

Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 08/09/2011

Reviewed on 07/22/2011

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

- **Product identifier**
- **Trade name:** ACTICIDE CBM 2
- **Application of the substance / the preparation** Biocide for industrial and/or commercial use.
- **Details of the supplier of the safety data sheet**
- **Supplier:**
Thor Specialties, Inc.
56 Quarry Road
Trumbull, CT 06611
USA
Phone: +1 203 3656530
Fax: +1 203 3656537
- **Competent person responsible for the Material Safety Data Sheet :**
Regulatory Affairs Department: Lynn P. Tordo, E-Mail: ltordo@thorsp.com
- **Emergency telephone number:**
Emergency phone number (worldwide 24 hrs service): +49 6 21 60-4 33 33
USA: In case of emergency call CHEMTREC 24 Hours at 800/424-9300 or international: +1-703-527-3887

2 Composition/information on ingredients

- **Chemical characterization: Mixtures**
- **Description:** Microbiocide based on isothiazolinones.

· Dangerous components:

2634-33-5	1,2-benzisothiazol-3(2H)-one ⚠ H318; ⚠ H400; ⚠ H302; H315; H317	9.3 - 10.7%
2682-20-4	2-methylisothiazol-3(2H)-one ⚠ H301; H311; H330; ⚠ H314; ⚠ H400; ⚠ H317; H335	4.7 - 5.2%
26172-55-5	5-Chloro-2-methyl-2H-isothiazol-3-one ⚠ H301; H311; H331; ⚠ H314; ⚠ H400; H410; ⚠ H317	0.9-1.1%

3 Hazards identification

- **Classification of the substance or mixture**



GHS05 Corrosion

H314 Causes severe skin burns and eye damage.



GHS09 Environment

H400 Very toxic to aquatic life.

H411 Toxic to aquatic life with long lasting effects.



GHS07

H317 May cause an allergic skin reaction.

(Contd. on page 2)

USA

Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 08/09/2011

Reviewed on 07/22/2011

Trade name: ACTICIDE CBM 2

(Contd. of page 1)

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



Corrosive

Causes burns.



Irritant

May cause sensitization by skin contact.



Dangerous for the environment

Very toxic to aquatic organisms.

Classification system:

The classification of health and environmental hazards is based either on test results or on the conventional calculation method according to Articles 6 & 7 of Directive 1999/45/EC (DPD).

Label elements

GHS label elements

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

Hazard pictograms



GHS05 GHS07 GHS09

Signal word Danger

Hazard-determining components of labelling:

1,2-benzisothiazol-3(2H)-one

2-methylisothiazol-3(2H)-one

Mixture, containing 5-Chloro-2-methyl-2H-isothiazol-3-one and 2-Methyl-2H-isothiazol-3-one (3:1)

Hazard statements

Causes severe skin burns and eye damage.

May cause an allergic skin reaction.

Very toxic to aquatic life.

Toxic to aquatic life with long lasting effects.

Precautionary statements

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

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

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

If skin irritation or rash occurs: Get medical advice/attention.

Wash contaminated clothing before reuse.

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

Classification system:

NFPA ratings (scale 0 - 4)



Health = 3

Fire = 0

Reactivity = 0

(Contd. on page 3)

Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 08/09/2011

Reviewed on 07/22/2011

Trade name: ACTICIDE CBM 2

(Contd. of page 2)

· HMIS-ratings (scale 0 - 4)

HEALTH	3	Health = 3
FIRE	0	Fire = 0
REACTIVITY	0	Reactivity = 0

These are recommended ratings. It is the responsibility of the employer to evaluate products and train employees on the hazards of those products prior to use.

4 First aid measures

· General information:

In case of emergency call toll free (800) 424-9300. Have the product container or label with you when you call a Poison Control Center or doctor or going for treatment.

· If inhaled:

Supply fresh air; consult doctor in case of symptoms.

Move person to fresh air.

If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible.

Call a Poison Control Center or doctor for treatment advice.

· If on skin or clothing:

Take off contaminated clothing.

Destroy or thoroughly clean contaminated shoes.

After contact with skin, wash immediately with plenty of water and alkaline soap (curd soap).

Immediate medical treatment necessary. Failure to treat burns can prevent wounds from healing.

Call a Poison Control Center or a doctor for treatment advice.

· If in eyes:

Hold eyes open and rinse slowly and gently with water for 15 to 20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eyes. Call a Poison Control Center or doctor for treatment advice.

