SECTION 1. IDENTIFICATION

Product identifier

Trade name : **BAEROPAN MC 8553 KA-ST/3 - US**

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

Use of the Substance/Mixture : Manufacture of plastics products
Polymer additive
Stabilizer

Recommended restrictions on use : None known.

Manufacturer or supplier's details

Company name of supplier : Baerlocher Production USA LLC
513-604-2327

Address : 5890 Highland Ridge Drive
Cincinnati OH 45232

Emergency telephone number : CHEMTREC: 1-800-424-9300 (inside U.S.) / 1-703 527-3887 (outside U.S.) Collect calls are accepted

E-mail address : Hotline.PS@baerlocher.com

Responsible/issuing person : Product Safety Department

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

Combustible dust Category 1

GHS label elements

Signal word Warning

Hazard statements May form combustible dust concentrations in air.

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)
Aluminium magnesium zinc carbonate hydroxide	169314-88-9	≥ 25*

Zinc compounds*	Trade Secret	< 25*
Titanium dioxide	13463-67-7	< 5*

*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.
In case of skin contact	:	Wash off with soap and plenty of water.
In case of eye contact	:	Rinse with plenty of water.
If swallowed	:	Clean mouth with water and drink afterwards plenty of water. Get medical advice/ attention if you feel unwell. 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.

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
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
Titanium dioxide	13463-67-7	PEL	15 mg/m3 (total dust)	OSHA Z-1
		air 8 h	10 mg/m3	ACGIH
Dust	Not Assigned	TWA (total dust)	50 Million particles per cubic foot	OSHA Z-3
		TWA (total dust)	15 mg/m3	OSHA Z-3
		TWA (respirable fraction)	5 mg/m3	OSHA Z-3
		TWA (respirable fraction)	15 Million particles per cubic foot	OSHA Z-3
Particulates	Not Assigned	TWA (total	15 mg/m3	OSHA Z-1

		dust)		
		TWA (respirable fraction)	5 mg/m3	OSHA Z-1
		TWA (Total)	15 mg/m3	OSHA P0
		TWA (Respirable fraction)	5 mg/m3	OSHA P0
		TWA (Inhalable particulate matter)	10 mg/m3	ACGIH
		TWA (Respirable particulate matter)	3 mg/m3	ACGIH

Engineering measures : Local exhaust

Personal protective equipment

Respiratory protection : P1 filter respirator for inert particles

Hand protection
Directive : protective gloves acc. to EN 374, e.g. neoprene

Eye protection : Safety glasses

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.
Handle in accordance with good industrial hygiene and safety practice.
Regular cleaning of equipment, work area and clothing.

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	:	practically insoluble
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	:	Applies to granules (R), pastilles (TX) and flakes (SMS): The product is not a dust explosion risk as supplied; however the build-up of fine dust can lead to a risk of dust explosions. Applies to powder and remaining product forms: Dust can form an explosive mixture in air.
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: 2,839 mg/kg
Method: Calculation method

Acute inhalation toxicity : Acute toxicity estimate: 6.55 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: Calculation method

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

Components:

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.

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.

Skin corrosion/irritation

Components:

Aluminium magnesium zinc carbonate hydroxide:

Species: Rabbit
Method: standardised international/national methodology
Result: No skin irritation
Remarks: Based on available data, the classification criteria are not met.

Zinc compounds:

Species: Rabbit
Method: OECD Test Guideline 404
Result: No skin irritation
Remarks: Based on available data, the classification criteria are not met.

Serious eye damage/eye irritation

Components:

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.

Zinc compounds:

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:

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.

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.

Germ cell mutagenicity

Components:

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.

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.

Carcinogenicity

Product:

Remarks: One component of this product present at levels greater than or equal to 0.1% is identified as possible human carcinogen Category 2B by IARC: titanium dioxide.
This product contains no known or suspected carcinogens listed by NTP or OSHA at or above reportable quantities.

Components:

Aluminium magnesium zinc carbonate hydroxide:

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

Zinc compounds:

Remarks: Read-across (Analogy)

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

Titanium dioxide:

Remarks: IARC: (International Agency for Research on Cancer)
Category 2B

Reproductive toxicity

Components:

Aluminium magnesium zinc carbonate hydroxide:

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

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

Zinc compounds:

Effects on fertility : Remarks: Read-across (Analogy)

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

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

STOT - single exposure

Components:

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

Zinc compounds:
Remarks: Read-across (Analogy)

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

Repeated dose toxicity

Components:

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.

Zinc compounds:
Remarks: Read-across (Analogy)

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

Aspiration toxicity

Components:

Aluminium magnesium zinc carbonate hydroxide:
Not classified due to lack of data.

Zinc compounds:

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

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Components:

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, May cause long lasting harmful effects to aquatic life.

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

Persistence and degradability

Components:

Aluminium magnesium zinc carbonate hydroxide:

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

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

Bioaccumulative potential

Components:

Aluminium magnesium zinc carbonate hydroxide:

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

Zinc compounds:

Bioaccumulation	:	Remarks: Not applicable

Mobility in soil

Components:

Aluminium magnesium zinc carbonate hydroxide:

Mobility	:	Remarks: No data available

Zinc compounds:

Mobility	:	Remarks: According to experience not expected

Other adverse effects

Components:

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.

Zinc compounds:

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. Dispose in accordance with local, state and federal 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	89.0

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

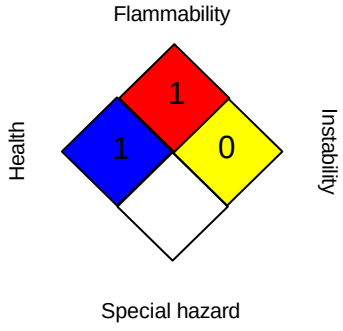
SECTION 16. OTHER INFORMATION

Full text of other abbreviations

AIIC - Australian Inventory of Industrial Chemicals; 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; TECI - Thailand Existing Chemicals 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

NFPA:



HMIS III:

HEALTH	1/
FLAMMABILITY	1
PHYSICAL HAZARD	0

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

Revision Date : 06/21/2022

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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