SECTION 1. IDENTIFICATION

Product identifier

Trade name : **BAEROSTAB CT 9169 X RF-US**

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 : 513-604-2327

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

Responsible/issuing person : Product Safety Department

Emergency telephone number (0 - 24 h)

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

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

Skin irritation : Category 2

Serious eye damage : Category 1

Skin sensitisation : Category 1

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.

Precautionary statements : **Prevention:**
P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.

P264 Wash skin thoroughly after handling.
P272 Contaminated work clothing should not be allowed out of the workplace.
P280 Wear protective gloves/ eye protection/ face protection.

Response:

P302 + P352 IF ON SKIN: Wash with plenty of soap and water.
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.
P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.
P362 Take off contaminated clothing and wash before reuse.

Disposal:

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

Other hazards

Combustible material

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Chemical nature : Mixture
Contains organic solvents.

Hazardous components

Chemical name	CAS-No.	Concentration (% w/w)
Phosphorous acid, tri-C12-15-alkyl esters	68610-62-8	≥ 50*
Triisodecyl phosphite	25448-25-3	≥ 25*
Zinc Compounds*	Trade Secret	< 20*
Alcohols, C12-15	63393-82-8	< 10*
2,6-di-tert-butyl-p-cresol	128-37-0	< 10*
Zinc Compounds*	Trade Secret	< 10*
Calcium Compounds*	Trade Secret	< 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

General advice	:	Remove and wash contaminated clothing before re-use.
If inhaled	:	Move to fresh air.
In case of skin contact	:	Wash off with soap and plenty of water. Take off contaminated clothing and shoes immediately.
In case of eye contact	:	Rinse with plenty of water.
If swallowed	:	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. Ensure adequate ventilation. Avoid contact with skin and eyes. Use personal protective equipment.
Environmental precautions	:	Do not flush into surface water or sanitary sewer system. Avoid subsoil penetration.
Methods and materials for containment and cleaning up	:	Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). 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. Provide sufficient air exchange and/or exhaust in work rooms.
Conditions for safe storage	:	Store at room temperature in the original container. Keep container tightly closed in a dry and well-ventilated place.
Technical measures/Precautions	:	Handle in accordance with good industrial hygiene and safety practice.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parame-ters / Permissible concentration	Basis
2,6-di-tert-butyl-p-cresol	128-37-0	air 8 h	2 mg/m3	ACGIH
		TWA	10 mg/m3	Z1A
		TWA	10 mg/m3	NIOSH REL

Engineering measures : Local exhaust

Personal protective equipment

Respiratory protection : In case of inadequate ventilation wear respiratory protection.
Protective mask against solvent vapours (A2 Filter)

Hand protection
Material : protective gloves acc. to EN 374, e.g. neoprene
Glove thickness : >= 0.7 mm

Eye protection : Safety glasses

Skin and body protection : Long sleeved clothing
Rubber apron

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	:	liquid
Color	:	yellowish
Odor	:	characteristic
Odor Threshold	:	No data available
pH	:	No data available
Melting point/range	:	No data available
Boiling point/boiling range	:	260 - 290 °C Value refers to the solvent.
Flash point	:	> 100 °C
Evaporation rate	:	No data available
Flammability (liquids)	:	Combustible Liquid
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	:	0.8 - 1.0 g/cm3
Solubility(ies)		
Water solubility	:	slightly 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
Refractive index	:	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	:	Vapours may form explosive mixture with air.
Conditions to avoid	:	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 inhalation toxicity	:	Acute toxicity estimate: > 200 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:

Phosphorous acid, tri-C12-15-alkyl esters:

Acute oral toxicity	:	LD50 (Rat): 47,009 mg/kg
Acute dermal toxicity	:	LD50 (Rat): 74,259 mg/kg

Triisodecyl phosphite:

Acute oral toxicity	:	LD50 (Rat): > 5,000 mg/kg
Acute inhalation toxicity	:	LC50 (Rat): > 12.6 mg/l
Acute dermal toxicity	:	LD50 (Rabbit): > 5,000 mg/kg

Zinc Compounds:

Acute oral toxicity	:	LD50: > 2,000 mg/kg Method: Acute toxicity estimate Remarks: Based on available data, the classification criteria are not met.
Acute inhalation toxicity	:	Remarks: Not classified due to lack of data.

