



Material Safety Data Sheet

Accepta 2027

Date issued: 01-06-2004

1. IDENTIFICATION OF THE PREPARATION AND OF THE COMPANY

| | |
|-----------------------------|---|
| Product Name: | ACCEPTA 2027 |
| Application: | Biocide Paper and Pulp Process biocide In compliance with recommendation BgVV XXXVI |
| 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: Preparation containing: 5-chloro-2-methyl -4-isothiazolin-3-one, 2-Methyl-4-isothiazolin-3-one in aqueous

HAZARDOUS INGREDIENTS:

| CAS NO. | EINECS NO. | CHEMICAL NAME | WT % | SYMBOL | R-PHRASES |
|------------|------------|---|---------|--------|----------------------|
| 26172-55-4 | 2475007 | Mixture: 5-chloro-2-methyl -4-isothiazolin-3-one | 1.5-1.9 | T,N | 23/24/25,34,43,50/53 |
| 2682-20-4 | 2202396 | and 2-Methyl-4-isothiazolin-3-one | | | |

3. HAZARD IDENTIFICATION

HUMAN HEALTH HAZARDS: Acute

INHALATION: Repeated or prolonged exposure may irritate the respiratory tract.

SKIN CONTACT: Causes burns. Skin irritation effects can be delayed for hours.

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

INGESTION: Harmful if swallowed. May cause nausea and vomiting.

HUMAN HEALTH HAZARDS - CHRONIC: May cause sensitisation by skin contact.

ENVIRONMENTAL HAZARDS:

PHYSICAL AND CHEMICAL HAZARDS:



Material Safety Data Sheet

Accepta 2027

Date issued: 01-06-2004

4. FIRST AID MEASURES

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

SKIN CONTACT: Remove contaminated clothing. Wash off affected area immediately with plenty of water. If skin irritation persists, obtain medical attention.

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

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

5. FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA: Use extinguishing media appropriate for surrounding fire. Water mist may be used to cool closed containers.

FIRE AND EXPLOSION HAZARD: May evolve HCl under fire conditions. May evolve oxides of nitrogen and sulphur 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: Avoid contact with skin and eyes. 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 watercourses, immediately inform the appropriate water authorities. Toxic to aquatic organisms.

METHODS FOR CLEANING UP:
 Large spills: Soak up with inert absorbent material. Transfer contaminated material to suitable containers for disposal. Contaminated surfaces should be swabbed with deactivation solution, let stand for 30 minutes and rinse thoroughly with clean water. DO NOT add deactivation solution to the waste container to deactivate the absorbed material. * DEACTIVATION SOLUTION - prepare fresh a solution of 5% Sodium bicarbonate and 5% Sodium hypochlorite in water. Use at a ratio of 10 volumes decontamination solution per estimated volume of residual spill.
 Small spills: Soak up with inert absorbent material. Clean up promptly by scoop or vacuum. Dike and absorb with inert material (e.g. dry earth, sand), shovel all contaminated solids into a pail or drum and then treat with enough deactivation solution to wet the solids thoroughly. Let these containers stand open for 48 hours to prevent pressure build up and then seal for disposal. Equipment containing residues should be decontaminated before carrying out maintenance or repair work or using for other service. Contaminated surfaces should be swabbed with deactivation solution, wait for the reaction to subside and rinse thoroughly with clean water.



Material Safety Data Sheet

Accepta 2027

Date issued: 01-06-2004

7. HANDLING AND STORAGE

HANDLING: Avoid contact with skin and eyes. Wear suitable protective clothing, gloves and eye/face protection. Discard contaminated shoes, belts and other articles made of leather. Skin reaction can be delayed and therefore wetting of the skin and/or clothes does not always give an indication of contamination. Treat all wetting of the skin and/or clothes which occurs during handling as contact with the product and administer first aid immediately. Use only in well-ventilated areas.

STORAGE CONDITIONS: Protect from freezing. Storage for more than 6 months is not recommended. Keep container tightly closed in a cool, well-ventilated place.

CONSTRUCTION MATERIAL COMPATIBILITY.

