SAFETY DATA SHEET

KEMIRA PAX-MP3103M

Ref. /US/EN

Revision Date: 10/03/2017 Previous date: 01/27/2016 Print Date:08/19/2019

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

Product information

Product name
KEMIRA PAX-MP3103M

Recommended use of the chemical and restrictions on use

Use of the Substance/Mixture

Water treatment chemical
Recommended restrictions on use
There are no uses advised against.

Supplier's details

Kemira Oyj
P.O. Box 33000101 HELSINKI FINLAND
Telephone+358108611, Telefax. +358108621124
ProductSafety.FI.Helsinki@kemira.com

Emergency telephone number

Carechem 24 International: +44 (0) 1235 239 670

2. HAZARDS IDENTIFICATION

Classification of the substance or mixture

Corrosive to metals; Category 1; May be corrosive to metals.;
Serious eye damage; Category 1; Causes serious eye damage.;

GHS-Labelling

Hazard pictograms :

Signal word : Danger

Hazard statements	:	**Hazard statements:**
		H290 May be corrosive to metals.
		H318 Causes serious eye damage.
Precautionary statements	:	**Prevention:**
		P234 Keep only in original container.
		P264 Wash face, hands and any exposed skin thoroughly after handling.
		Response:
		P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
		P337 + P313 If eye irritation persists: Get medical advice/ attention.
		P390 Absorb spillage to prevent material damage.
		Storage:
		P406 Store in corrosive resistant container with a resistant inner liner.
		Disposal:
		P501 Dispose of contents/container as special waste in compliance with local and national regulations.

Other hazards which do not result in classification

Advice; Small amounts of hydrogen chloride may be released at temperatures above the boiling point.
Potential environmental effects; May lower the pH of water and thus be harmful to aquatic organisms.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substances /Mixtures

4. FIRST AID MEASURES

Description of first aid measures

General advice

Show this safety data sheet to the doctor in attendance.

Inhalation

Move to fresh air. In case of feeling sick consult a physician.

Skin contact

Rinse with plenty of water. If skin irritation persists, call a physician.

Eye contact

Rinse immediately with plenty of water, also under the eyelids, for at least 10 minutes. If possible use lukewarm water. Consult a physician.

Ingestion

Do NOT induce vomiting. Rinse mouth with plenty of water. Drink 1 or 2 glasses of water. Obtain medical attention.

Most important symptoms and effects, both acute and delayed

5. FIREFIGHTING MEASURES

Suitable extinguishing media

Not combustible.

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media

No special requirements.

Special hazards arising from the substance or mixture

Small amounts of hydrogen chloride may be released at temperatures above the boiling point.

Special protective actions for fire-fighters

Exposure to decomposition products may be a hazard to health. In the event of fire, wear self-contained breathing apparatus.

Further information

Cool containers/tanks with water spray.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

For personal protection see section 8.

Environmental precautions

Restrict the spread of the spillage by using inert absorbent material (sand, gravel). Cover the drains. Must be disposed of in accordance with local and national regulations.

Methods and materials for containment and cleaning up

Clean-up methods - small spillage

Dilute residues with water and then neutralize with lime or limestone powder to a solid consistency. Shovel or sweep up. Must be disposed of in accordance with local and national regulations.

.

Clean-up methods - large spillage

Remove spill using a vacuum truck. Dilute residues with water and then neutralize with lime or limestone powder to a solid consistency. Shovel or sweep up remaining material. Must be disposed of in accordance with local and national regulations.

Additional advice

Inform the rescue service in case of entry into waterways, soil or drains.

7. HANDLING AND STORAGE

Precautions for safe handling

For personal protection see section 8. The work place and work methods shall be organized in such a way that direct contact with the product is prevented or minimized.
Provide sufficient air exchange and/or exhaust in work rooms. Avoid contact with skin, eyes and clothing.

