



Material Safety Data Sheet

Accepta 2073

Date issued: 01-06-2004

1. IDENTIFICATION OF THE PREPARATION AND OF THE COMPANY

Product Name:	ACCEPTA 2073
Application:	Bromine based biocide tablets
Company Identification:	Accepta Ltd. Quay West Trafford Wharf Road Manchester M17 1HH United Kingdom
Office telephone number:	+44 (0) 161 240 2100
Office fax number:	+44 (0) 870 135 6389
Emergency Telephone Number:	+44 (0) 161 240 2100

2. COMPOSITION/INFORMATION ON INGREDIENTS

CHEMICAL DESCRIPTION:

Bromochloro-5, 5-dimethylhydantoin, 1,3-dichloro-5, 5-dimethylhydantion, 1,3-Dichloro-5-ethyl- 5-methylhydantoin.

HAZARDOUS INGREDIENTS:

CAS NO.	EINECS NO.	CHEMICAL NAME	WT %	SYMBOL	R-PHRASES
32718-18-6	2511715	Bromochloro-5, 5-dimethylhydantoin	50 - 70	C, O, N	8,22,34,43,50
118-52-5	2042587	1,3-dichloro-5, 5-dimethylhydantion	20 - 30	C, O, N	8,22,34,43,50
89415-87-2	401-570-7 (ELINCS)	1,3-Dichloro-5-ethyl- 5-methylhydantoin	10 - 20	O, T+, N	8,22,26,34,43,

3. HAZARD IDENTIFICATION

This product is classified as dangerous (European Directive 88/379/EEC, 1999/45/EC).

HUMAN HEALTH HAZARDS - ACUTE:

INHALATION: Corrosive to respiratory system.

SKIN CONTACT: Causes burns. May cause sensitization by skin contact.

EYE CONTACT: Causes burns. May cause permanent damage to eyes.

INGESTION: Corrosive, causes burns to gastro-intestinal tract. Nausea, vomiting and stomach pain may occur. In severe cases blood may be vomited. Harmful if swallowed.

HUMAN HEALTH HAZARDS - CHRONIC:

May cause sensitization by skin contact.

ENVIRONMENTAL HAZARDS

Very toxic to aquatic organisms.

PHYSICAL AND CHEMICAL HAZARDS:

Contact with other chemicals or organic materials can generate heat, toxic gases and cause a fire.

Contact with combustible material may cause fire. May evolve toxic gases or fumes under fire conditions.



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4. FIRST AID MEASURES

INHALATION:
Obtain medical attention immediately. Remove to fresh air, rest, treat symptomatically. Artificial respiration and/or oxygen may be necessary.

SKIN CONTACT:
Obtain medical attention immediately. Speed is essential. Brush off excess powder. Remove contaminated clothing. Wash off affected area immediately with soap and plenty of water. If severe burns have occurred and areas of skin are destroyed, cover the burned area with clean dry non fluffy material and obtain medical attention.

EYE CONTACT:
Obtain medical attention immediately. Speed is essential. Immediately gently irrigate with clean water for at least 15 minutes. Move eyeball and keep eyelids wide open and apart whilst irrigating.

INGESTION: Do not induce vomiting without medical advice. If conscious wash out mouth and give 500ml of water to drink. Obtain medical attention.

ADDITIONAL INFORMATION Note to Physician: Probable mucosal damage may contraindicate the use of gastric lavage. Measures against circulatory shock, respiratory depression and convulsions may be needed.

5. FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA:
Water, Water spray, Dry powder, Foam, Carbon dioxide.

UNSUITABLE EXTINGUISHING MEDIA:
Ammonium phosphate fire extinguishers.

FIRE AND EXPLOSION HAZARD
Hydrogen bromide, bromine, Hydrogen chloride, Chlorine, Oxides of nitrogen, Oxides of carbon (under fire conditions).

SPECIAL PROTECTIVE EQUIPMENT FOR FIRE FIGHTING:
In case of fire, wear a full face positive-pressure self contained breathing apparatus and protective suit.

6. ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS:
Do not breathe dust. Avoid contact with skin and eyes. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. After contact with skin, wash immediately with plenty of water. Ensure adequate ventilation. Use personal protective equipment recommended in Section 8.