8. EXPOSURE CONTROL/PERSONAL PROTECTION

OCCUPATIONAL EXPOSURE LIMITS

5-chloro-2-methyl -4-isothiazolin-3-one: Manufacturers Recommendation 0.076 mg/m³ (TWA), 0.23 mg/m³ (STEL)

2-Methyl-4-isothiazolin-3-one Manufacturers Recommendation 1.5 mg/m³ (TWA), 4.5 mg/m³ (STEL)

NATIONAL REGULATIONS GERMANY

5-chloro-2-methyl -4-isothiazolin-3-one, 2-Methyl-4-isothiazolin-3-one: MAK 0,05 mg/m³

ENGINEERING MEASURES: General ventilation is recommended. Use a closed dosing system.

RESPIRATORY PROTECTION: Respiratory protection not normally needed. An approved respirator must be worn if the occupational exposure limit is likely to be exceeded (filter-type A).

HAND PROTECTION: Nitrile gloves, Butyl gloves

SKIN PROTECTION: Apron and boots. Complete suit protecting against chemicals.

EYE PROTECTION: Chemical splash goggles, face shield.

HYGIENE RECOMMENDATIONS: Keep an eye wash fountain available. Keep a safety shower available. Wash hands at breaks and at the 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: Liquid

COLOUR: Clear Colourless - Light green / Yellow

ODOUR: Pungent

BOILING POINT: approx. 100 °C ASTM D-86

MELTING POINT: approx. -3 °C

FLASH POINT: NA

VAPOUR PRESSURE Isothiazolone: 13.3 Pa

RELATIVE DENSITY: 1.01-1.03 g/cm³

SOLUBILITY IN WATER: Complete

pH (neat, 20°C): 3.0-5.0

VISCOSITY (25 °C): 3 mPas

BULK DENSITY: NA

FREEZING POINT: -3 °C

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



Material Safety Data Sheet

Accepta 2027

Date issued: 01-06-2004

10. STABILITY AND REACTIVITY

STABILITY: Stable under ambient conditions. No degradation if used as prescribed

CONDITIONS TO AVOID: Freezing temperatures

MATERIALS TO AVOID: Avoid use of: Oxidizing agents. Organic materials and reducing agents

HAZARDOUS DECOMPOSITION PRODUCTS: Oxides of nitrogen, Oxides of sulphur, Hydrogen chloride (under fire conditions).

11. TOXICOLOGICAL INFORMATION

Please refer to section 3 for hazards identification.

ACUTE TOXICITY DATA:

ACUTE LETHALITY VALUES:

Inhalation (rat) LC50 = > 13.7 mg/l

Dermal (rabbit) LD50 = >5 g/kg

Oral (rat) LD50 = = 3.81 g/kg

PRIMARY (DRAIZE TEST) SKIN/EYE:

Primary skin irritation: Can cause severe irritation

Primary eye irritation: Corrosive

SENSITIZATION: May cause sensitisation by skin contact. A guinea pig (Buehler technique) sensitisation study with an induction dosage of 90 ppm of isothiazolinone followed by an insult of 429 ppm of isothiazolinone was positive.

CHRONIC TOXICITY DATA: A 90-day dietary study in dogs of 840 ppm of isothiazolinone resulted in no mortalities or pathological findings. A 90-day dermal study in rabbits of 0.4 mg/kg/day of isothiazolinone resulted in irritation but no pathological effects. A 30-month skin painting study with mice using 400 ppm isothiazolinone three times per week showed no increased tumour frequency over control. A teratology study with rabbits and rats was negative using dosages of 1.5 to 15 mg/kg isothiazolinone. Mutagenicity results have been equivocal.

12. ECOLOGICAL INFORMATION

PERSISTENCY AND DEGRADATION:

Persistency/Resistancy: None

Abiotic degradation: The product may be degraded via abiotic processes. The degradation of the major active ingredient begins with ring opening and elimination of chloride ion. Degradation leads to the formation of a variety of small organic acids, methylamine, carbon dioxide and elemental sulphur. The half-life of each active ingredient is dependent upon the initial concentration.

