SECTION 1. IDENTIFICATION

Product identifier

Trade name	:	**BAEROSTAB MC 9109 KA**

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

Use of the Sub-stance/Mixture	:	Manufacture of plastics products Polymer additive Stabilizer
Recommended restrictions on use	:	None known.

Details of the supplier of the safety data sheet

Company	:	Baerlocher Production USA LLC 5890 Highland Ridge Drive Cincinnati, OH 45232
Telephone	:	Day 330-602-1528 or 330-602-1531
	:	Night 513-207-1620 or 513-604-2327
E-mail address	:	Hotline.PS@baerlocher.com
Responsible/issuing person	:	Product Safety Department

Emergency telephone number (0 - 24 h)

Tel.: 800-424-9300 USA or 703-527-3887

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

Skin irritation	:	Category 2
Serious eye damage	:	Category 1
Skin sensitisation	:	Category 1
Reproductive toxicity	:	Category 1B
Specific target organ toxicity - single exposure	:	Category 3 (Respiratory system)
Combustible dust		

GHS label elements

Hazard pictograms :

Signal word	:	Danger
Hazard statements	:	H315 Causes skin irritation.

H317 May cause an allergic skin reaction.
H318 Causes serious eye damage.
H335 May cause respiratory irritation.
H360F May damage fertility.
May form combustible dust mixtures in air.

Precautionary statements :

Prevention:

P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
P264 Wash skin thoroughly after handling.
P271 Use only outdoors or in a well-ventilated area.
P272 Contaminated work clothing should not be allowed out of the workplace.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response:

P302 + P352 IF ON SKIN: Wash with plenty of soap and water.
P304 + P340 + P312 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor if you feel unwell.
P305 + P351 + P338 + P310 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor.
P308 + P313 IF exposed or concerned: Get medical advice/ attention.
P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.
P362 Take off contaminated clothing and wash before reuse.

Storage:

P403 + P233 Store in a well-ventilated place. Keep container tightly closed.
P405 Store locked up.

Disposal:

P501 Dispose of contents/ container to an approved waste disposal plant.

Other hazards

Dust can form an explosive mixture in air.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Chemical nature : Mixture

Hazardous components

Chemical name	CAS-No.	Concentration (% w/w)
Zinc compounds*	Trade Secret	< 20*
Calcium hydroxide	1305-62-0	>= 20*
Aluminium magnesium zinc carbonate hydroxide	169314-88-9	>= 25*
4,4'-Isopropylidene diphenol	80-05-7	< 10*
Dibenzoyl methane	120-46-7	< 10*

*Trade Secret - The specific chemical identity and/or exact percentage of composition has been withheld as a trade secret.

SECTION 4. FIRST AID MEASURES

If inhaled	:	Move to fresh air. Call a physician immediately. Show this safety data sheet to the doctor in attendance.
In case of skin contact	:	Wash off with soap and plenty of water.
In case of eye contact	:	Irrigate copiously with clean, fresh water for at least 10 minutes, holding the eyelids apart. Call a physician immediately.
If swallowed	:	Clean mouth with water and drink afterwards plenty of water. Do NOT induce vomiting. Call a physician immediately. Show this safety data sheet to the doctor in attendance.
Most important symptoms and effects, both acute and delayed	:	No information available.
Notes to physician	:	Treat symptomatically.

SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media	:	Water spray Foam Carbon dioxide (CO2) Dry chemical Sand
Unsuitable extinguishing media	:	High volume water jet
Specific hazards during fire-fighting	:	Smoke and fumes, toxic.
Special protective equipment for firefighters	:	In the event of fire, wear self-contained breathing apparatus.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	:	Remove all sources of ignition. Avoid dust formation. Provide adequate ventilation. Avoid contact with skin and eyes. For personal protection see section 8.
Environmental precautions	:	Do not flush into surface water or sanitary sewer system. Avoid subsoil penetration.
Methods and materials for containment and cleaning up	:	Use mechanical handling equipment. Keep in suitable, closed containers for disposal.