· If swallowed:

Have person sip a glass of water if able to swallow.

Do not induce vomiting unless told to do so by the Poison Control Center or doctor.

Call a Poison Control Center or doctor immediately for treatment advice.

Do not give anything by mouth to an unconscious person.

5 Firefighting measures

· **Suitable extinguishing agents:** Water spray jet, extinguishing powder, CO₂, foam.

· **For safety reasons unsuitable extinguishing agents:** none

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

In case of fire, toxic incineration products may be released such as:

Nitrogen oxides (NO_x)

Carbon monoxide (CO)

Sulphur dioxide (SO₂)

Hydrogen chloride (HCl)

· **Protective equipment:** Wear protective clothing and self-contained respiratory protective device.

· **Additional information**

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

USA

(Contd. on page 4)

Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 08/09/2011

Reviewed on 07/22/2011

Trade name: ACTICIDE CBM 2

(Contd. of page 3)

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

Wear protective clothing.

Keep unprotected persons away.

When selecting the protective suit it has to be paid attention to a complete and safe protection of skin and mucous membrane. Impermeable protective clothes, protective boots made of neoprene, complete face protection, nitrile-rubber-gloves with long tops.

Environmental precautions:

As the product is hazardous for the aquatic environment, it must be prevented from reaching surface water.

Prevent from spreading (e. g. by enclosing with a ring of chemical absorbent).

Inform respective authorities in case of seepage into water course or sewage system.

Methods and material for containment and cleaning up:

Collect large amounts in suitable container. Cover the rest with absorbent, mix intensively and collect mechanically.

Suitable binder: multi-purpose absorbent.

Dispose of contaminated binding material in accordance with local, state and federal regulations.

Surfaces can be decontaminated with a solution containing 5% sodium hydrogensulfite and 5% sodium bicarbonate.

In case of a spill drained to the sewer collect contaminated water in suitable container and add 10% sodium bisulfite solution. Contact supplier for further instructions.

Reference to other sections None**7 Handling and storage****Handling:****Precautions for safe handling**

Ensure good ventilation/exhaustion at the workplace.

Handle product in closed systems preferably.

Load carefully, avoid splashes.

Compliance with the minimum requirements designed to guarantee a better standard of safety and health at work is essential to ensure the safety and health of workers.

Information about protection against explosions and fires: No special measures required.**Storage:****Requirements to be met by storerooms and receptacles:** Store only in the original receptacle.**Information about storage in one common storage facility:** Store away from foodstuffs.**Further information about storage conditions:**

Prevent release to the environment by adequate secondary containment design and use of appropriate spill control procedures.

Recommended storage temperature: 15-20° C, 60-70 F**Sensitivity against UV-radiation and heat:** Protect from heat and direct sunlight.**8 Exposure controls/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:**

Avoid contact with the eyes and skin.

Wash hands thoroughly before breaks and at the end of work.

(Contd. on page 5)

Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 08/09/2011

Reviewed on 07/22/2011

Trade name: ACTICIDE CBM 2

(Contd. of page 4)

Provide skin protection plan.

· Breathing equipment:

When there is potential for airborne exposures in excess of applicable limits, wear NIOSH/MSHA approved respiratory protection.

OV/N95 or OV/P100; organic vapors/prefilter (NIOSH Approval No. TC-84A-0699).

· Protection of hands:



Chemical protective gloves according to DIN EN 374 with CE-labelling.

Before use check protective gloves for any damages like holes, cuts or tears.

Do not wear protective gloves longer than necessary.

· Material of gloves Nitrile rubber, NBR

· Penetration time of glove material

Penetration time depends on different criteria and may be determined by the manufacturer according to the standard DIN EN 374-3.

· Not suitable are gloves made of the following materials:

Gloves for mechanical protection do not provide protection against chemicals.

· Eye protection:



Face protection

· Body protection:

Protective work clothing

Apron

Full head, face and neck protection

9 Physical and chemical properties

· General Information

· Appearance:

Form: Dispersion

Color: whitish

· Odor: Mild

· Odour threshold: Not relevant for safety

· pH-value at 20°C (68 °F): ca. 4.5

· Change in condition

Melting point/Melting range: Not determined

Boiling point/Boiling range: 100°C (212 °F)

· Flash point: Not applicable

· Auto igniting: Product is not selfigniting.

