



SAFETY DATA SHEET

GreenKote® PM-1/P, PM-10/P, PM-21/P

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

1.1. Product identifier

Product identifier name: GREENKOTE® PM-1/P, PM-10/P, PM-21/P

Product code:

Common / Trade name: PM-1/P, PM-10/P, PM-21/P

Other means of identification: Not available.

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

Identified uses:	
Industrial use, Professional use:	For coating

1.3 Details of the supplier of the safety data sheet

Supplier: Greenkote Plc, Industrial Zone Barkan
448200 Barkan, Israel
Phone: +972 3 9060920.

Email address of person responsible for this SDS:

Itzhak.rosenthul@greenkote.com
steve.hadzinsky@greenkote.com (USA)

1.4 Emergency telephone number

Supplier:

Emergency telephone number: For transport in Europe and Israel: +972 54 4923047
For transport in USA: +972 54 4923047

Hours of operation: 7 days a week/24 hours per day

Date of issue: 29/08/2019

Date of previous issue: 05/01/2014

SECTION 2: Hazards identification

2.1 Classification of the mixture

Product definition: Mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS] Aquatic Acute 1, H400
Aquatic Chronic 1, H410

Ingredients of unknown toxicity: 0%

Ingredients of unknown ecotoxicity: 0%

Classification according to Directive 1999/45/EC [DPD]:

The product is classified as dangerous according to Directive 1999/45/EC and its amendments.

Classification: N R50/53

Environmental hazards:

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

See Section 16 for the full text of the R phrases or H statements declared above. See Section 11 for more detailed information on health effects and symptoms.



2.2 Label elements

Hazard pictograms:



Signal word:

Warning

Hazard statements:

Very toxic to aquatic life with long lasting effects.

Precautionary statements:

Prevention:

Avoid release to the environment.

Response:

Collect spillage.

Storage:

Not applicable.

Disposal:

Dispose of contents and container in accordance with all local, regional, national and international regulations.

Supplemental label elements: Not applicable.

Annex XVII – Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles:

Not applicable.

Special packaging requirements

Containers to be fitted with child-resistant fastenings:

Not applicable

Tactile warning of danger:

Not applicable.

2.3 Other hazards

Other hazards which do not result in classification:

Handling and/or processing of this material may generate a dust which can cause mechanical irritation of the eyes, skin, nose and throat.

SECTION 3: Composition/information on ingredients

Mixture

Mixture

Product/ ingredient name	Identifiers	%	Classification		Type
			67/548/EEC	Regulation (EC) No. 1272/2008 [CLP]	
Zinc powder (stabilized)	EC: 231-175-3 CAS: 7440-66-6 Index: 030-001-01-9	80-90	N; R50/53	Aquatic Acute 1, H400 Aquatic Chronic 1, H410	[1]
Zinc oxide	EC: 215-222-5 CAS: 1314-13-2 Index: 030-013-00-7	<5.5%	N; R50/53	Aquatic Acute 1, H400 Aquatic Chronic 1, H410	[1]
Component A	Trade Secret	Proprietary	See Section 16 for the full text of the R-phrases declared above.	See Section 16 for the full text of the H statements declared above.	NA
Component B	Trade Secret	Proprietary			NA
Component C	Trade Secret	Proprietary			NA
Component D	Trade Secret	Proprietary			NA
Component E	Trade Secret	Proprietary			NA
Component F	Trade Secret	Proprietary			NA

There are no additional ingredients present which, within the current knowledge of the supplier, are classified and contribute to the classification of the substance and hence require reporting in this section.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Type:

- [1] Substance classified with a health or environmental hazard
- [2] Substance with a workplace exposure limit
- [3] Substance meets the criteria for PBT according to Regulation (EC) No. 1907/2006, Annex XIII
- [4] Substance meets the criteria for vPvB according to Regulation (EC) No. 1907/2006, Annex XIII
- [5] Substance of equivalent concern

Occupational exposure limits, if available, are listed in Section 8.