SECTION 7. HANDLING AND STORAGE

Advice on safe handling	:	Take precautionary measures against static discharges. Keep away from sources of ignition - No smoking. Avoid formation and buildup of dust.
Conditions for safe storage	:	Store at room temperature in the original container. Keep in a dry place.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Calcium hydroxide	1305-62-0	PEL	15 mg/m3 (total dust)	OSHA Z-1
		PEL	5 mg/m3 (Respirable fraction)	OSHA Z-1
		TWA	5 mg/m3	NIOSH REL
		air 8 h	5 mg/m3	ACGIH
Zinc compounds	Trade Secret	PEL	15 mg/m3 (total dust)	OSHA Z-1
		PEL	5 mg/m3 (Respirable fraction)	OSHA Z-1
		TWA	10 mg/m3 (total dust)	NIOSH REL
		TWA	5 mg/m3 (Respirable fraction)	NIOSH REL
		TWA	10 mg/m3 (Respirable dust)	ACGIH
		TWA	5 mg/m3 (Respirable fraction)	ACGIH
General limits for air contaminants (PNOC)	Not Assigned	air 8 h (total dust)	15 mg/m3	OSHA Z-3
		air 8 h (Respirable fraction)	5 mg/m3	OSHA Z-3
		air 8 h (inhalable dust)	10 mg/m3	ACGIH
		air 8 h (Respirable fraction)	3 mg/m3	ACGIH

Engineering measures : Local exhaust

Personal protective equipment

Respiratory protection : P1 filter respirator for inert particles

Hand protection

Remarks	:	protective gloves acc. to EN 374, e.g. neoprene
Eye protection	:	Tightly fitting safety goggles
Skin and body protection	:	Long sleeved clothing
Protective measures	:	antistatic shoes
Hygiene measures	:	When using do not eat or drink. Do not smoke. Wash hands before breaks and at the end of workday. Shower or bathe at the end of working. Keep working clothes separately.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	:	powder
Color	:	off-white
Odor	:	slight
Odor Threshold	:	No data available
pH	:	No data available
Melting point/range	:	> 100 °C
Boiling point/boiling range	:	No data available
Flash point	:	>> 100 °C
Evaporation rate	:	No data available
Flammability (solid, gas)	:	Combustible Solids
Upper explosion limit	:	No data available
Lower explosion limit	:	No data available
Vapor pressure	:	No data available
Relative vapor density	:	No data available
Relative density	:	No data available
Density	:	No data available
Bulk density	:	No data available

Solubility(ies)		
Water solubility	:	partly soluble
Partition coefficient: n-octanol/water	:	No data available
Auto-ignition temperature	:	No data available
Decomposition temperature	:	No data available
Viscosity		
Viscosity, dynamic	:	No data available
Viscosity, kinematic	:	No data available

SECTION 10. STABILITY AND REACTIVITY

Reactivity	:	Stable at normal ambient temperature and pressure.
Chemical stability	:	No decomposition if stored normally.
Possibility of hazardous reactions	:	Risk of dust explosion. Aqueous dispersion reacts as an alkali.
Conditions to avoid	:	Avoid dust formation. Keep away from heat and sources of ignition.
Incompatible materials	:	Strong oxidizing agents
Hazardous decomposition products	:	No decomposition if used as directed.

SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity

Product:

Acute oral toxicity	:	Acute toxicity estimate: 5,000 mg/kg Method: Calculation method
Acute dermal toxicity	:	Acute toxicity estimate: > 5,000 mg/kg Method: Calculation method

Components:

Zinc compounds:

Acute oral toxicity	:	LD50 (Rat): > 5,000 mg/kg Method: OECD Test Guideline 401 Remarks: Read-across (Analogy) LD50 (Rat): > 2,000 mg/kg

Method: OECD Test Guideline 423
Remarks: Based on available data, the classification criteria are not met.

Acute inhalation toxicity : LC50 (Rat): > 200 mg/l
Exposure time: 1 h
Test atmosphere: dust/mist

LC50 (Rat): > 50 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Remarks: Based on available data, the classification criteria are not met.

Acute dermal toxicity : LD50 (Rabbit): > 2,000 mg/kg
Remarks: Based on available data, the classification criteria are not met.

Calcium hydroxide:

Acute oral toxicity : LD50 (Rat): > 2,000 mg/kg
Method: OECD Test Guideline 425
GLP: yes
Remarks: Based on available data, the classification criteria are not met.

Acute inhalation toxicity : LC50 (Rat): > 6.04 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: OECD Test Guideline 436
GLP: yes
Remarks: Based on available data, the classification criteria are not met.

Acute dermal toxicity : LD50 (Rabbit): > 2,500 mg/kg
Method: OECD Test Guideline 402
Remarks: Based on available data, the classification criteria are not met.

Aluminium magnesium zinc carbonate hydroxide:

Acute oral toxicity : LD50 (Rat): > 2,000 mg/kg
Method: standardised international/national methodology
Remarks: Based on available data, the classification criteria are not met.