Conditions for safe storage, including any incompatibilities

For quality reasons:
Keep at temperatures above 0 °C. Handling operations become difficult due to increased viscosity.

Materials for packaging

Suitable material: plastic (PE, PP, PVC), fiberglass-reinforced polyester, epoxy-coated concrete, titanium, acidproof or rubber-coated steel.

Materials to avoid:

chlorites, hypochlorites, sulphites, galvanized surfaces, Iron

Storage stability:

Storage period 12 Months

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Value	Form of exposure	Control parameters	Update	Basis

Appropriate engineering controls

Ensure adequate ventilation.

Handle in accordance with good industrial hygiene and safety practice. Avoid contact with the skin and the eyes.
Eye wash bottle or emergency eye-wash fountain must be found in the work place.

Individual protection measures, such as personal protective equipment
Respiratory protection

Respiratory protection is not required under normal handling conditions. If aerosols or mist are formed, eg. when cleaning containers with a high pressure washer, use half mask with filter B2.

Hand protection

Glove material: PVC and neoprene gloves
Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time.Gloves should be removed and replaced immediately if there is any indication of degradation or chemical breakthrough.

Skin and body protection

Long sleeved clothing Wear protective clothing if necessary. Use rubber boots.

Eye protection

Tightly fitting safety goggles. Eye wash bottle with pure water

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state	liquid,
Colour	light yellow, clear
Odour	not significant
Melting point/range	Crystallisation point/range -10 °C
Initial boiling point and boiling range	Boiling point/boiling range 105 - 115 °C
Flash point	> 100 °C

Explosive properties:	
Lower explosion limit	Not applicable
Upper explosion limit	Not applicable
Density	1.24 - 1.38 g/cm³
Solubility(ies):	
Water solubility	(20 °C) completely soluble, Information refers to the main component.
Oxidizing potential	Not oxidizing

10. STABILITY AND REACTIVITY

Reactivity

Corrosive to metals.

Chemical stability

Stable under recommended storage conditions.

Possibility of hazardous reactions

Hazardous reactions: Bases cause exothermic reactions.

Contact with certain metals may form hydrogen gas, which in turn may form explosive mixtures of gases with air.

Conditions to avoid

Conditions to avoid: Avoid freezing.

High temperatures.

Incompatible materials

Materials to avoid: chlorites
hypochlorites
sulphites
galvanized surfaces
Iron

Hazardous decomposition products

Hazardous decomposition

products:	Small amounts of hydrogen chloride may be released at temperatures above the boiling point.

11. TOXICOLOGICAL INFORMATION

Information on toxicological effects

Acute oral toxicity	**Aluminium chloride, basic / Polyaluminium chloride:** yes/OECD Test Guideline 401/>/Rat/2,000 mg/kg/LD50 **Aluminium chloride, basic / Polyaluminium chloride:** Conclusion: Calculated as Al />/487 mg/kg/LD50 **Epichlorohydrin-dimethylamine copolymer:** /Rat/5,000 mg/kg/LD50
Acute inhalation toxicity	**Aluminium chloride, basic / Polyaluminium chloride:** LC50/Rat/>/5.6 mg/l/OECD Test Guideline 403 **Aluminium chloride, basic / Polyaluminium chloride:** LC50/Rat/>/1.4 mg/l Conclusion: Calculated as Al **Epichlorohydrin-dimethylamine copolymer:** LC50/Rat/4 h/>/20 mg/l
Acute dermal toxicity	**Aluminium chloride, basic / Polyaluminium chloride:** LD50/> /2,000 mg/kg/OECD Test Guideline 402 Remarks: Read-across (Analogy), CAS-No., 39290-78-3 **Aluminium chloride, basic / Polyaluminium chloride:** LD50/> /550 mg/kg Remarks: Calculated as Al **Epichlorohydrin-dimethylamine copolymer:** LD50/Rabbit/> /2,000 mg/kg
Skin corrosion/irritation	Conclusion: Repeated or prolonged skin contact may cause:, Skin irritation, dry skin