SECTION 4: First aid measures

4.1 Description of first aid measures

- Eye contact:** Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention if irritation occurs.
- Inhalation:** Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
- Skin contact:** Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Ingestion:** Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
- Protection of first-aiders:** No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Responders should wear eye protection and dust mask in accordance with Section 8.

4.2 Most important symptoms and effects, both acute and delayedPotential acute health effects

- Eye contact:** Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the eyes.:
- Inhalation** Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the nose, throat and lungs.
- Skin contact** No known significant effects or critical hazards.
- Ingestion** No known significant effects or critical hazards.

Over-exposure signs/symptoms

- Eye contact:** Adverse symptoms may include the following:
irritation
redness
- Inhalation** Adverse symptoms may include the following:
respiratory tract irritation
coughing
- Skin contact** No specific data.
- Ingestion** No specific data.



4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician: Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
Specific treatments: No specific treatment.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media: Use dry chemical, CO2 or sand.

Unsuitable extinguishing media:

Do not use water or foam.

5.2 Special hazards arising from the substance or mixture Hazards from the substance or mixture:

This material is very toxic to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain. See Section 11 for more detailed information on health effects and symptoms.

Hazardous combustion products:

None.

5.3 Advice for firefighters: Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Special protective equipment for fire-fighters:

Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

Additional information:

May present an explosion hazard when material is suspended in air in confined areas or equipment and subjected to spark, heat or flame. Original packaging can be wetted using water for extinguishing surrounding fire in well ventilated areas. Wetted powder will heat and release gases (hydrogen). Isolate wetted packaging and powder from combustible materials and dry powder and store in an excellent ventilated area. Avoid runoff to sewers.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel:

No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing dust. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment including eye protection and dust mask in accordance with Section 8.

For emergency responders:

If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

6.2 Environmental precautions:

Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities. Collect spillage.



6.3 Methods and materials for containment and cleaning up:

Small spill: Move containers from spill area. Vacuum or sweep up material and place in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor. Do not mix with water. **KEEP DRY WASTE DRY.** Do not introduce dry powder waste into processed/wet powder waste or sources of moisture. Dry powder waste accidentally wetted must be vented.

Large spill: Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Vacuum or sweep material and place in a designated, labeled waste container. Avoid creating dusty conditions and prevent wind dispersal. Dispose of via a licensed waste disposal contractor. **KEEP DRY WASTE DRY.** Do not introduce dry powder waste into processed/wet powder waste or sources of moisture. Dry powder waste accidentally wetted must be vented.

6.4 Reference to other sections: See Section 1 for emergency contact information.
See Section 8 for information on appropriate personal protective equipment.
See Section 13 for additional waste treatment information.

SECTION 7: Handling and storage

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

7.1 Precautions for safe handling
Protective measures: Put on appropriate personal protective equipment (see Section 8).
Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing dust. Avoid release to the environment. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

Advice on general occupational hygiene: Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

7.2 Conditions for safe storage, including any incompatibilities
Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. Keep away from sources of ignition. Keep away from heat.
Use explosion-proof electrical (ventilating, lighting and material handling) equipment.
Keep area clean and tidy.
Avoid the creation of dust when handling and avoid all possible sources of ignition (spark or flame).
Keep container dry, keep storage area dry, keep contents (powder) dry.
Do not introduce dry powder waste into processed/wet powder waste (nor wet into dry). Processed/wet powder waste should be vented in storage and shipping.
Dry powder stores accidentally wetted must be vented. Do not vent dry powder stores (containers), as venting may introduce ambient moisture (humidity).

Seveso II Directive - Reporting thresholds (in tonnes)

Danger criteria

Category	Notification and MAPP threshold	Safety report threshold
E1: Hazardous to the aquatic environment –	100	200



Acute 1 or Chronic 1 C9i: Very toxic for the environment	100	200
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7.3 Specific end use(s) Recommendations:

Not available.

Industrial sector specific Solutions:

Not available.