Acute inhalation toxicity : LC50 (Rat): > 5.17 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: standardised international/national methodology
Remarks: Based on available data, the classification criteria are not met.

Acute dermal toxicity : Remarks: Read-across (Analogy)

LD50 (Rat): > 2,000 mg/kg
Remarks: Based on available data, the classification criteria are not met.

4,4'-Isopropylidene diphenol:

Acute oral toxicity : LD50 (Rat): > 2,000 mg/kg
Method: OECD Test Guideline 401
GLP: no
Remarks: Based on available data, the classification criteria are not met.

Acute inhalation toxicity : LC50 (Rat): > 0.170 mg/l
Exposure time: 6 h
Test atmosphere: dust/mist
Method: standardised international/national methodology
GLP: yes
Remarks: Based on available data, the classification criteria are not met.

Acute dermal toxicity : LD50 (Rabbit): 3,000 mg/kg
Method: standardised international/national methodology
GLP: no
Remarks: Based on available data, the classification criteria are not met.

Dibenzoyl methane:

Acute oral toxicity : LD50 (Rat): > 2,000 mg/kg
Method: OECD Test Guideline 423
GLP: yes
Remarks: Based on available data, the classification criteria are not met.

Acute inhalation toxicity : Remarks: study scientifically unjustified

Acute dermal toxicity : LD50 (Rat): > 2,000 mg/kg
Method: OECD Test Guideline 402
GLP: yes

Skin corrosion/irritation

Components:

Zinc compounds:

Species: Rabbit
Method: OECD Test Guideline 404
Result: not irritating
Remarks: Based on available data, the classification criteria are not met.

Calcium hydroxide:

Species: Rabbit
Method: OECD Test Guideline 404
Result: Causes skin irritation.
GLP: yes

Aluminium magnesium zinc carbonate hydroxide:

Species: Rabbit
Method: standardised international/national methodology
Result: not irritating
Remarks: Based on available data, the classification criteria are not met.

4,4'-Isopropylidene diphenol:

Species: Rabbit
Method: OECD Test Guideline 404
Result: not irritating
GLP: yes
Remarks: Based on available data, the classification criteria are not met.

Dibenzoyl methane:

Species: in vitro assay
Method: OECD Test Guideline 439
Result: not irritating
GLP: yes
Remarks: Based on available data, the classification criteria are not met.

Serious eye damage/eye irritation

Components:

Zinc compounds:

Species: Rabbit
Result: not irritating
Method: OECD Test Guideline 405
Remarks: Based on available data, the classification criteria are not met.

Calcium hydroxide:

Species: Rabbit
Result: Causes serious eye damage.
Method: OECD Test Guideline 405
GLP: yes

Aluminium magnesium zinc carbonate hydroxide:

Species: Rabbit
Result: not irritating
Method: standardised international/national methodology
Remarks: Based on available data, the classification criteria are not met.

4,4'-Isopropylidene diphenol:

Species: Rabbit
Result: irritating
Method: OECD Test Guideline 405
GLP: yes

Remarks: Classification
Labelling according to EC Directives
Regulation (EC) No 1272/2008, Annex VI, Table 3.1
Category 1

Dibenzoyl methane:

Species: Rabbit
Result: not irritating
Method: OECD Test Guideline 405
Remarks: Based on available data, the classification criteria are not met.

Respiratory or skin sensitisation

Components:

Zinc compounds:

Remarks: Skin sensitisation
Patch test on human volunteers did not demonstrate sensitisation properties.
Based on available data, the classification criteria are not met.

Remarks: Respiratory sensitisation
Based on available data, the classification criteria are not met.

Calcium hydroxide:

Remarks: Skin sensitisation
Not classified due to lack of data.

Remarks: Respiratory sensitisation
Not classified due to lack of data.

Aluminium magnesium zinc carbonate hydroxide:

Test Type: Skin sensitisation
Species: Guinea pig
Method: standardised international/national methodology
Result: Does not cause skin sensitisation.
Remarks: Based on available data, the classification criteria are not met.

Remarks: Respiratory sensitisation
Not classified due to lack of data.

4,4'-Isopropylidene diphenol:

Remarks: Skin sensitisation

Test Type: LLNA

Species: Mouse
Method: OECD Test Guideline 429
Result: negative
GLP: yes

Remarks: Classification
Labelling according to EC Directives
Regulation (EC) No 1272/2008, Annex VI, Table 3.1
Skin sensitisation
Category 1

Remarks: Respiratory sensitisation
Based on available data, the classification criteria are not met.

