

**MATERIAL SAFETY DATA SHEET****JUBOCID**

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Date of issue
Feb. 10, 2009

Version 06

1. IDENTIFICATION OF THE PREPARATION AND OF THE COMPANY

Product name: JUBOCID

Product description: Mould preventative.

Producer: JUB chemical industry
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2. HAZARDS IDENTIFICATION

Human health hazards. May cause sensitization by skin contact.

Environmental hazards. Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Composition: water-based fungicide

Hazardous ingredients	Wt.-%	CAS-No. EC-No. INDEX-No.	Danger symbol	Risk phrases
Zinc pyrrithione	< 0,5	13463-41-7 236-671-3 -	T, N	22-23-38-41-50
3-iodo-2-propynyl butylcarbamate	< 0,11	55406-53-6 259-627-5 -	Xn, N	20/22-41-50/53
2-Octyl-2H-isothiazol-3-one	< 0,11	26530-20-1 247-761-7 613-112-00-5	T, N	22-23/24-34-43-50/53
Zinc oxide	< 0,5	1314-13-2 215-222-5 -	N	50/53

4. FIRST AID MEASURES

Inhalation	Remove to fresh air. Inhalation of vapour or mist can cause irritation of nose and throat.
Skin contact	Remove contaminated clothing. Wash skin with water, use soap.
Eyes contact	Flush eyes with water for 10 to 15 minutes, get medical attention.
Ingestion	Only when conscious, rinse mouth, give one or two glasses of water to drink. Obtain medical attention immediately.

5. FIRE-FIGHTING MEASURES

Extinguishing media. /
Fire fighting procedures. /

6. ACCIDENTAL RELEASE MEASURES

Personal precautions. Avoid contact with skin and eyes.

Environmental precautions. Prevent contamination of water. Advise authorities if product has entered or may enter watercourses. Do not empty into drains or water.

Cleaning / Disposal. Absorb or contain liquid with sand, earth or spill control material. Shovel up and place in a labelled container for subsequent safe disposal.

7. HANDLING AND STORAGE

Handling. Avoid contact with skin and eyes.

Storage. Keep containers closed. Store at room temperature. Protect from freezing. Keep out of reach of children.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering control measures. /

Respiratory protection. Normally not necessary.

Hand protection. Prolonged or repeated contact with skin: wear nitrile rubber(chemical resistant) gloves.

Body protection. /

Eye protection. Use splash goggles when eye contact may occur.

Hygiene measures. Wash hands before breaks and immediately after handling the product. When using do not eat, drink or smoke.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	liquid
Colour:	colourless to white
Odour:	typical
pH:	app. 8,6/20°C
Boiling point / range:	n. a.
Flash point:	n. a.
Autoignition temperature:	n. a.
Density:	app. 1,0 kg/dm ³ /20°C
Viscosity:	10,6 s(φ4mm)/20°C
Explosion limits:	n. a.
Vapour pressure:	n. a.
Solubility in water:	miscible with water
Solids content:	app. 2,6 wt.%

10. STABILITY AND REACTIVITY

Stability. Stable under normal use conditions.

Hazardous decomposition products. CO, CO₂, NO_x.

11. TOXICOLOGICAL INFORMATION

Basis for assessment. Information given is based on data on the components and the toxicology of similar products. May cause sensitization by skin contact. Irritating to eyes and skin. **The fully cured product is not health hazardous.**

From structurally related products the following may be expected:

- 3-iodo-2-propynyl butylcarbamate (CAS: 55406-53-6)

Acute toxicity:

Oral(rat):	LD ₅₀ : 1470 mg/kg
Dermal (rat):	LD ₅₀ : >2000 mg/kg
Inhalation(rat):	LC ₅₀ : 0,67 mg/l/4 hours

- 2-Octyl-2H-isothiazol-3-one (CAS: 26530-20-1)

Acute toxicity:

Oral(rat):	LD ₅₀ : >500 mg/kg
Oral(bobwhite quail):	LD ₅₀ : >5000 mg/kg
Dermal (rat):	LD ₅₀ : >900 mg/kg
Inhalation(rat):	LC ₅₀ : 0,27 mg/l/4 hours

- Zinc pirithione (CAS: 13463-41-7)

Acute toxicity:

Oral(rat):	LD ₅₀ : 774 - 1300 mg/kg
Dermal (rabbit):	LD ₅₀ : >2000 mg/kg

Primary irritation effects (JUBOCID):

Eyes: strong irritant effect, danger of severe eye injury.

