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

1.1. Product identifier

AFA-PB5

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/preparation

Insert use

1.3. Details of the supplier of the safety data sheet

Address/Manufacturer

Insert address and further data

Telephone no.	xxx
Fax no.	xxx
Information provided by	Hazardous substances officer
E-mail address of person responsible for this SDS	xxx

1.4. Emergency telephone number

Insert phone number

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture according to regulation (EC) No 1272/2008

Acute Tox. 4	H302+H332
Eye Dam. 1	H318
Aquatic Acute 1	H400
Aquatic Chronic 1	H410

2.2. Labelling according to regulation (EC) No 1272/2008

Hazard pictograms

Signal word

Danger

Hazard statements

H302+H332	Harmful if swallowed or if inhaled.
H318	Causes serious eye damage.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.

Precautionary statements

P261	Avoid breathing fume/gas/mist/vapours/spray.

P273	Avoid release to the environment.
P280	Wear protective gloves, protective clothing such as apron, boots, and safety glasses with side shields.
P301+P312	IF SWALLOWED: Call a POISON CENTRE/doctor if you feel unwell.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338	IF IN EYES: Rinse continuously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.
P391	Collect spillage.

2.3. Other hazards

No special hazards must be mentioned.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Chemical characterization

- mixture

Hazardous ingredients (Regulation (EC) No. 1272/2008)

Pyrithione zinc

CAS-No. 13463-41-7
Registration-No. 01-2119511196-46
EC-No. 236-671-3
Concentration > 3 < 8 %
Classification (Regulation (EC) No. 1272/2008)

Acute Tox. 3	H301
Acute Tox. 3	H331
Eye Dam. 1	H318
Aquatic Acute 1	H400
Aquatic Chronic 1	H410

SECTION 4: First aid measures

4.1. Description of first aid measures

General information

Remove contaminated, soaked clothing immediately and dispose of safely. Adhere to personal protective measures when giving first aid. Clean body thoroughly (bath, shower). In any case show the physician the Safety Data Sheet.

After inhalation

Ensure supply of fresh air. Remove affected person from danger area. Seek medical advice immediately.

After skin contact

Wash off immediately with soap and water. Take medical treatment.

After eye contact

Separate eyelids wash the eyes thoroughly with water (15 min.). Take medical treatment.

After ingestion

If swallowed, seek medical advice immediately and show this container or label. Rinse mouth thoroughly with water. Let plenty of water be drunk in small gulps. Do not induce vomiting.

Adhere to personal protective measures when giving first aid

First aider: Pay attention to self-protection!

4.2. Most important symptoms and effects, both acute and delayed

Until now no symptoms known so far.

4.3. Indication of any immediate medical attention and special treatment needed

Hints for the physician / hazards

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

Foam, CO_2, or dry powder. Water spray may be used if no other available and then in copious quantities.

Not suitable extinguishing media

Water jet

5.2. Special hazards arising from the substance or mixture

Carbon oxides (CO, CO_2), nitrogen oxides (NO, NO_2 etc.), hydrocarbons can be released in case of fire.

5.3. Advice for firefighters

Special protective equipment for firefighting

Do not inhale explosion and/or combustion gases. In case of combustion use a suitable breathing apparatus. Wear full protective suit.

Other information

Collect contaminated fire-fighting water separately, must not be discharged into the drains. Fire residues and contaminated fire-fighting water must be disposed of in accordance with the local regulations. Observe manufacturer's / distributor`s instructions.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Avoid contact with skin, eyes, and clothing. Refer to protective measures listed in Sections 7 and 8.

6.2. Environmental precautions

Prevent spread over a wide area (e.g. by containment or oil barriers). Do not discharge into the drains/surface waters/groundwater. In case the product spills into sewage waters, immediately inform the authorities.

6.3. Methods and material for containment and cleaning up

Pick up with absorbent material. Dispose of absorbed material in accordance with the regulations.

6.4. Reference to other sections

Refer to protective measures listed in Sections 7 and 8. For disposal see section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling

Avoid formation of aerosols. Perform filling operations only at stations with exhaust ventilation facilities. Provide suitable exhaust ventilation at the processing machines. Keep container tightly closed.

Advice on protection against fire and explosion

No special measures required.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Keep in original packaging, tightly closed. Storage rooms must be properly ventilated. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Provide solvent-resistant and impermeable floor.

7.3. Specific end use(s)

Observe technical data sheet.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Exposure limit values

Pyrithione zinc
CAS-No. 13463-41-7
TWA: 0.35 mg/m³

DNEL/PNEC-values

Pyrithione zinc
CAS-No. 13463-41-7
TWA: 0.35 mg/m³

8.2. Exposure controls

General protective and hygiene measures

Hold eye wash fountain available. Hold emergency shower available. Do not inhale gases/vapours/aerosols. Avoid contact with skin and eyes. Do not eat, drink, or smoke during work time. Wash hands before breaks and after work. Clean skin thoroughly after work; apply skin cream.

Respiratory protection

If workplace limits are exceeded, a respiratory protection approved for this job must be worn.

Hand protection

Chemical resistant gloves
Appropriate Material: acrylonitrile butadiene rubber, chloroprene (chlorobutadiene) rubber

Eye protection

Safety glasses with side protection shield.