Dibenzoyl methane:

Remarks: Skin sensitisation

Test Type: LLNA
Species: Mouse
Method: OECD Test Guideline 429
Result: Sensitising
GLP: yes

Remarks: Respiratory sensitisation

Remarks: Not classified due to lack of data.

Germ cell mutagenicity

Components:

Zinc compounds:

Genotoxicity in vitro	:	Remarks: Read-across (Analogy)
	:	Method: standardised international/national methodology Result: negative Remarks: Based on available data, the classification criteria are not met.
Genotoxicity in vivo	:	Remarks: Read-across (Analogy)
		Method: standardised international/national methodology Result: negative Remarks: Based on available data, the classification criteria are not met.

Calcium hydroxide:

Genotoxicity in vitro	:	Test Type: Mutagenicity (Salmonella typhimurium - reverse mutation assay) Species: Bacteria Method: OECD Test Guideline 471 Result: negative

GLP: yes

: Test Type: Chromosome aberration test in vitro
Species: human cells
Method: OECD Test Guideline 473
Result: negative
GLP: no

: Test Type: In vitro gene mutation study in mammalian cells
Species: mouse lymphoma cells
Method: OECD Test Guideline 476
Result: negative
GLP: yes
Remarks: Based on available data, the classification criteria are not met.

Aluminium magnesium zinc carbonate hydroxide:

Genotoxicity in vitro : Test Type: Mutagenicity (Salmonella typhimurium - reverse mutation assay)
Species: Bacteria
Method: standardised international/national methodology
Result: negative

: Test Type: In vitro gene mutation study in mammalian cells
Species: mouse lymphoma cells
Method: standardised international/national methodology
Result: negative

: Test Type: Mutagenicity (in vitro mammalian cytogenetic test)
Species: Human lymphocytes
Method: standardised international/national methodology
Result: negative
Remarks: Based on available data, the classification criteria are not met.

4,4'-Isopropylidene diphenol:

Genotoxicity in vitro : Test Type: Mutagenicity (Salmonella typhimurium - reverse mutation assay)
Species: Bacteria
Result: negative

: Test Type: In vitro gene mutation study in mammalian cells
Species: mouse lymphoma cells
Result: negative
GLP: no

: Test Type: Mutagenicity (in vitro mammalian cytogenetic test)
Species: Chinese hamster ovary cells
Result: negative
GLP: no
Remarks: Based on available data, the classification criteria are not met.

Genotoxicity in vivo : Test Type: In vivo micronucleus test
Species: Mouse
Application Route: Oral
Method: standardised international/national methodology
Result: negative
GLP: yes
Remarks: Based on available data, the classification criteria are not met.

Dibenzoyl methane:

Genotoxicity in vitro : Test Type: Mutagenicity (Salmonella typhimurium - reverse mutation assay)
Species: Bacteria
Method: OECD Test Guideline 471
Result: negative
GLP: yes

: Test Type: In vitro gene mutation study in mammalian cells
Species: mouse lymphoma cells
Method: OECD Test Guideline 476
Result: positive
GLP: yes

: Test Type: Mutagenicity (in vitro mammalian cytogenetic test)
Species: CHL
Method: OECD Test Guideline 487
Result: positive
GLP: yes
Remarks: Based on available data, the classification criteria are not met.

Carcinogenicity

Product:

Remarks: This product contains no known or suspected carcinogens listed by IARC, NTP or OSHA at or above reportable quantities.

Components:

Zinc compounds:

Remarks: Read-across (Analogy)

Remarks: Based on available data, the classification criteria are not met.

Calcium hydroxide:

Remarks: Read-across (Analogy)

Species: Rat
Application Route: Oral

Remarks: Based on available data, the classification criteria are not met.

Aluminium magnesium zinc carbonate hydroxide:

Remarks: Based on available data, the classification criteria are not met.

4,4'-Isopropylidene diphenol:

Species: rat / mouse
Application Route: Oral
GLP: no
Remarks: Based on available data, the classification criteria are not met.

Dibenzoyl methane:

Remarks: Not classified due to lack of data.

Reproductive toxicity

Components:

Zinc compounds:

Effects on fertility :

Remarks: Read-across (Analogy)

Remarks: Based on available data, the classification criteria are not met.

Effects on foetal development : Remarks: Read-across (Analogy)
Remarks: Based on available data, the classification criteria are not met.

Calcium hydroxide:

Effects on fertility :

Remarks: Read-across (Analogy)

Species: Mouse
Application Route: Oral

GLP: no
Remarks: Based on available data, the classification criteria are not met.