SECTION 8: Exposure controls/personal protection

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

8.1 Control parameters**Occupational exposure limits**

No exposure limit value known.

Recommended monitoring procedures:

If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

Derived effect levels

Product/ingredient name	Type	Exposure	Value	Population	Effects
zinc powder - dust (stabilized)	DNEL	Long term Inhalation	5 mg/m ³	Workers	Systemic
	DNEL	Long term Oral	50 mg/day	Workers	Systemic
	DNEL	Long term Dermal	5000 mg/day	Workers	Systemic
	DNEL	Long term Inhalation	2.5 mg/m ³	Consumers	Systemic
zinc oxide	DNEL	Long term Dermal	5000 mg/day	Consumers	Systemic
	DNEL	Long term Inhalation	5 mg/m ³	Workers	Systemic
	DNEL	Long term Inhalation	2.5 mg/m ³	Consumers	Systemic
	DNEL	Long term Oral	0.83 mg/kg bw/day	Consumers	Systemic
	DNEL	Long term Dermal	87 mg/kg bw/day	Consumers	Systemic
	DNEL	Long term Dermal	87 mg/kg bw/day	Workers	Systemic



Predicted effect concentrations

Product/ingredient name	Type	Compartment Detail	Value	Method Detail	
zinc powder - dust (stabilized)	PNEC	Fresh water	20.6 µg/l	-	
	PNEC	Marine	6.1 µg/l	-	
	PNEC	Sewage Treatment Plant	52 µg/l	-	
	PNEC	Fresh water sediment	118 mg/kg dwt	-	
	PNEC	Marine water sediment	56.5 mg/kg dwt	-	
	PNEC	Soil	35.6 mg/kg dwt	-	
	zinc oxide	PNEC	Fresh water	20.6 µg/l	Sensitivity Distribution
		PNEC	Marine	6.1 µg/l	Sensitivity Distribution
		PNEC	Fresh water sediment	117 mg/kg dwt	Sensitivity Distribution
		PNEC	Sewage Treatment Plant	52 µg/l	Assessment Factors
	PNEC	Marine water sediment	56.5 mg/kg dwt	Assessment Factors	
	PNEC	Soil	35.6 mg/kg dwt	Sensitivity Distribution	

8.2 Exposure controls Appropriate engineering Controls

Use only with adequate ventilation. If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Individual protection measures:

Hygiene measures:

Eating, drinking and smoking should be prohibited in area where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking.

Eye/face protection:

Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields. If operating conditions cause high dust concentrations to be produced, use dust goggles.

Skin protection

Hand protection

Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Body protection:

Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Other skin protection:

Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection:

Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels. Dust masks should be worn when handling or working around the material to avoid metal dust inhalation



Environmental exposure controls:

Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance

Physical state:	Powder.
Color:	Gray.
Odor:	Odorless.
Odor threshold:	Not available.
pH:	Not applicable.
Melting point/freezing point:	420 °C (788°F)
Initial boiling point and boiling range:	908°C (1666.4°F)
Flash point:	Not available.
Evaporation rate:	Not available.
Flammability of the product:	May be combustible at high temperature.
Flammability (solid, gas):	Highly flammable in the presence of the following materials or conditions: oxidizing materials. Original packaging can be wetted using water for extinguishing surrounding fire in well ventilated areas. Wetted powder will heat and release gases (hydrogen) Isolate wetted packaging and powder from combustible materials and dry powder and store in an excellent ventilated area. Avoid runoff to sewers.
Burning time:	Not available.
Burning rate:	Not available.
Upper/lower flammability or explosive limits:	Not available.
Vapor pressure:	Not available.
Vapor density:	Not available.
Density:	7.14 g/cm ³
Solubility(ies):	Insoluble in the following materials: cold water.
Partition coefficient: n-octanol/water:	Not available.
Auto-ignition temperature:	Not available.
Decomposition temperature:	Not available.
Viscosity (20°C / 40°C):	Not available.
Explosive properties:	Non-explosive in the presence of the following materials or conditions: shocks and mechanical impacts. May present an explosion hazard when material is suspended in air in confined areas or equipment and subjected to spark, heat or flame.
Oxidizing properties:	Not available.