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

· Vapor pressure at 20°C (68 °F): 23 hPa (17 mm Hg)

· Density at 20°C (68 °F): ca. 1.09 g/cm³ (ca. 9.096 lbs/gal)

· Solubility in / Miscibility with

Water: Fully miscible.

(Contd. on page 6)

Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 08/09/2011

Reviewed on 07/22/2011

Trade name: ACTICIDE CBM 2

Other information

No further relevant information available.

(Contd. of page 5)

10 Stability and reactivity

Thermal decomposition / conditions to be avoided:

Before handling, the product should not be diluted or mixed with other chemicals, in order to avoid any negative influences on the active ingredient(s).

Minimum shelf life: 9 months from production date.

Incompatible materials:

Alkalis
Reducing agents
Strong oxidising agents
Nucleophils

Hazardous decomposition products: None expected during normal storage, handling and use.

11 Toxicological information

Acute toxicity:

LD/LC50 values that are relevant for classification:

Oral	LD50	> 2000 mg/kg (rat) (OECD 423) LAB 08/780-001P
Dermal	LD50	> 2000 mg/kg (rat) (OECD 402) LAB 08/780-002P

Primary irritant effect:

Target Organism - skin: Caustic effect on skin and mucous membranes.

Target Organism - eye: Strong caustic effect.

Sensitization: Sensitization possible through skin contact.

12 Ecological information

Acquatic toxicity:

2634-33-5 1,2-benzisothiazol-3(2H)-one

EC50 / 48 h	3 mg/l (Daphnia)
EC50 / 72 h	0.067 mg/l (Pseudokirchneriella subcapitata)
LC50 / 96 h	2.2 mg/l (rainbow trout)

2682-20-4 2-methylisothiazol-3(2H)-one

EC50 / 48 h	1.68 mg/l (Daphnia)
EC50 / 72 h	0.157 mg/l (Pseudokirchneriella subcapitata)
LC50 / 96 h	6.0 mg/l (rainbow trout)
NOEC / 48 h	0.882 mg/l (Daphnia)
NOEC / 96 h	3.06 mg/l (rainbow trout)

55965-84-9 Mixture, containing 5-Chloro-2-methyl-2H-isothiazol-3-one and 2-Methyl-2H-isothiazol-3-one (3:1)

EC50 / 48 h	0.12 mg/l (Daphnia)
EC50 / 72 h	0.048 mg/l (Pseudokirchneriella subcapitata) SPO12089

(Contd. on page 7)

Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 08/09/2011

Reviewed on 07/22/2011

Trade name: ACTICIDE CBM 2

(Contd. of page 6)

EC50 / 96 h	0.22 mg/l (rainbow trout)
NOEC	0.098 mg/l (rainbow trout)

- **Persistence and degradability** No further relevant information available.
- **Degree of elimination:**
- **Biodegradability:** The components are readily biodegradable.
- **Behavior in environmental systems:**
- **Components:**
The active substance MIT has been shown to be biodegradable in the simulation test "Aerobic Mineralisation in Surface Water - Simulation Biodegradation Test" according to OECD guideline 309.
The active substance CIT/MIT proved to be biodegradable in the simulation test OECD 301 D (Closed-Bottle-Test), O₂-consumption: > 60%.
The active substance BIT proved to be biodegradable in the Aerobic Sewage Treatment Simulation Test (OECD 303 A). Primary degradation is above 90%.
- **Bioaccumulative potential** No further relevant information available.
- **Ecotoxic effects:**

· Behavior in sewage processing plants:	
2634-33-5 1,2-benzisothiazol-3(2H)-one	
EC50 / 16 h	0.4 mg/l (Pseudomonas putida)
2682-20-4 2-methylisothiazol-3(2H)-one	
EC50 / 16 h	2.3 mg/l (Pseudomonas putida)
55965-84-9 Mixture, containing 5-Chloro-2-methyl-2H-isothiazol-3-one and 2-Methyl-2H-isothiazol-3-one (3:1)	
EC50	7.9 mg/l (Activated Sludge)

- **Remark:** Depending on concentration, toxic effects on activated sludge organisms are possible.
- **Additional ecological information:**
- **AOX-indication:**
Can affect the AOX-value of the effluent water. The active ingredient is not persistent, it is degraded by separation of the chlorine atom.
- **According to the formulation contains the following heavy metals and compounds from the EU guideline NO. 2006/11 EC:**
None
- **General notes:**
The product contains materials that are harmful to the environment.
Avoid transfer into the environment.