Effects on foetal development : Remarks: Read-across (Analogy)
Species: Rat
Application Route: Oral
Method: OECD Test Guideline 414
GLP: no
Remarks: Read-across (Analogy)
Species: Mouse

Application Route: Oral
Method: OECD Test Guideline 414
GLP: no
Remarks: Based on available data, the classification criteria are not met.

Aluminium magnesium zinc carbonate hydroxide:

Effects on fertility :

Remarks: Based on available data, the classification criteria are not met.

Effects on foetal development : Remarks: Based on available data, the classification criteria are not met.

4,4'-Isopropylidene diphenol:

Effects on fertility :

Test Type: Two-generation reproductive toxicity
Species: Mouse
Application Route: Oral

Method: OECD Test Guideline 416
GLP: yes

Test Type: Two-generation reproductive toxicity
Species: Rat
Application Route: Oral

Method: OECD Test Guideline 416
GLP: yes

Remarks: Classification

Remarks: Labelling according to EC Directives

Remarks: Regulation (EC) No 1272/2008, Annex VI, Table 3.1

Remarks: Reproductive toxicity

Remarks: Category 1B

Dibenzoyl methane:

Effects on fertility :

Remarks: Not classified due to lack of data.

Effects on foetal development : Remarks: Not classified due to lack of data.

STOT - single exposure

Components:

Zinc compounds:
Remarks: Read-across (Analogy)

Remarks: Based on available data, the classification criteria are not met.

Calcium hydroxide:
Exposure routes: Inhalation
Target Organs: Respiratory Tract
Assessment: May cause respiratory irritation.

Aluminium magnesium zinc carbonate hydroxide:
Remarks: Based on available data, the classification criteria are not met.

4,4'-Isopropylidene diphenol:
Assessment: May cause respiratory irritation.

Dibenzoyl methane:
Remarks: Not classified due to lack of data.

Repeated dose toxicity

Components:

Zinc compounds:
Remarks: Read-across (Analogy)

Remarks: Based on available data, the classification criteria are not met.

Calcium hydroxide:
Species: Rat
NOEC: 0.107 mg/l
Application Route: Inhalation
Exposure time: 14d
Method: OECD Test Guideline 412
GLP: yes
Symptoms: Local effects
Remarks: Based on available data, the classification criteria are not met.

Aluminium magnesium zinc carbonate hydroxide:
Species: Rat
NOAEL: 1,000 mg/kg
Application Route: Oral

Exposure time: 28 d
Method: standardised international/national methodology
Remarks: Based on available data, the classification criteria are not met.

4,4'-Isopropylidene diphenol:

Species: rat / mouse
NOAEL: 50 mg/kg
Application Route: Oral
Exposure time: two generation cycles
Method: OECD Test Guideline 416
GLP: yes

Species: Rat
NOAEL: 200 mg/kg
Application Route: Oral
Exposure time: 28 days
Method: OECD Test Guideline 407
GLP: yes
Remarks: Based on available data, the classification criteria are not met.

Species: Rat
NOAEL: 0.01 mg/l
Application Route: Inhalation
Exposure time: 13 weeks
GLP: yes
Remarks: Based on available data, the classification criteria are not met.

Dibenzoyl methane:

Species: Rat
NOAEL: 62.5 mg/kg
Application Route: Oral
Exposure time: 90 d
Method: OECD Test Guideline 408
GLP: yes
Remarks: Based on available data, the classification criteria are not met.

Aspiration toxicity

Components:

Zinc compounds:

Based on available data, the classification criteria are not met.

Calcium hydroxide:

Not classified due to lack of data.

Aluminium magnesium zinc carbonate hydroxide:

Not classified due to lack of data.

4,4'-Isopropylidene diphenol:
Based on available data, the classification criteria are not met.

Dibenzoyl methane:
Not classified due to lack of data.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Components:

Zinc compounds:

Toxicity to fish	:	LC50 (Danio rerio (zebra fish)): > 10,000 mg/l Exposure time: 96 h Test Type: semi-static test Method: Directive 67/548/EEC, Annex V, C.1. Remarks: Read-across (Analogy) LC50 (Oncorhynchus mykiss (rainbow trout)): 0,169 mg Zn/L Exposure time: 96 h Test Type: static test Method: standardised international/national methodology Remarks: Read-across (Analogy) (Pimephales promelas (fathead minnow)): 0,330 - 0,780 mg Zn/L
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): > 100 mg/l Exposure time: 48 h Test Type: static test Method: OECD Test Guideline 202 Remarks: Read-across (Analogy) LC50 (Ceriodaphnia dubia (water flea)): 0.147 - > 0,53 mg Zn/l
Toxicity to algae	:	NOEC (Pseudokirchneriella subcapitata (green algae)): 19.3 mg/l Exposure time: 72 h Test Type: static test Method: OECD Test Guideline 201 EC50 (Pseudokirchneriella subcapitata (green algae)): > 100 mg/l Exposure time: 72 h Test Type: semi-static test

Method: OECD Test Guideline 201
GLP: yes
Remarks: Value refered to the Water accumulated fraction (WAF).