Biological degradation: The product is biodegradable. Biodegradation of the active ingredient may occur only below the biological active concentration

Formation of toxic metabolites: None

Chemical Oxygen Demand (COD): 20000 mg/l

MOBILITY AND BIOACCUMULATION POTENTIAL:

The following results are for the active ingredient:

log Kow = < 3

Fish: BCF < 100



Material Safety Data Sheet

Accepta 2027

Date issued: 01-06-2004

12. ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL EFFECTS:

The following results are for the active ingredient:

Bobwhite Quail 21-Day Oral LD50 = 85 mg/kg

Bobwhite Quail 8-Day Dietary LC50 = > 560 ppm

Peking Duck 8-Day Dietary LC50 = > 560 ppm

LC50/6D/Lepomis macrochirus (Bluegill Sunfish)= 0.54 ppm

LC50/6D/Oncorhynchus Mykiss (Rainbow Trout)= 0.14 ppm

LC50/96H/Cyprinodon variegatus (Sheepshead Minnow)= 0.3 ppm

LC50/48H/Daphnia magna (Water Flea) = 0.13 ppm

LC 50/96H/Mytilus edulis = 1.9 ppm

Mytilus edulis NOEC: 0.40 ppm

Mytilus edulis embryo/larvae, 48 Hour LC50 = 14 ppb

Mytilus edulis embryo/larvae, NOEC: 3.2 ppb

Eastern oyster 48 Hour LC₅₀ = 28 ppb

The following results are for the product:

Fish:

LC 50/6D/Oncorhynchus Mykiss (Rainbow Trout)= 12.6 mg/l

LC 50/96H/Lepomis macrochirus (Bluegill Sunfish)= 18.7 mg/l

Daphnia magna:

LC 50/48H/Daphnia magna (Water Flea) = approx. 10.6 mg/l

Bacteria:

Biodegradation of the active ingredient may occur only below the biological active concentration

ADDITIONAL ECOLOGICAL DATA:

Behaviour in municipal sewage treatment plants:

Discharge in minor quantity into adapted biological units of sewage treatment plants is not expected to affect the efficiency of the activated sludge process.

AOX information: Product contains organic halogens, may contribute to AOX



Material Safety Data Sheet

Accepta 2027

Date issued: 01-06-2004

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.

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

NATIONAL REGULATIONS AUSTRIA: Waste Code: 53103

14. TRANSPORT INFORMATION

Class: 8 Packing Group: II UN No. 3265
 Proper shipping name: CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. Contains: 5-chloro-2-methyl-4-isothiazolin-3-one, 2-Methyl-4-isothiazolin-3-one
 ADR/RID, H.I.n.: 80
 ADR/RID, No: 40 b)
 IMDG Page 8147-1
 EmS-Nr.: 8-15
 MFAG-Nr.: 760
 Tariff code: 38084020-90

15. REGULATORY INFORMATION

CLASSIFICATION:
 HAZARD SYMBOL: C, Corrosive



C, CORROSIVE

Contains: 5-chloro-2-methyl-4-isothiazolin-3-one, 2-Methyl-4-isothiazolin-3-one
 RISK PHRASES R34 Causes burns. R43 May cause sensitization by skin contact.
 SAFETY PHRASES: S45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). 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
 S36/37/39 Wear suitable protective clothing, gloves and eye/face protection.
 NATIONAL REGULATIONS GERMANY
 VbF-Klasse: None
 WHG-WGK: 2 Classification according VwVwS v. 17.05.99, Anhang 4
 Berufsgenossensch. Vorschriften: Take notice of UVV-Chemie
 TA-Luft: -
 StörfallVO: /12.BImSchV.Liste d. Anh. II): -
 Hinweise zur Beschäftigungsbeschränkung: Observe § 15 of regulations for hazardous substances



Material Safety Data Sheet

Accepta 2027

Date issued: 01-06-2004

15. REGULATORY INFORMATION (cont...)

NATIONAL REGULATIONS UK: COSHH regulations apply. A precaution card is available and should be displayed wherever this product is used and stored (Ref. Ciso).

NATIONAL REGULATIONS SWITZERLAND
BAGT-Nr: 611484
Toxic class: 4

NATIONAL REGULATIONS SWEDEN
Registered pesticides, Class 2, Reg. No 3689

NATIONAL REGULATIONS NORWAY
Registration number 016308

16. OTHER INFORMATION

Product complies with FOOD AND DRUG ADMINISTRATION (FDA) Federal Food, Drug and Cosmetic Act: 21CFR176.300.

Relevant Risk Phrases:

R23/24/25 Toxic by inhalation, in contact with skin and if swallowed. R34 Causes burns, R43 May cause sensitization by skin contact. R50/53 Very toxic to aquatic organisms, may cause long term adverse effects in the aquatic environment.

Emergency Telephone Number +44 (0) 161 240 2100