9.2 Other information

No additional information.

SECTION 10: Stability and reactivity

10.1 Reactivity Powder dispersion (dust) classified as Group A, explosive. **1)** Reactivity due to contact with surface heat (red glow wire coil at 1,000°C) was nil. **2)** Weak to moderate flame propagation can occur with a strong electric spark of 8.0 – 10.0 Joule (automotive spark plugs typically generate 0.05 to 0.20 Joule).

- Testing per:
- Minimum explosible concentration (MEC) to BS EN 14034-3.
 - Minimum ignition energy (MIE) to BS EN 13821.

10.2 Chemical stability

The product is stable.



10.3 Possibility of Hazardous reactions

Following the safe storage and use conditions stipulated in this document will prevent hazardous reactions.

10.4 Conditions to avoid

No specific data.

10.5 Incompatible Materials

Reactive or incompatible with the following materials:
oxidizing materials and acids.
Use explosion-proof electrical (ventilating, lighting and material handling) equipment.
Keep area clean and tidy.
Avoid the creation of dust when handling and avoid all possible sources of ignition (spark or flame).
Keep container and material dry and away from water or sources of moisture.

10.6 Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Zinc	LC50 Intratracheal	Rat	25 mg/kg	-
	LD50 Oral	Rat	>2000 mg/kg	-
Zinc powder – dust (stabilized)	LC50 Inhalation Dusts and mists	Rat	>5.4 mg/l	4 hours
	LD50 Oral	Rat	>2000 mg/kg	-
	LD50 Dermal	Rat	>2000 mg/kg	-
Zinc oxide	LC50 Inhalation Dusts and mists	Rat	>5700 mg/m ³	4 hours
	LD50 Dermal	Rat	>2000 mg/kg	-
	LD50 Oral	Rat	>5000 mg/kg	-
	LD50 Intraperitoneal	Rat	240 mg/kg	-
	LD50 Oral	Mouse	7950 mg/kg	-
	LDLo Oral	Human	500 mg/kg	-
	LC50 Inhalation	Rat	>5700 mg/m ³	4 hours
Component A	LD50		not determined	
Component B	LD50 Oral	Rat	8471 mg/kg	
Component C	LD50		not determined	
Component D	LD50		not determined	
Component E	LD50 Oral	Rat	3450 mg/kg	-
	LD50 Oral	Mouse	1130 mg/kg	-
	LD50 Skin	Rabbit	>2000 mg/kg	-
Component F	LD50		not determined	

Acute toxicity estimates

Not available.

Irritation/Corrosion

Not available.

Conclusion/Summary

Skin:

Non-irritating to the skin

Eyes:

Non-irritating to the eyes

Respiratory:

Based on the read-across from ZnO, the product is not a skin or respiratory sensitizer.

Sensitizer

Product/ingredient name	Route of exposure	Species	Result
zinc oxide	skin	Guinea pig	Not sensitizing

**Conclusion/Summary**

Skin: Not sensitizing.
Respiratory: Not sensitizing.

Mutagenicity

Product/ingredient name	Test	Experiment	Result
zinc oxide	471 Bacterial Reverse Mutation Test	Experiment: In vitro Subject: Bacteria	Negative
	475 Mammalian Bone Marrow Chromosomal Aberration Test	Experiment: In vivo Subject: Mammalian-Animal	Negative

Conclusion/Summary: **zinc oxide:** No mutagenic effect

Carcinogenicity:

Not available.

Conclusion/Summary

Based on read across from ZnSO₄: No data indicating any concern for carcinogenicity. No classification required.

Reproductive toxicity

Not available.

Conclusion/Summary

Based on read across from ZnO: No classification required.

Teratogenicity

Not available.

Specific target organ toxicity (single exposure)

Not available.

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Information on the likely routes of exposure

Not available.