EC10 (Pseudokirchneriella subcapitata (green algae)): 3.31 mg/l
Exposure time: 72 h
Test Type: semi-static test
Method: OECD Test Guideline 201
GLP: yes
Remarks: Value refered to the Water accumulated fraction (WAF).

Toxicity to fish (Chronic toxicity) : Remarks: Read-across (Analogy)

NOEC: 0,044 - 0,530 mg Zn/L
Test Type: Fresh water

Remarks: Read-across (Analogy)

NOEC: 0,025 mg Zn/L
Test Type: Marine water

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : Remarks: Read-across (Analogy)

NOEC: 0,037 - 0,400 mg Zn/L
Test Type: Fresh water

Remarks: Read-across (Analogy)

NOEC: 0,0056 - 0,9 mg Zn/L
Test Type: Marine water

Toxicity to bacteria : NOEC (Photobacterium phosphoreum): 1,560 mg/l
Exposure time: 0.5 h
Test Type: static test
Method: DIN 38412 T 34
GLP:

GLP:
Remarks: Read-across (Analogy)

EC50 (activated sludge): 5,2 mg Zn/l
Exposure time: 3 h
Test Type: static test
Method: OECD Test Guideline 209
GLP: no

Calcium hydroxide:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 50.6 mg/l
Exposure time: 96 h

Test Type: static test
Method: OECD Test Guideline 203
GLP: yes

LC50 (Gasterosteus aculeatus (threespine stickleback)): 457 mg/l
Exposure time: 96 h
Test Type: static test
Method: standardised international/national methodology

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 49.1 mg/l
Exposure time: 48 h
Test Type: static test
Method: OECD Test Guideline 202
GLP: yes

LC50 (Crangon septemspinosa): 158 mg/l
Exposure time: 96 h
Test Type: static test

Toxicity to algae : EC50 (Pseudokirchneriella subcapitata (green algae)): 184.57 mg/l
Exposure time: 72 h
Test Type: static test
Method: OECD Test Guideline 201
GLP: yes

NOEC (Pseudokirchneriella subcapitata (green algae)): 48 mg/l
Exposure time: 72 h
Test Type: static test
Method: OECD Test Guideline 201
GLP: yes

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Crangon septemspinosa): 32 mg/l
Exposure time: 14 d
Test Type: semi-static test
Method: standardised international/national methodology

Toxicity to bacteria : EC50 (activated sludge): 300.4 mg/l
Exposure time: 3 h
Test Type: Respiration inhibition
Method: OECD Test Guideline 209
GLP: yes

Ecotoxicology Assessment

Acute aquatic toxicity : Based on available data, the classification criteria are not met.

Chronic aquatic toxicity : Based on available data, the classification criteria are not met.

Aluminium magnesium zinc carbonate hydroxide:

Toxicity to fish : LC50 (Cyprinus carpio (Carp)): > 100 mg/l

Exposure time: 96 h
Test Type: static test
Method: OECD Test Guideline 203

LC50 (Cyprinodon variegatus (sheepshead minnow)): > 100 mg/l
Exposure time: 96 h
Test Type: static test
Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): > 100 mg/l
Exposure time: 48 h
Test Type: static test
Method: OECD Test Guideline 202

Toxicity to algae : EC50 (Pseudokirchneriella subcapitata (green algae)): > 100 mg/l
Exposure time: 48 h
Test Type: static test
Method: OECD Test Guideline 201

EC50 (Skeletonema costatum (marine diatom)): > 180 mg/l
Exposure time: 48 h
Test Type: Growth inhibition
Method: ISO 10253

Toxicity to bacteria : IC50 (activated sludge): > 100 mg/l
Exposure time: 0.5 h
Test Type: Respiration inhibition
Method: OECD Test Guideline 209

Ecotoxicology Assessment

Acute aquatic toxicity : Based on available data, the classification criteria are not met.

Chronic aquatic toxicity : Classification, Labelling according to EC Directives, Regulation (EC) No 1272/2008, Annex VI, Table 3.1, May cause long lasting harmful effects to aquatic life.