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

Alcohols, C12-15:

Acute oral toxicity	:	LD50 (Rat): > 2,000 mg/kg Remarks: Based on available data, the classification criteria are not met.
Acute inhalation toxicity	:	LC50 (Rat): > 20 mg/l Exposure time: 1 h Remarks: Based on available data, the classification criteria are not met.
Acute dermal toxicity	:	LD50 (Rat): > 2,000 mg/kg Remarks: Based on available data, the classification criteria are not met.

2,6-di-tert-butyl-p-cresol:

Acute oral toxicity	:	LD50 (Rat): > 2,930 mg/kg Method: OECD Test Guideline 401 GLP: yes Remarks: Based on available data, the classification criteria are not met.
Acute inhalation toxicity	:	Remarks: Based on available data, the classification criteria are not met.
Acute dermal toxicity	:	LD50 (Rat): > 2,000 mg/kg Method: OECD Test Guideline 402 GLP: yes Remarks: Based on available data, the classification criteria are not met.

Zinc Compounds:

Acute oral toxicity	:	Remarks: Read-across (Analogy) LD50 (Rat): > 2,000 mg/kg Remarks: Based on available data, the classification criteria are not met.
Acute inhalation toxicity	:	Remarks: Read-across (Analogy) LC50 (Rat): > 5 mg/l Exposure time: 4 h Test atmosphere: dust/mist Remarks: Based on available data, the classification criteria are not met.

Acute dermal toxicity	:	Remarks: Read-across (Analogy) LD50 (Rabbit): > Remarks: Based on available data, the classification criteria are not met.

Calcium Compounds:

Acute oral toxicity	:	Remarks: Read-across (Analogy) (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	:	Remarks: Not classified due to lack of data.
Acute dermal toxicity	:	Remarks: Read-across (Analogy) LD50 (Rat): > 2,000 mg/kg Method: OECD Test Guideline 402 Remarks: Based on available data, the classification criteria are not met.

Skin corrosion/irritation

Components:

Phosphorous acid, tri-C12-15-alkyl esters:

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

Triisodecyl phosphite:

Remarks: Causes skin irritation.

Zinc Compounds:

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

Alcohols, C12-15:

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

2,6-di-tert-butyl-p-cresol:

Species: Rabbit
Exposure time: 24 h
Result: slight irritation

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

Zinc Compounds:

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

Calcium Compounds:

Species: reconstructed human epidermis (RhE)
Method: OECD Test Guideline 439
Result: Causes skin irritation.
GLP: yes

Species: In Vitro Membrane Barrier Test Method for Skin Corrosion - CORROSITEX
Method: OECD Test Guideline 435
Result: No corrosion
GLP: yes

Serious eye damage/eye irritation

Components:

Phosphorous acid, tri-C12-15-alkyl esters:

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

Triisodecyl phosphite:

Remarks: Causes serious eye irritation.

Zinc Compounds:

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

Alcohols, C12-15:

Result: Causes serious eye irritation.

2,6-di-tert-butyl-p-cresol:

Species: Rabbit
Result: slight irritation
Exposure time: 72 h
Remarks: Based on available data, the classification criteria are not met.

Zinc Compounds:

Species: Rabbit

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

Calcium Compounds:

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

Respiratory or skin sensitisation

Components:

Phosphorous acid, tri-C12-15-alkyl esters:

Remarks: May cause an allergic skin reaction.

Triisodecyl phosphite:

Remarks: May cause an allergic skin reaction.

Zinc Compounds:

Remarks: Skin sensitisation

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

Remarks: Respiratory sensitisation

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

Alcohols, C12-15:

Remarks: No data available

2,6-di-tert-butyl-p-cresol:

Remarks: Skin sensitisation

Test Type: Patch Test 24 Hrs.
Species: Humans
Method: standardised international/national methodology
Result: negative
Remarks: Based on available data, the classification criteria are not met.

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

Zinc Compounds:

Remarks: Skin sensitisation
Read-across (Analogy)

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

Remarks: Respiratory sensitisation

Remarks: Not classified due to lack of data.

Calcium Compounds:

Remarks: Skin sensitisation

Remarks: Read-across (Analogy)

Test Type: Maximisation Test
Species: Guinea pig
Method: OECD Test Guideline 406
Result: negative
GLP: yes
Remarks: Based on available data, the classification criteria are not met.