Potential acute health effects

Inhalation: Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the nose, throat and lungs.

Ingestion: No known significant effects or critical hazards.

Skin contact: No known significant effects or critical hazards.

Eye contact: Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the eyes.

Symptoms related to the physical, chemical and toxicological characteristics

Inhalation: Adverse symptoms may include the following:
respiratory tract irritation
coughing

Ingestion: No specific data.

Skin contact: No specific data.

Eye contact: Adverse symptoms may include the following:
irritation
redness

Delayed and immediate effects and also chronic effects from short and long term exposure:**Short term exposure**

Potential immediate effects: Not available.

Potential delayed effects: Not available.

Long term exposure

Potential immediate effects: Not available.

Potential delayed effects: Not available.

Potential chronic Health effects: Not available.

General: Repeated or prolonged inhalation of dust may lead to chronic respiratory irritation



Carcinogenicity:	No known significant effects or critical hazards.
Mutagenicity:	No known significant effects or critical hazards.
Teratogenicity:	No known significant effects or critical hazards.
Developmental effects:	No known significant effects or critical hazards.
Fertility effects:	No known significant effects or critical hazards.
Other information:	Not available.

SECTION 12: Ecological information

12.1 Toxicity

Product/ingredient name	Result	Species	Exposure
zinc powder	Acute EC50 2,8 mg/L	Daphnia	48 hours
	Acute LC50 0,57 mg/L	Daphnia	96 hours
	Acute LC50 0,56 mg/L	Fish	96 hours
	Acute LC50 0,41 mg/L	Fish	96 hours
	Acute LC50 0,24 mg/L	Fish	96 hours
	Acute LC50 0,238 mg/L	Fish	96 hours
zinc oxide	Acute EC50 >1000 mg/L	Daphnia – Daphnia Magna	48 hours
	Acute EC50 0,17 mg/L	Algae – Selenastrum Capricornutum	72 hours
	Acute LC50 >320 mg/L	Fish – Lepomis macrochirus	96 hours
	Acute LC50 1,1 mg/L	Fish – Oncorhynchus mykiss	96 hours
Component A	Acute LC50 2246 mg/L	Fish – Pimephales Promales	96 hours
Component B	No information found		
Component C	No information found		
Component D	No information found		
Component E	No information found		
Component F	No information found		

12.2 Persistence and degradability Not available.

12.3 Bioaccumulative potential Not available.

12.4 Mobility in soil

Soil/water partition coefficient (K_{oc}): Not available.

Mobility: Not available.

12.5 Results of PBT and vPvB assessment

PBT: Not available.

vPvB: Not available.

12.6 Other adverse effects: No known significant effects or critical hazards.

SECTION 13: Disposal considerations

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

13.1 Waste treatment methods

Product

Methods of disposal: The generation of waste should be avoided or minimized wherever possible. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. This product is recyclable. Consideration of disposal via this route should be given.

Hazardous waste: **The classification of the product may meet the criteria for a hazardous waste.**



Packaging



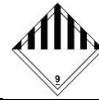

Methods of disposal:

The generation of waste should be avoided or minimized wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

Special precautions:

not listed

SECTION 14: Transport information

	ADR/RID	ADN	IMDG	IATA
14.1 UN number	UN3077	UN3077	UN3077	UN3077
14.2 UN proper shipping name	Environmentally hazardous sub-stance, solid, n.o.s. (Zinc, zinc oxide)	Environmentally hazardous sub-stance, solid, n.o.s. (Zinc, zinc oxide)	Environmentally hazardous sub-stance, solid, n.o.s. (Zinc, zinc oxide). Marine pollutant (Zinc, zinc oxide)	Environmentally hazardous sub-stance, solid, n.o.s. (Zinc, zinc oxide)
14.3 Transport hazard class(es)	9 	9 	9 	9 
14.4 Packing group	III	III	III	III
14.5 Environmental hazards	Yes	Yes	Yes	Yes
14.6 Additional information	The environmentally hazardous substance mark is not required when transported in sizes of ≤5 L or ≤5 kg. Hazard identification number 90 Limited quantity 5 kg Special provisions 274 335 601 Tunnel code (E)	The environmentally hazardous substance mark is not required when transported in sizes of ≤5 L or ≤5 kg. Special provisions 274 335 601	The marine pollutant mark is not required when transported in sizes of ≤5 L or ≤5 kg. Emergency schedules (EmS) F-A, S-F Special provisions 274 335	The environmentally hazardous substance mark is not required when transported in sizes of ≤5 L or ≤5 kg. Passenger and Cargo Aircraft Quantity limitation: 400 kg; Packaging instructions: 956 Cargo Aircraft Only Quantity limitation: 400 kg; Packaging instructions: 956 Limited Quantities - Passenger Aircraft Quantity limitation: 30 kg; Packaging instructions: Y956 Special provisions A97 A158 A179

14.7 Transport in bulk per Annex II of MARPOL 73/78 and the IBC Code Not available.

Remark:

The product qualities covered by this SDS have been tested according to the criteria for classes 4.1, 4.2 and 4.3. The test results show that these qualities don't meet the criteria for classification as dangerous goods in the classes 4.1, 4.2 or 4.3 for transport: BAM, 2005 Report II.2-916/04.
 Effective 1st of January 2015, when carried in single packaging or inner packaging of 5 kg or less, this material is not subject to the transport regulations dangerous goods.
 The single packaging or outer packaging must not be UN-approved but must be a good quality packaging.

Special precautions for user:

Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

SECTION 15: Regulatory information

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

Integrated pollution prevention and control list (IPPC) – Air: Listed
Integrated pollution prevention and control list (IPPC) – Water: Listed

Seveso II Directive: This product is controlled under the Seveso II Directive.

**Danger criteria****Category**

E1: Hazardous to the aquatic environment - Acute 1 or Chronic 1

C9i: Very toxic for the environment

Chemical Weapons Convention List Schedule I Chemicals: Not listed**Chemical Weapons Convention List Schedule II Chemicals:** Not listed**Chemical Weapons Convention List Schedule III Chemicals:** Not listed**15.2 Chemical Safety Assessment**

This product contains substances for which Chemical Safety Assessments are still required.

SECTION 16: Other information**Abbreviations** ATE = Acute Toxicity Estimate**and acronyms:** CLP = Classification, Labelling and Packaging Regulation [Reg.(EC) No.1272/2008]

DNEL = Derived No Effect Level

EUH statement = CLP-specific Hazard statement

PNEC = Predicted No Effect Concentration

RRN = REACH Registration Number

Procedure used to derive the classification according to Regulation (EC) No. 1272/2008**[CLP/GHS]**

Classification	Justification
Aquatic Acute 1, H400	Calculation method
Aquatic Chronic 1, H410	Calculation method

Full text of abbreviated

H400 Very toxic to aquatic life

H-statements:

H410 Very toxic to aquatic life with long lasting effects.

Full text of classifications [CLP/GHS]:

Aquatic Acute 1, H400 AQUATIC HAZARD (ACUTE) – Category 1

Aquatic Chronic 1, H410 AQUATIC HAZARD (LONG TERM) - Category 1

Full text of abbreviated

R50/53- Very toxic to aquatic organisms, may cause long-term

R-phrases:

adverse effects in the aquatic environment.

Full text of classifications [DSD/DPD]:

N - Dangerous for the environment

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3

Notice to reader:

To the best of our knowledge, the information contained in this Safety Data Sheet is accurate and reliable on presently available resources. However, neither the seller nor any of its subsidiaries assumes any responsibility or liability whatsoever for the accuracy or completeness of the information contained herein. This Safety Data Sheet shall not constitute a guarantee for any specific product features. Final determination of suitability of this material is the sole responsibility of the user.

All materials may present unknown hazards and should be used and handled with caution and following reasonable safety procedures. Consequently the buyer assumes all risks in connection with the use and handling of this material.