4,4'-Isopropylidene diphenol:

Toxicity to fish : LC50 (Pimephales promelas (fathead minnow)): 4.6 - 4.7 mg/l
Exposure time: 96 h
Test Type: flow-through test
Method: OECD Test Guideline 203
GLP: yes

LC50 (Cyprinodon variegatus (sheepshead minnow)): 11 mg/l
Exposure time: 96 h
Test Type: flow-through test
Method: OECD Test Guideline 203
GLP: yes

Toxicity to daphnia and other : EC50 (Daphnia magna (Water flea)): 10.2 mg/l

aquatic invertebrates		Exposure time: 48 h Test Type: static test Method: standardised international/national methodology GLP: yes EC50 (Americamysis bahia (Mysidopsis bahia)): 1.1 mg/l Exposure time: 96 h Test Type: flow-through test Method: standardised international/national methodology GLP: yes
Toxicity to algae	:	EC50 (Pseudokirchneriella subcapitata (green algae)): 2.5 mg/l Exposure time: 96 h Test Type: static test Method: standardised international/national methodology GLP: yes EC50 (Skeletonema costatum (marine diatom)): 1.1 mg/l Exposure time: 96 h Test Type: static test Method: standardised international/national methodology GLP: yes NOEC (Lemna gibba): 7.8 mg/l Exposure time: 7 d Test Type: semi-static test Method: OECD Test Guideline 221 GLP: yes
Toxicity to fish (Chronic toxicity)	:	NOEC (Pimephales promelas (fathead minnow)): 0.016 mg/l Exposure time: 444 d Test Type: flow-through test Method: standardised international/national methodology GLP: yes NOEC (Cyprinodon variegatus (sheepshead minnow)): 0.066 mg/l Exposure time: 116 d Test Type: flow-through test Method: standardised international/national methodology GLP: yes NOEC (Pimephales promelas (fathead minnow)): 0.640 mg/l Exposure time: 36 d Test Type: flow-through test Method: OECD Test Guideline 210 GLP: yes NOEC (Pimephales promelas (fathead minnow)): 0.160 mg/l Exposure time: 164 d Test Type: flow-through test Method: standardised international/national methodology GLP: yes

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	NOEC (Marisa cornuarietis): 0.025 mg/l Exposure time: 328 d Test Type: flow-through test GLP: yes NOEC (Brachionus calyciflorus): 1.8 mg/l Exposure time: 48 h Test Type: static test Method: standardised international/national methodology GLP: yes NOEC (Americamysis bahia (Mysidopsis bahia)): 0.170 mg/l Exposure time: 28 d Test Type: flow-through test Method: standardised international/national methodology GLP: yes NOEC (Daphnia magna (Water flea)): > 3.16 mg/l Exposure time: 21 d Test Type: semi-static test Method: OECD Test Guideline 211 GLP: yes
Toxicity to bacteria	:	IC50 (Pseudomonas fluorescens): 54.5 mg/l Exposure time: 16 h Test Type: Growth inhibition Method: standardised international/national methodology GLP: EC10 (Pseudomonas putida): > 320 mg/l Exposure time: 18 h Test Type: static test Method: DIN 38412 GLP:

Ecotoxicology Assessment

Acute aquatic toxicity	:	Based on available data, the classification criteria are not met.
Chronic aquatic toxicity	:	Toxic to aquatic life with long lasting effects.

Dibenzoyl methane:

Toxicity to fish	:	LC50: 11.313 mg/l Exposure time: 96 h Method: QSAR
Toxicity to daphnia and other aquatic invertebrates	:	LC50: 7.519 mg/l Exposure time: 48 h Method: QSAR
Toxicity to algae	:	2.68 mg/l Exposure time: 96 h

Method: QSAR

Ecotoxicology Assessment

Acute aquatic toxicity : Based on available data, the classification criteria are not met.

Chronic aquatic toxicity : Based on available data, the classification criteria are not met.

Persistence and degradability

Components:

Zinc compounds:

Biodegradability : Ready biodegradability
Result: Readily biodegradable.
Biodegradation: 93 %
Exposure time: 28 d
Method: closed bottle test according to OECD 301 D

Remarks: Read-across (Analogy)

Ready biodegradability
Result: Readily biodegradable.
Biodegradation: 72 %
Exposure time: 29 d
Method: OECD Test Guideline 301

Calcium hydroxide:

Biodegradability : Remarks: The methods for determining biodegradability are not applicable to inorganic substances.