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

Germ cell mutagenicity

Components:

Phosphorous acid, tri-C12-15-alkyl esters:

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

Triisodecyl phosphite:

Germ cell mutagenicity - Assessment	:	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

Zinc Compounds:

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

Alcohols, C12-15:

Genotoxicity in vitro	:	Remarks: No data available

2,6-di-tert-butyl-p-cresol:

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

GLP: no

: Test Type: Mutagenicity (in vitro mammalian cytogenetic test)
Species: Chinese hamster ovary cells
Result: negative
GLP: no

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

: Test Type: In vitro gene mutation study in mammalian cells
Species: Liver cells (rat)
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
Result: negative
GLP: no

Test Type: Mutagenicity (in vivo mammalian bone-marrow cytogenetic test, chromosomal analysis)
Species: Rat
Application Route: Oral
Exposure time: 9 months
Result: negative
GLP: no
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.

Calcium Compounds:

Genotoxicity in vitro : Remarks: Read-across (Analogy)

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

: Remarks: Read-across (Analogy)

: Test Type: In vitro mammalian cell gene mutation test
Species: mouse lymphoma cells
Method: OECD Test Guideline 476
Result: negative
GLP: yes

: Remarks: Read-across (Analogy)

: Test Type: Mutagenicity (in vitro mammalian cytogenetic test)
Species: Human lymphocytes
Method: OECD Test Guideline 473
Result: negative
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:

Phosphorous acid, tri-C12-15-alkyl esters:

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

Triisodecyl phosphite:

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

Zinc Compounds:

Remarks: Not classified due to lack of data.

Alcohols, C12-15:

Remarks: No data available

2,6-di-tert-butyl-p-cresol:

Species: Rat
Application Route: Oral
Method: standardised international/national methodology
GLP: yes
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.

Calcium Compounds:

Remarks: No data available

Reproductive toxicity

Components:

Phosphorous acid, tri-C12-15-alkyl esters:

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

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.

Alcohols, C12-15:

Effects on fertility :

Remarks: No data available

2,6-di-tert-butyl-p-cresol:

Effects on fertility :

Species: Rat
Application Route: Oral
Test period: 22 months

Method: standardised international/national methodology
GLP: yes
Remarks: Based on available data, the classification criteria are not met.

Effects on foetal development : Species: Rat
Application Route: Oral
Test period: 22 months
Method: standardised international/national methodology
GLP: yes
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.
Effects on foetal development	:	Remarks: Read-across (Analogy) Remarks: Based on available data, the classification criteria are not met.

Calcium Compounds:

Effects on fertility	:	Remarks: Read-across (Analogy) Test Type: Three-generation study Species: Rat Application Route: Oral NOAEL: > 75 mg/kg, Method: OECD Test Guideline 416 Remarks: Based on available data, the classification criteria are not met.
Effects on foetal development	:	Remarks: Read-across (Analogy) Species: Rat Application Route: Oral >75 mg/kg Method: OECD Test Guideline 416 GLP: yes Remarks: Based on available data, the classification criteria are not met.

STOT - single exposure

Components:

Phosphorous acid, tri-C12-15-alkyl esters:
Remarks: Based on available data, the classification criteria are not met.

Triisodecyl phosphite:
Remarks: Not classified

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

2,6-di-tert-butyl-p-cresol:
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.

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

STOT - repeated exposure

Components:

Triisodecyl phosphite:
Remarks: Not classified

Repeated dose toxicity

Components:

Phosphorous acid, tri-C12-15-alkyl esters:
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.

Alcohols, C12-15:
Remarks: No data available

2,6-di-tert-butyl-p-cresol:
Species: Rat
Application Route: Oral
Method: standardised international/national methodology
GLP: yes
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.

Calcium Compounds:
Remarks: Read-across (Analogy)

Species: Rat
NOAEL: 300 mg/kg
Application Route: Oral

Exposure time: 28 d

Remarks: Read-across (Analogy)

Aspiration toxicity

Components:

Triisodecyl phosphite:
No data available

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

Alcohols, C12-15:
No data available

2,6-di-tert-butyl-p-cresol:
Based on available data, the classification criteria are not met.

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

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

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Components:

Phosphorous acid, tri-C12-15-alkyl esters:

Toxicity to fish	:	LD50: 2,888 mg/l Exposure time: 96 h
Toxicity to daphnia and other aquatic invertebrates	:	EC50: 3,778 mg/l Exposure time: 48 h

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.