Skin corrosion/irritation	**Aluminium chloride, basic / Polyaluminium chloride:** Rabbit Result: No skin irritation /OECD Test Guideline 404Remarks: (45% solution)
Serious eye damage/eye irritation	Conclusion: May cause irreversible eye damage.
Serious eye damage/eye irritation	**Aluminium chloride, basic / Polyaluminium chloride:** Rabbit Result: Eye irritation /OECD Test Guideline 405 Remarks: (45% solution)
	Aluminium chloride, basic / Polyaluminium chloride: Rabbit /OECD Test Guideline 405 Conclusion: Causes severe irritation to eyes in animal experiments.
	Aluminium chloride, basic / Polyaluminium chloride:
	Conclusion: May cause irreversible eye damage.

Respiratory or skin sensitisation

Respiratory sensitisation	Conclusion: Inhalation of mist may cause irritation of the respiratory system.
Skin sensitisation	**Aluminium chloride, basic / Polyaluminium chloride:**
	Not sensitizing.

Germ cell mutagenicity

Genotoxicity in vitro	**Aluminium chloride, basic / Polyaluminium chloride:** AMES test/Mutagenicity (Salmonella typhimurium - reverse mutation assay)/with and without Result: negative OECD Test Guideline 471
	Aluminium chloride, basic / Polyaluminium chloride: micronucleus test/In vitro mammalian cells/with and without Result: negative OECD Test Guideline 487
	Aluminium chloride, basic / Polyaluminium chloride: Lymphoma/In vitro gene mutation study in mammalian cells/with and without Result: negative OECD Test Guideline 476

Carcinogenicity

Carcinogenicity	**Aluminium chloride, basic / Polyaluminium chloride:** Not believed to be a carcinogen.
Reproductive toxicity	
Toxicity for reproduction	**Aluminium chloride, basic / Polyaluminium chloride:** Reproductive effects/Rat/female/Oral/3,225 mg/kg/OECD Test Guideline 452 Remarks: Read-across (Analogy), CAS-No., 31142-56-0 Conclusion: No known effect. **Aluminium chloride, basic / Polyaluminium chloride:** Screening test/Rat/male and female/Oral/1,000 mg/kg/OECD Test Guideline 422 Conclusion: No known effect. **Aluminium chloride, basic / Polyaluminium chloride:** Conclusion: Not believed to be toxic for reproduction.
Teratogenicity	**Aluminium chloride, basic / Polyaluminium chloride:** Rat/female/Oral/1,075 mg/kg/OECD Test Guideline 452 Conclusion: Read-across (Analogy), Did not show mutagenic or teratogenic effects in animal experiments., CAS-No., 31142-56-0

12. ECOLOGICAL INFORMATION

Ecotoxicity effects

Aquatic toxicity

This material is not classified as dangerous for the environment. At environmentally relevant pH 5,5 – 8, the solubility of aluminium is low. Aluminium salts dissociate with water resulting in rapid formation and precipitation of aluminium hydroxides. At pH <5.5, the free ion (Al3+) becomes the prevalent form, the increased availability at this pH is reflected in higher toxicity. At pH 6.0–7.5, solubility declines due to the presence of insoluble Al(OH)3. At higher pH (pH >8.0), the more soluble Al(OH)4 - species predominate, which again increases availability.
Aluminium salts must not be released to rivers and lakes in an uncontrolled way and pH variations around 5 - 5.5 should be avoided.

Aluminium chloride, basic / Polyaluminium chloride:
LC50/96 h/Danio rerio/OECD Test Guideline 203: > 1,000 mg/l
LC50: > 243 mg/l
Calculated as Al

NOEC/Danio rerio/OECD Test Guideline 203: > 1,000 mg/l
LC50: > 0.156 mg/l
Calculated as Al Maximum soluble concentration under the test conditions.