Aluminium magnesium zinc carbonate hydroxide:

Biodegradability : Remarks: The methods for determining biodegradability are not applicable to inorganic substances.

4,4'-Isopropylidene diphenol:

Biodegradability : aerobic
Inoculum: activated sludge
Result: Readily biodegradable.
Biodegradation: 89 %
Exposure time: 28 d
Method: OECD Test Guideline 301F
GLP: yes

aerobic
Inoculum: Fresh water sediment
Result: Readily biodegradable.
Lag phase: 2 - 8 d
Method: standardised international/national methodology
GLP: yes

aerobic
Inoculum: Soil
Result: Readily biodegradable.
Method: standardised international/national methodology
GLP: yes

Dibenzoyl methane:

Biodegradability : aerobic
Inoculum: activated sludge
Result: Readily biodegradable.
Biodegradation: 89 %
Exposure time: 28 d
Method: OECD Test Guideline 301B
GLP: yes

Bioaccumulative potential

Components:

Zinc compounds:

Bioaccumulation : Remarks: Not applicable

Calcium hydroxide:

Bioaccumulation : Remarks: Not applicable

Partition coefficient: n-octanol/water : Remarks: No data available

Aluminium magnesium zinc carbonate hydroxide:

Bioaccumulation : Remarks: No data available

Partition coefficient: n-octanol/water : Remarks: No data available

4,4'-Isopropylidene diphenol:

Bioaccumulation : Species: Cyprinus carpio (Carp)
Bioconcentration factor (BCF): <= 67
Exposure time: 42 d
Method: standardised international/national methodology
Remarks: Accumulation in aquatic organisms is unlikely.

Dibenzoyl methane:

Bioaccumulation : Remarks: study scientifically unjustified

Partition coefficient: n-octanol/water : log Pow: < 3

Mobility in soil

Components:

Zinc compounds:

Mobility : Remarks: According to experience not expected

Calcium hydroxide:

Mobility : Remarks: Not applicable

Aluminium magnesium zinc carbonate hydroxide:

Mobility : Remarks: No data available

4,4'-Isopropylidene diphenol:

Mobility : Method: QSAR
Remarks: Predicted distribution to environmental compartments
Soil
Water

Dibenzoyl methane:

Mobility : Remarks: No data available

Other adverse effects

Product:

Additional ecological information : Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
Avoid release to the environment.

Components:

Zinc compounds:

Results of PBT and vPvB assessment : Based on available data, the classification criteria are not met.

Endocrine disrupting potential : No information available.

Calcium hydroxide:

Results of PBT and vPvB assessment : Based on available data, the classification criteria are not met.

Endocrine disrupting potential : No information available.

Aluminium magnesium zinc carbonate hydroxide:

Results of PBT and vPvB assessment : Based on available data, the classification criteria are not met.

Endocrine disrupting potential : No information available.

4,4'-Isopropylidene diphenol:

Results of PBT and vPvB assessment	:	Based on available data, the classification criteria are not met.
Endocrine disrupting potential	:	No information available.

Dibenzoyl methane:

Results of PBT and vPvB assessment	:	Based on available data, the classification criteria are not met.
Endocrine disrupting potential	:	No information available.

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues	:	Consult an expert on the disposal of recovered material. Ensure disposal in compliance with government requirements and ensure conformity to local disposal regulations.
Contaminated packaging	:	Empty containers must be handled with care due to product residue.

SECTION 14. TRANSPORT INFORMATION

National Regulations

DOT
Not regulated as a dangerous good

International Regulations

IATA-DGR
Not regulated as a dangerous good

IMDG-Code
Not regulated as a dangerous good

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
Not applicable for product as supplied.

SECTION 15. REGULATORY INFORMATION

SARA 313 : This product contains the following toxic chemicals subject to the reporting requirements of section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 and of 40 CFR 372:

Components	CAS-No.	Wt.
Zinc Compounds (N982)	Not Assigned	66.0
4,4'-Isopropylidene diphenol	80-05-7	3.0

The components of this product are reported in the following inventories:

TSCA	listed
DSL	listed
AICS	listed
ECL	listed
CHINA	listed
EINECS	complies with the requirements
ENCS	listed
PICCS	listed

SECTION 16. OTHER INFORMATION

Full text of other abbreviations

AICS - Australian Inventory of Chemical Substances; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations;

UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

Further information

HMIS III:

HEALTH	**3***
FLAMMABILITY	**1**
PHYSICAL HAZARD	**0**

0 = not significant, 1 =Slight,
2 = Moderate, 3 = High
4 = Extreme, * = Chronic

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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.

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