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:**
Biocide or Pesticide wastes are acutely hazardous. Improper disposal or excess product or rinsate is a violation of Federal law. If these wastes cannot be disposed of by use according to label instructions, contact your State Biocide/Pesticide or Environmental Control Agency, or the Hazardous Waste representative at your nearest EPA Regulation Office for guidance.
- **Uncleaned packagings:**
- **Recommendation:** In accordance with label.

USA

(Contd. on page 8)

Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 08/09/2011

Reviewed on 07/22/2011

Trade name: ACTICIDE CBM 2

(Contd. of page 7)

14 Transport information

- UN-Number
- DOT, ADR, IMDG, IATA
- UN proper shipping name
- DOT, IMDG, IATA
- ADR
- Transport hazard class(es)
- DOT, IATA

UN3265

CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (Mixture, containing 5-Chloro-2-methyl-4-isothiazolin-3-one and 2-Methyl-4-isothiazolin-3-one (3:1))

3265 CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (Mixture, containing 5-Chloro-2-methyl-4-isothiazolin-3-one and 2-Methyl-4-isothiazolin-3-one (3:1)), ENVIRONMENTALLY HAZARDOUS



- Class
- Label

8 Corrosive substances.

8

- ADR



- Class
- Label

8 (C3) Corrosive substances

8

- IMDG



- Class
- Label
- Packing group
- DOT, ADR, IMDG, IATA
- Environmental hazards:
- Marine pollutant:
- Special marking (ADR):
- Special precautions for user
- Danger code (Kemler):
- EMS Number:
- Segregation groups

8 Corrosive substances.

8

III

Yes

Symbol (fish and tree)

Symbol (fish and tree)

Warning: Corrosive substances

80

F-A,S-B

Acids

- Transport/Additional information:

- IATA

- Remarks:

Packing Instructions / max. net weight: Passenger aircraft: 852 / 5 L;
Cargo aircraft: 856 / 60 L

(Contd. on page 9)

USA

Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 08/09/2011

Reviewed on 07/22/2011

Trade name: ACTICIDE CBM 2

- (Contd. of page 8)
- **UN "Model Regulation":** UN3265, CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S.
(Mixture, containing 5-Chloro-2-methyl-2H-isothiazol-3-one and 2-Methyl-2H-isothiazol-3-one (3:1)), ENVIRONMENTALLY HAZARDOUS, 8, III

15 Regulatory information

- **EPA-Registration number:** 67071-62
- **SARA**

· **Section 302 (extremely hazardous substances):**

None of the ingredient is listed.

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

None of the ingredients are listed at a concentration above the "de minimus" level.

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

All ingredients are listed.

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

All ingredients are listed.

· **Canadian Non Domestic Substance List (NDSL):**

None of the ingredients is listed.

· **Carcinogenic categories**

· **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.

· **TLV (Threshold Limit Value established by ACGIH)**

None of the ingredients is listed.

· **NIOSH (National Institute for Occupational Safety and Health)**

None of the ingredients is listed.

· **OSHA (Occupational Safety & Health Administration)**

None of the ingredients is listed.

· **GHS label elements**

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

· **Hazard pictograms**



GHS05 GHS07 GHS09

· **Signal word** Danger

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

1,2-benzisothiazol-3(2H)-one

2-methylisothiazol-3(2H)-one

Mixture, containing 5-Chloro-2-methyl-2H-isothiazol-3-one and 2-Methyl-2H-isothiazol-3-one (3:1)

(Contd. on page 10)

**Material Safety Data Sheet**

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Trade name: ACTICIDE CBM 2

(Contd. of page 9)

· Hazard statements

Causes severe skin burns and eye damage.

May cause an allergic skin reaction.

Very toxic to aquatic life.

Toxic to aquatic life with long lasting effects.

· Precautionary statements

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

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

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

If skin irritation or rash occurs: Get medical advice/attention.

Wash contaminated clothing before reuse.

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

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.

· Training hints

US: Use only in accordance with EPA-approved label. Canada: Use only in accordance with PMRA-approved label.

Further information under the regulations of use can be taken from the Product Data Sheet and label.

· Contact for technical information: Biocides: info@ThorSp.com**· Abbreviations and acronyms:**

PBT: persistent, bioaccumulative, toxic

vPvB: very persistent, very bioaccumulative

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

IATA: International Air Transport Association

ICAO: International Civil Aviation Organization

ACGIH: American Conference of Governmental Industrial Hygienists

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

· * Data compared to the previous version altered.

—USA—