EC50/Daphnia magna (Water flea)/semi-static test/OECD Test Guideline 202: 98 mg/l
EC50: 24 mg/l
Calculated as Al

EC50/72 h/Pseudokirchneriella subcapitata (green algae)/static test/OECD Test Guideline 201: 15.6 mg/l
EC50: 3.8 mg/l
Calculated as Al

NOEC/72 h/Pseudokirchneriella subcapitata (green algae)/static test/OECD Test Guideline 201: 1.1 mg/l
NOEC: 0.27 mg/l
Calculated as Al

Epichlorohydrin-dimethylamine copolymer:
LC50/96 h/Branchydanio rerio (zebra fish)/OECD Test Guideline 203: 10 - 100 mg/l
Remarks: Harmful to fish.
EC50/48 h/Daphnia magna (Water flea)/OECD Test Guideline 202: 10 - 100 mg/l
Remarks: Harmful to aquatic organisms.

Toxicity to other organisms

No data available

Persistence and degradability

Biological degradability:
Aluminium chloride, basic / Polyaluminium chloride:
The methods for determining the biological degradability are not applicable to inorganic substances.

Epichlorohydrin-dimethylamine copolymer:
/OECD Test Guideline 301B/28 d: < 70 % Not readily biodegradable.

Chemical degradation:
Aluminium chloride, basic / Polyaluminium chloride:
When reacting with water on pH range 5,8 - 8 precipitates of aluminium hydroxides are formed.

Bioaccumulative potential

The product is not expected to bioaccumulate.

Aluminium chloride, basic / Polyaluminium chloride:
Partition coefficient: n-octanol/water: Not applicable, inorganic compound

Epichlorohydrin-dimethylamine copolymer:

The product is not expected to bioaccumulate.

Mobility in soil

Water solubility: completely soluble (20 °C)

Other adverse effects

May lower the pH of water and thus be harmful to aquatic organisms.

13. DISPOSAL CONSIDERATIONS

Product	Classified as hazardous waste.Must be disposed of in accordance with local and national regulations.
Contaminated packaging	Thoroughly cleaned packaging material may be recycled. Packages that cannot be cleaned must be disposed of the same way as the unused product.

14. TRANSPORT INFORMATION

UN number 1760

Land transport
DOT:

Description of the goods:	UN1760, Corrosive liquid, n.o.s.
Proper shipping name	
Class:	8
Packaging group:	III
DOT-Labels	8

Sea transport
IMDG:

Description of the goods:	
UN proper shipping name	UN1760, CORROSIVE LIQUID, N.O.S. (ALUMINIUM CHLORIDE, BASIC / POLYALUMINIUM CHLORIDE)
Class:	8
Packaging group:	III
IMDG-Labels:	8

Air transport

ICAO/IATA:
Description of the goods:

UN proper shipping name	UN1760, Corrosive liquid, n.o.s. (Aluminium chloride, basic / Polyaluminium chloride)
Class:	8
Packaging group:	III
ICAO-Labels:	8

Special precautions for user

No data available

15. REGULATORY INFORMATION

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

SARA Title III Section 311 Categories

Immediate (Acute) Health Effects: Yes;
Delayed (Chronic) Health Effects: No;
Fire Hazard: Yes;
Sudden Release Of Pressure Hazard: No;
Reactivity Hazard: No;

WHMIS Classification

E Corrosive Material

Other regulations : No restrictions identified other than those already covered in regulations.

16. OTHER INFORMATION

HMIS Rating

Health: 3
Flammability: 1
Reactivity: 0

NFPA Rating

Health: 3

Fire: 1
Reactivity: 0

Training advice

Read the safety data sheet before using the product.

Further information

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

Sources of key data used to compile the Safety Data Sheet

Regulations, databases, literature, own tests.

Additions, Deletions, Revisions

Relevant changes have been marked with vertical lines.