Zinc Compounds:

Toxicity to algae	:	EC50 (Pseudokirchneriella subcapitata (green algae)): 1.69

mg/l
Exposure time: 72 h
Test Type: static test
Method: OECD Test Guideline 201
GLP: yes

NOEC (Pseudokirchneriella subcapitata (green algae)): < 1.78 mg/l
Exposure time: 72 h
Test Type: static test
Method: OECD Test Guideline 201
GLP: yes

Ecotoxicology Assessment

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

Alcohols, C12-15:

Toxicity to fish	:	EC50 (Fish): < 1 mg/l
Toxicity to daphnia and other aquatic invertebrates	:	Remarks: No data available
Toxicity to algae	:	EC50 (algae): < 1 mg/l
Toxicity to bacteria	:	Remarks: No data available

Ecotoxicology Assessment

Acute aquatic toxicity	:	Very toxic to aquatic life.
Chronic aquatic toxicity	:	Based on available data, the classification criteria are not met.

2,6-di-tert-butyl-p-cresol:

Toxicity to fish	:	LC0 (Danio rerio (zebra fish)): >= 0.57 mg/l Exposure time: 96 h Test Type: semi-static test Method: Directive 67/548/EEC, Annex V, C.1. GLP: yes
Toxicity to daphnia and other aquatic invertebrates	:	NOEC (Daphnia magna (Water flea)): 0.15 - 0.23 mg/l Exposure time: 48 h Test Type: static test Method: OECD Test Guideline 202 GLP: yes
Toxicity to algae	:	EC50 (Desmodesmus subspicatus (green algae)): > 0.4 mg/l Exposure time: 72 h Test Type: static test Method: Directive 67/548/EEC, Annex V, C.3. GLP: yes

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	EC50 (Daphnia magna (Water flea)): 0.39 mg/l Exposure time: 21 d Test Type: semi-static test Method: standardised international/national methodology GLP: yes NOEC (Daphnia magna (Water flea)): 0.316 mg/l Exposure time: 21 d Test Type: semi-static test Method: standardised international/national methodology GLP: yes
Toxicity to bacteria	:	EC50 (activated sludge): > 10,000 mg/l Exposure time: 3 h Test Type: Respiration inhibition Method: standardised international/national methodology GLP: yes

Zinc Compounds:

Toxicity to algae	:	EC50 (Pseudokirchneriella subcapitata (algae)): 0.199 mg/l Exposure time: 72 h Test Type: static test Method: OECD Test Guideline 201 GLP: yes (Pseudokirchneriella subcapitata (algae)): 0.065 mg/l Exposure time: 72 h Test Type: static test Method: OECD Test Guideline 201 GLP: yes
M-Factor (Acute aquatic toxicity)	:	1
M-Factor (Chronic aquatic toxicity)	:	1

Ecotoxicology Assessment

Acute aquatic toxicity	:	Very toxic to aquatic life.
Chronic aquatic toxicity	:	Toxic to aquatic life with long lasting effects.

Calcium Compounds:

Toxicity to fish	:	Remarks: Read-across (Analogy) LL50 (Oncorhynchus mykiss (rainbow trout)): > 100 mg/l Exposure time: 96 h Test Type: semi-static test Method: OECD Test Guideline 203 GLP: yes LL50 (Oncorhynchus mykiss (rainbow trout)): < 300 mg/l Exposure time: 96 h

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

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

EL50 (Daphnia magna (Water flea)): > 457 mg/l
Exposure time: 48 h
Test Type: static test
Method: OECD Test Guideline 202
GLP: yes

Toxicity to algae : Remarks: Read-across (Analogy)

EC50 (Pseudokirchneriella subcapitata (algae)): > 100 mg/l
Exposure time: 72 h
Test Type: static test
Method: OECD Test Guideline 201
GLP: yes

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

Chronic Toxicity Value (Fish): 1.6 mg/l
Exposure time: 30 d
Method: QSAR

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

Chronic Toxicity Value (Daphnia magna (Water flea)): 1.7 mg/l
Method: QSAR

Toxicity to bacteria : GLP:
Remarks: Read-across (Analogy)

EC50 (Escherichia coli): 52.5 mg/l
Method: QSAR
GLP:

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:

Phosphorous acid, tri-C12-15-alkyl esters:

Biodegradability : Remarks: No data available

Zinc Compounds:

Biodegradability	:	Remarks: Read-across (Analogy) Result: Not readily biodegradable.

Alcohols, C12-15:

Biodegradability	:	Remarks: No data available
Physico-chemical removability	:	Remarks: The product is slightly soluble in water. It can be largely eliminated from the water by abiotic processes, e. g. mechanical separation.