ENVIRONMENTAL PRECAUTIONS:
Do not allow to enter sewers or water courses. If spillage does enter sewers or water courses, immediately inform the appropriate water authorities.

METHODS FOR CLEANING UP:
Sweep up and shovel. Reclaim into recovery or salvage drums. Ensure that the container is free of readily combustible / oxidisable material. Wash site of spillage thoroughly with water. Do not use cotton waste, sawdust or other combustible substances as absorbent materials, these may ignite when dried out.
Please refer to Section 13 for disposal considerations.



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7. HANDLING AND STORAGE

HANDLING:
 Prevent contact with skin, eyes and clothing. Avoid generating dusts. Use personal protective equipment recommended in Section 8.
 Do not mix with any other chemical. Do not add this product to containers / dosing vessels which may contain residues of other chemicals.
 Avoid use of stainless steel, carbon steel, cast iron, copper, Zinc, aluminium, brass, other common metals and nylon.

STORAGE CONDITIONS:
 Keep container tightly closed and dry. Store in a cool well ventilated area away from direct sunlight. Store away from organic chemicals and other oxidizable materials, reducing agents, acids and alkalis. Storage for more than 6 months is not recommended.

CONSTRUCTION MATERIAL COMPATIBILITY. Compatible with:
 Equipment for storage and application should be constructed from polyvinylidene difluoride, Unplasticised PVC, polypropylene, polyethylene, hypalon, teflon or viton.

8. EXPOSURE CONTROL/PERSONAL PROTECTION

OCCUPATIONAL EXPOSURE LIMITS
NATIONAL REGULATIONS UK
 Bromochloro-5, 5-dimethylhydantoin Manufacturers Recommendation 0.2 mg/m³ (TWA)
 1,3-dichloro-5, 5-dimethylhydantoin Manufacturers Recommendation 0.2 mg/m³
 1,3-Dichloro-5-ethyl- 5-methylhydantoin Manufacturers Recommendation 0.2 mg/m³

ENGINEERING MEASURES
 Use a closed dosing system. Bromine dispensers and filling cones are available from us. Local exhaust ventilation if necessary to control airborne levels below the exposure guidelines.

RESPIRATORY PROTECTION: If significant dusting occurs, an approved dust respirator is recommended (filter P).

HAND PROTECTION: PVC gloves, Nitrile gloves, Butyl gloves, Neoprene gloves. Most glove materials are of low chemical resistance. Replace gloves regularly.

SKIN PROTECTION: Wear impervious apron.

EYE PROTECTION: Chemical splash goggles.

HYGIENE RECOMMENDATIONS:
 Keep a safety shower available. Keep an eye wash fountain available. Wash hands during breaks and at end of the shift. If clothing is contaminated, remove clothing and thoroughly wash the affected area. Launder contaminated clothing before reuse.

9. PHYSICAL AND CHEMICAL PROPERTIES

NOTE: These physical properties are typical values for this product

FORM: Tablet

COLOUR: Off-white

ODOUR: Pungent.

