-life t_{1/2}: ≤ 91 h pH: 7 Method: EPA-FIFRA.

Bioaccumulative potential:

No data available.

Mobility in soil

No data available.

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Results of PBT& vPvB assessment:

No data available.

Other adverse effects:

No data available.

SECTION 13. DISPOSAL CONSIDERATIONS

Waste treatment methods:

Dispose of in accordance with municipal, provincial and national regulations.

Product/ packaging disposal:

Recycle where possible.

SECTION 14. TRANSPORT INFORMATION

	Land transport (ADR/RID)	Sea transport (IMDG)	Air transport (ICAO/IATA)
UN-Number	3085	3085	3085
UN Proper shipping name:	OXIDIZING SOLID, CORROSIVE, N.O.S. (Bromochloro-5,5- dimethylimidazolidine- 2,4-dione)	OXIDIZING SOLID, CORROSIVE, N.O.S. (Bromochloro-5,5- dimethylimidazolidine- 2,4-dione)	OXIDIZING SOLID, CORROSIVE, N.O.S. (Bromochloro-5,5- dimethylimidazolidine- 2,4-dione)
Transport hazard class:	5.1	5.1	5.1
Packaging group:	III	III	III
Marine pollutant:	Yes	Yes	Yes
Special precautions for user:			
Transport in bulk according to MARPOL 73/78 Annex II and the IBC code			

SECTION 15. REGULATORY INFORMATION

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

Relevant information regarding authorization: Occupational Health and Safety Act 1993 Regulation for Hazardous Chemical Substances. This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

Relevant information regarding restrictions: None known.

EU regulations: Regulation EC 1272/2008 [EU-GHS/CLP]

Other National regulations: None.

Chemical Safety Assessment carried out? No.

16. OTHER INFORMATION

Indication of changes:

GHS aligned.

Relevant classification and H statements (number and full text):

Aquatic Acute (Category 1): Hazardous to the Aquatic Environment Acute 1

H272 May intensify fire; oxidiser. H302 Harmful if swallowed. H314 Causes severe skin burns and eye damage. H317 May cause an allergic skin reaction. H318 Causes serious eye damage. H400 Very toxic to aquatic life.

Training instructions:

Use as instructed.

Further information:

This information is based upon the present state of our knowledge. This SDS has been compiled and is solely intended for this product.

Notice to readers:

Employers should use this information only as a supplement to other information gathered by them, and should make independent judgement of suitability of this information to ensure proper use and protect the health and safety of employees.

This information is furnished without warranty, and any use of the product not in conformance with this Safety Data Sheet, or in combination with any other product or process, is the responsibility of the user.