2,6-di-tert-butyl-p-cresol:

Biodegradability	:	aerobic Inoculum: activated sludge Result: Readily biodegradable. Exposure time: 112 d Method: OECD Test Guideline 301 GLP: no aerobic Inoculum: activated sludge Biochemical oxygen demand Result: Partially biodegradable. Exposure time: 28 d Method: OECD Test Guideline 301 aerobic Inoculum: Soil Result: Biodegradable Exposure time: 24 d Method: OECD Test Guideline 304A GLP: no Remarks: According to the results of tests of biodegradability this product is considered as being readily biodegradable.

Zinc Compounds:

Biodegradability	:	Remarks: Read-across (Analogy) Remarks: Readily biodegradable.

Calcium Compounds:

Biodegradability	:	Remarks: Read-across (Analogy) aerobic Inoculum: activated sludge Result: Not readily biodegradable. Biodegradation: 11 % Exposure time: 28 d Method: OECD Test Guideline 301F

Bioaccumulative potential

Components:

Phosphorous acid, tri-C12-15-alkyl esters:

Bioaccumulation : Remarks: No data available

Triisodecyl phosphite:

Bioaccumulation : Remarks: No data available

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

Zinc Compounds:

Bioaccumulation : Remarks: Read-across (Analogy)

Remarks: This substance is not considered to be bioaccumulating.

Partition coefficient: n-octanol/water : Remarks: Not applicable

Alcohols, C12-15:

Bioaccumulation : Remarks: No data available

2,6-di-tert-butyl-p-cresol:

Bioaccumulation : Species: Cyprinus carpio (Carp)
Bioconcentration factor (BCF): 330 - 1,800
Exposure time: 28 d
Temperature: 25 °C
Concentration: 0.005 mg/l
Method: standardised international/national methodology

Species: Cyprinus carpio (Carp)
Bioconcentration factor (BCF): 230 - 2,500
Exposure time: 56 d
Temperature: 25 °C
Concentration: 0.05 mg/l
Method: standardised international/national methodology

Partition coefficient: n-octanol/water : log Pow: 5

Zinc Compounds:

Bioaccumulation : Remarks: Bioaccumulation is unlikely.

Calcium Compounds:

Bioaccumulation : Remarks: Read-across (Analogy)

Species: Oncorhynchus mykiss (rainbow trout)
Bioconcentration factor (BCF): 225
Exposure time: 14 d

Method: OECD Test Guideline 305
GLP: yes

Mobility in soil

Components:

Triisodecyl phosphite:
Mobility : Remarks: No data available

Zinc Compounds:
Mobility : Remarks: Not applicable

Alcohols, C12-15:
Mobility : Remarks: No data available

2,6-di-tert-butyl-p-cresol:
Mobility : Remarks: After release, disperses into the air.

Zinc Compounds:
Mobility : Remarks: No data available

Calcium Compounds:
Mobility : Remarks: No data available

Other adverse effects

Components:

Phosphorous acid, tri-C12-15-alkyl esters:
Results of PBT and vPvB assessment : Based on available data, the classification criteria are not met.
Endocrine disrupting potential : No information available.

Triisodecyl phosphite:
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.

Alcohols, C12-15:
Results of PBT and vPvB assessment : Based on available data, the classification criteria are not met.

Endocrine disrupting potential	:	No information available.

2,6-di-tert-butyl-p-cresol:

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.

Calcium 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

UN/ID No.	:	UN 3082
Proper shipping name	:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (2,6-di-tert-butyl-p-cresol, solution)
Class	:	9
Packing group	:	III
Labels	:	Miscellaneous

IMDG-Code

UN number	:	UN 3082

Proper shipping name	:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (2,6-di-tert-butyl-p-cresol, solution)
Class	:	9
Packing group	:	III
Labels	:	9
EmS Code	:	F-A, S-F
Marine pollutant	:	yes

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	8.3

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

EINECS	listed
TSCA	listed
DSL	listed
AICS	listed
ECL	listed
CHINA	listed
ENCS	listed

SECTION 16. OTHER INFORMATION

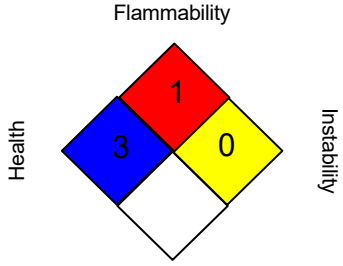
Full text of other abbreviations

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

NFPA:



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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