Body protection

Clothing as usual in the chemical industry. Protective shoes

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Form	liquid
Odour	not determined
pH value	not determined
Melting point	not determined
Freezing point	not determined
Initial boiling point and boiling range	not determined
Flash point	232 °C (449.6 °F)
Evaporation rate (ether = 1)	not determined
Flammability (solid, gas)	not determined
Upper/lower flammability or explosive limits	not determined
Vapour pressure	not determined
Vapour density	not determined
Density	not determined
Solubility in water	not determined
Solubility(ies)	not determined
Partition coefficient: n-octanol/water	not determined
Ignition temperature	not determined

Decomposition temperature	not determined
Viscosity	not determined
Explosive properties	not determined
Oxidising properties	not determined

9.2. Other information
None known

SECTION 10: Stability and reactivity

10.1. Reactivity
Reacts with acids, bases, and oxidizing agents.

10.2. Chemical stability
Stable when applying the recommended regulations for storage and handling.

10.3. Possibility of hazardous reactions
Keep away from acids, bases, and oxidizing agents to avoid exothermic reactions.

10.4. Conditions to avoid
High temperatures, moisture, heavy sun exposure.

10.5. Incompatible materials
Acids, bases, and oxidizing agents.

10.6. Hazardous decomposition products
When stored in accordance with regulations, no hazardous decomposition products occur.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute oral toxicity	ATE: 1513 mg/kg, calculated
Acute dermal toxicity	ATE: > 2000 mg/kg, calculated
Acute inhalational toxicity	ATE: 1.03 mg/l, calculated
Skin corrosion/irritation	not determined
Serious eye damage/irritation	Causes serious eye damage.
Sensitization	not determined
Subacute, subchronic, chronic toxicity	not determined
Mutagenicity	not determined
Reproductive toxicity	not determined
Carcinogenicity	not determined.
Specific Target Organ Toxicity (STOT)	not determined
Other information	No further toxicological data are available.

SECTION 12: Ecological information

12.1. Toxicity

Fish toxicity (Components)

Pyrithione zinc

Species	Pimephales promelas (fathead minnow)
LC50	0.0026 mg/l
Duration of exposure	96 h

Very toxic to aquatic organisms.

Daphnia toxicity (Components)

Pyrithione zinc

Species	Daphnia magna

EC50 0.0082 mg/l
Duration of exposure 48 h

Algae toxicity (Components)
Pyrithione zinc
Species Skeletonema costatum
ErC50 0.0012 mg/l
Duration of exposure 120 h

12.2. Persistence and degradability

Biodegradability (Components)
Pyrithione zinc
Evaluation According to OECD criteria the product is not readily biodegradable but inherently biodegradable.

12.3. Bioaccumulative potential

Pyrithione zinc
Partition coefficient: n-octanol/water: 0.93
No indication of bioaccumulation potential

Bioconcentration factor (BCF) (Components)
Pyrithione zinc
Bioconcentration factor (BCF): < 50
No indication of bioaccumulation potential.

12.4. Mobility in soil

not determined

12.5. Results of PBT and vPvB assessment

not determined

12.6. Other adverse effects

not determined

General information / ecology

Do not discharge product unmonitored into the environment.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Disposal recommendations for the product

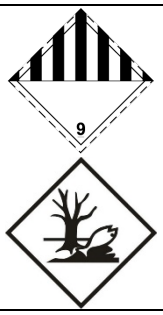
This material and its container must be disposed of in a safe way. Allocation of a waste code number should be carried out in agreement with the regional waste disposal company.

Disposal recommendations for packaging

Packaging that cannot be cleaned should be disposed of in agreement with the regional waste disposal company.

SECTION 14: Transport information

	Land transport ADR/RID	Marine transport IMDG/GGVSee	Air transport ICAO/IATA
14.1. UN number	3082	3082	3082
14.2. UN proper shipping name	ENVIRONMENTALLY HAZARDOUS	ENVIRONMENTALLY HAZARDOUS	ENVIRONMENTALLY HAZARDOUS

	SUBSTANCE, LIQUID, N.O.S.	SUBSTANCE, LIQUID, N.O.S.	SUBSTANCE, LIQUID, N.O.S.
14.3. Transport hazard class (es)	9	9	9
Label			
14.4. Packing group	III	III	III

14.5. Environmental hazards

ADR / RID: Environmentally Hazardous.
IMDG: Marine Pollutant.
IATA: Environmentally Hazardous.

14.6. Special precautions for user

Transport always in closed, upright, and safe containers. Make sure that persons transporting the product know what to do in case of an accident or leakage.
Advices on safe handling: see parts 6 – 8.

Further information

ADR / RID: HIN – Kemler: 90; limited quantities: 5 L (1.32 gal); tunnel restriction code: E
IMDG: EMS: F-A, S-F; limited quantities: 5 L (1.32 gal)
IATA: maximum amount: 400 kg (882 lbs)

14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

Not applicable

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

Insert corresponding US laws

15.2. Chemical safety assessment

A chemical safety assessment has not been carried out for this preparation.

SECTION 16: Other information

Acute Tox. 3	Acute toxicity, Category 3
Acute Tox. 4	Acute toxicity, Category 4
Eye Dam. 1	Serious eye damage, Category 1
Aquatic Acute 1	Hazardous to the aquatic environment, acute, Category 1
Aquatic Chronic 1	Hazardous to the aquatic environment, chronic, Category 1
H301	Toxic if swallowed.

H331	Toxic if inhaled.
H302+H332	Harmful if swallowed or if inhaled.
H318	Causes serious eye damage.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.

Supplemental information

Relevant changes compared with the previous version of the safety data sheet are marked with:***
This information is based on our present state of knowledge. However, it should not constitute a guarantee for any specific product properties and shall not establish a legally valid relationship.