VALUE UNIT TEST METHOD

MELTING POINT: 120 - 148 °C

SOLUBILITY IN WATER: 5.4 (25 °C) g/l

pH 1% 3.6

Abbreviation: NE = not evaluated, NA = not applicable, NR = not relevant



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10. STABILITY AND REACTIVITY
<p>STABILITY: Stable under ambient conditions.</p> <p>CONDITIONS TO AVOID: High temperatures. Direct sunlight. Moisture.</p> <p>MATERIALS TO AVOID: Acids, Bases, Organic materials and reducing agents. Contact with other chemicals or organic materials can generate heat, toxic gases and cause a fire.</p> <p>HAZARDOUS DECOMPOSITION PRODUCTS: Hydrogen bromide, bromine, Hydrogen chloride, Chlorine, Oxides of nitrogen, Oxides of carbon (under fire conditions).</p>
11. TOXICOLOGICAL INFORMATION
<p>Please refer to section 3 for hazards identification.</p> <p>ACUTE TOXICITY DATA: ACUTE LETHALITY VALUES: Oral (rat) LD50 = 477 mg/kg</p> <p>PRIMARY (DRAIZE TEST) SKIN/EYE Corrosive (OECD 404)</p> <p>SENSITIZATION: The results of testing on guinea pigs showed this material to be a sensitiser.</p> <p>OTHER INFORMATION Abraded granules are coarse-grained and not considered to be inhalable (sieve analysis and Malvern).</p>
12. ECOLOGICAL INFORMATION
<p>PERSISTENCY AND DEGRADATION: The product is hydrolysed in water to hypobromous acid, hypochlorous acid and 5,5-dimethylhydantoin.</p> <p>Biological degradation: (42 day(s)) > 99.0 %</p> <p>ECOTOXICOLOGICAL EFFECTS: The following results are for the product:</p> <p>LC50/96H/Oncorhynchus Mykiss (Rainbow Trout)= 0.5 ppm. LC50/96H/Pimephales promelus (Fathead Minnow)= 0.71 ppm. LC50/96H/Cyprinodon variegatus (Sheepshead Minnow)= 1.6 ppm. LC50/96H/Lepomis macrochirus (Bluegill Sunfish)= 1.2 ppm. LC50/96H/Mysidopsis bahia (Mysid Shrimp)= 1.1 ppm. LC50/48H/Daphnia magna (Water Flea) : 0.4 ppm. LC50/48H/Ceriodaphnia dubia (Water Flea)= 0.15 ppm. LC50/96H/Crassostrea virginica (American Oyster) = 0.84 ppm</p> <p>5,5-Dimethylhydantoin: LC50/96H/Oncorhynchus Mykiss (Rainbow Trout)= 6100 mg/l. LC50/96H/Pimephales promelus (Fathead Minnow)= 8100 mg/l. LC50/96H/Cyprinodon variegatus (Sheepshead Minnow)= 13300 mg/l. LC50/96H/Palaemonetes vulgaris (Grass Shrimp)= 12000 mg/l. LC50/96H/Crassostrea virginica (American Oyster) = 14200 mg/l. LC50/48H/Daphnia magna (Water Flea) : 1300 mg/l.</p> <p>ADDITIONAL ECOLOGICAL DATA: AOX information: Product contains organic halogens, may contribute to AOX.</p>



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13. DISPOSAL CONSIDERATIONS

Via authorized contractor. If this product becomes a waste, the final user must define and assign the appropriate European Waste Catalogue code. Ensure compliance with EC, national and local regulations.

NATIONAL REGULATIONS UK

In accordance with the Environmental Protection (Duty of Care) Regulations 1991. Special Waste Regulations 1996 apply.

NATIONAL REGULATIONS AUSTRIA

Waste Code: 53507

14. TRANSPORT INFORMATION

Class: 5.1 Packing group: II

UN No: 3085

Proper shipping name: OXIDIZING SOLID, CORROSIVE, N.O.S.

Contains: Bromochloro-5, 5-dimethylhydantoin

ADR/RID, H.I.n.: 58

EmS-Nr.: 5.1-05

Marine pollutant: yes

15. REGULATORY INFORMATION

CLASSIFICATION:

HAZARD SYMBOL: OXIDIZING, CORROSIVE



O, OXIDIZING C, CORROSIVE

Contains: Bromochloro-5, 5-dimethylhydantoin, 1,3-dichloro-5, 5-dimethylhydantoin, 1,3-Dichloro-5-ethyl-

5-methylhydantoin.

RISK PHRASES:

R8 Contact with combustible material may cause fire. R34 Causes burns. R22 Harmful if swallowed.

R43 May cause sensitization by skin contact.

SAFETY PHRASES:

S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.S28

After contact with skin, wash immediately with plenty of water.S45 In case of accident or if you feel

unwell, seek medical advice immediately (show the label where possible).S36/37/39 Wear suitable

protective clothing, gloves and eye/face protection.S50 Do not mix with any other chemical.

NATIONAL REGULATIONS GERMANY

VbF-Klasse: None

WHG-WGK: 2

StörfallVO: /12.BImSchV.Liste d. Anh. II): -

TA-Luft: -

Berufsgenossensch. Vorschriften: Take notice of UVV-Chemie

Hinweise zur Beschäftigungsbeschränkung: Observe § 15 of regulations for hazardous substances

NATIONAL REGULATIONS UK

COSHH regulations apply. A precaution card is available and should be displayed wherever this product is used and stored (REF.COxXnGP).



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16. OTHER INFORMATION

Emergency Telephone Number +44 (0) 161 240 2100