Skin: slightly irritant. The product may affect skin.

Sensitization (JUBOCID): possible by skin contact

12. ECOLOGICAL INFORMATION

Basis for assessment. Incomplete ecotoxicological data are available. The information given below is based partly on a knowledge of the components and the ecotoxicology of similar products.

Persistence/degradability. This product is soluble in water.

Ecotoxicology. Toxic to aquatic organisms. Do not empty into drains or water.

From structurally related products the following may be expected:

- 3-iodo-2-propynyl butylcarbamate (CAS: 55406-53-6)

Ecotoxicity

LC₅₀ 0,072 mg/l/96 hours (rainbow trout)

EC₅₀ 0,16 mg/l/48 hours (Daphnia)

IC₅₀ 0,095 mg/l/72 hours (Algae)

- 2-Octyl-2H-isothiazol-3-one (CAS: 26530-20-1)

Ecotoxicity

ECO / 48 h: 0,32 mg/l (Daphnia)

EC₅₀ / 21 d: 0,058 mg/l (Daphnia)

EC₅₀ / 48 h: 0,42 mg/l (Daphnia)

LC0 / 21 d: 0,022 mg/l (Oncorhynchus mykiss)

LC₁₀₀ / 21 d: 0,076 mg/l Oncorhynchus mykiss

NOEC: 0.0016 mg

- Zinc pirithione (CAS: 13463-41-7)

EC₅₀ / 48 h 0,05 mg/l (Daphnia)

EC₅₀ / 72 h 0,067 mg/l (Selenastrum capricornutum)

LC₅₀ / 96 h 0,021 mg/l (Bluegill sunfish)

0,15 mg/l (oncorhynchus mykiss)

General notes

JUBOCID contains materials that are harmful to the environment. According to EC guideline No. 76/464 EC the product contains zinc.

13. DISPOSAL CONSIDERATIONS

Liquid waste is classified as **ecotoxic waste (H14, contains C34(biocide): EWC: 08 01 19***.

Liquid waste must not be disposed together with domestic wastes, poured into water or in sewage system.

Disposal according to the national legislation.

Waste packaging is classified as packaging containing residues or contaminated by dangerous substances: **EWC: 15 01 10***: Packaging may be recycled after appropriate cleaning.

14. TRANSPORT INFORMATION

ADR/RID: not classified

IMDG: not classified

15. REGULATORY INFORMATION**Danger symbol:****Xi, IRRITANT**

Contains zinc pyrithione, 3-iodo-2-propynylbutylcarbamate and isothiazolin compound

R- Phrases: R 36 Irritating to eyes.
R 52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

S- Phrases: S 2 Keep out of reach of children.
S 24/25 Avoid contact with skin and eyes.
S 28 After contact with skin, wash immediately with plenty of water.
S 29 Do not empty into drains.
S 46 If swallowed, seek medical advice immediately and show this container or label.
S 61 Avoid release to the environment. Refer to special instructions/Safety data sheets.

16. OTHER INFORMATION**Explanation to R-phrases in section 2**

R 22 Harmful if swallowed.

R 23 Toxic by inhalation.

R 20/22 Harmful by inhalation and if swallowed.

R 23/24 Toxic by inhalation and in contact with skin.

R 34 Causes burns.

R 38 Irritating to skin.

R 41 Risk of serious damage to eyes.

R 43 May cause sensitization by skin contact.

R 50 Very toxic to aquatic organisms.

R 50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

This MSDS is issued in accordance with the EU Regulation 1907/2006/EC concerning REACH. The classification and labelling of the preparation are made according to the EU Directive 1999/45/EC as well as the international transport regulation is being considered.

The information contained herein relates only to the specific product identified. The information given is designed only as a guidance for safe handling, use, storage, transportation, disposal and release and is not to be considered a warranty or guarantee or quality specification.

It remains the user's own responsibility to make sure that the information is appropriate and complete for his special use of this product.

Date of the 1st preparation: March 26, 1997

Date of previous issue: February 5, 2008

Date of revision (version 06): February 10, 2009

This MSDS has been revised in sections: 1, 2, 3 and 16.