SECTION 1. IDENTIFICATION

Product identifier

Trade name : **B 2525**

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

Serious eye damage : Category 1

Skin sensitisation : Category 1

Reproductive toxicity : Category 2

GHS label elements

Hazard pictograms :

Signal word : Danger

Hazard statements : H317 May cause an allergic skin reaction.
H318 Causes serious eye damage.
H361d Suspected of damaging the unborn child.

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 mist or vapours.
P272 Contaminated work clothing must 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.
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.
P363 Wash contaminated clothing before reuse.

Storage:

P405 Store locked up.

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)
Triisotridecyl phosphite	77745-66-5	> 20*
Calcium Compounds*	Trade Secret	< 20*
White mineral oil (petroleum)	8042-47-5	< 10*
Zinc Compounds*	Trade Secret	< 20*
1,3-diphenylpropane-1,3-dione	120-46-7	< 10*
Zinc Compounds*	Trade Secret	< 20*

*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 immediately with plenty of water, also under the eyelids.
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
White mineral oil (petroleum)	8042-47-5	air 8 h	5 mg/m3	ACGIH
		TWA	5 mg/m3	NIOSH REL
		STEL	10 mg/m3	NIOSH REL
		PEL	5 mg/m3	OSHA Z-1
Particulates Not Otherwise Regulated (PNOR) Respirable fraction		PEL	5 mg/m3	OSHA
		TWA	3 mg/m3	ACGIH TLV

Engineering measures : Local exhaust

Personal protective equipment

Respiratory protection : Up to 0.5 mg/m3: (APF=10) Any air-purifying respirator with a high-efficiency particulate filter/(APF=10) Any air-supplied respirator

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

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. 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	:	liquid
Color	:	yellowish
Odor	:	characteristic
Odor Threshold	:	No data available
pH	:	No data available
Melting point/range	:	No data available
Boiling point/boiling range	:	218 - 800 °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	:	0.1 hPa (20 °C) Value refers to the solvent.
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	:	325 - 355 °C Value refers to the solvent.
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

Information on likely routes of exposure

Inhalation
Skin contact
Ingestion

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:

triisotridecyl phosphite:

Acute oral toxicity	:	LD50 (Rat): > 2,000 mg/kg Method: OECD Test Guideline 425 GLP: yes Assessment: The substance or mixture has no acute oral toxicity

Acute inhalation toxicity	:	Remarks: Read-across (Analogy) LC50 (Rat): > 12.6 mg/l Exposure time: 1 h Test atmosphere: dust/mist Method: OECD Test Guideline 403 GLP: yes LC50 (Rat): > 3.15 mg/l Exposure time: 4 h Test atmosphere: dust/mist Method: Calculation method Assessment: The substance or mixture has no acute inhalation toxicity
Acute dermal toxicity	:	Remarks: Read-across (Analogy) LD50 (Rabbit): > 5,000 mg/kg Method: OECD Test Guideline 402 GLP: yes Assessment: The substance or mixture has no acute dermal toxicity

Calcium Compounds:

Acute oral toxicity	:	LD50 (Rat): > 5,000 mg/kg Method: standardised international/national methodology Remarks: Based on available data, the classification criteria are not met.
Acute inhalation toxicity	:	LC50 (Rat): > 4.8 mg/l Exposure time: 1 h Test atmosphere: dust/mist Remarks: Based on available data, the classification criteria are not met.
Acute dermal toxicity	:	LD50 (Rabbit): > 5,000 mg/kg Method: standardised international/national methodology Remarks: Based on available data, the classification criteria are not met.

White mineral oil (petroleum):

Acute oral toxicity	:	LD50 (Rat): > 5,000 mg/kg Method: OECD Test Guideline 401 GLP: yes Remarks: Based on available data, the classification criteria are not met.
Acute inhalation toxicity	:	LC50 (Rat): > 5 mg/l Exposure time: 4 h Test atmosphere: dust/mist Method: OECD Test Guideline 403 GLP: yes

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

Acute dermal toxicity : LD50 (Rabbit): > 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: Not classified due to lack of data.

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

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

1,3-diphenylpropane-1,3-dione:

Acute oral toxicity : LD50 (Rat): > 2,000 mg/kg
Method: OECD Test Guideline 423
GLP: yes
Assessment: The substance or mixture has no acute oral toxicity

Acute inhalation toxicity : Remarks: study scientifically unjustified

Acute dermal toxicity : LD50 (Rat): > 2,000 mg/kg
Method: OECD Test Guideline 402
GLP: yes
Assessment: The substance or mixture has no acute dermal toxicity

Zinc Compounds:

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

LD50 (Rat): > 2,000 mg/kg
Method: Acute toxicity estimate

LD50 (Rat): < 2,250 mg/kg
Method: Acute toxicity estimate
Assessment: The component/mixture is minimally toxic after single ingestion.

Acute inhalation toxicity : LC50 (Rat): > 5.07 mg/l

Exposure time: 4 h
Test atmosphere: dust/mist
Method: OECD Test Guideline 436
GLP: yes
Assessment: The substance or mixture has no acute inhalation toxicity

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

LD50 (Rabbit): > 2,000 mg/kg
Assessment: The substance or mixture has no acute dermal toxicity

Skin corrosion/irritation

Components:

triisotridecyl phosphite:

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

Calcium Compounds:

Remarks: Read-across (Analogy)

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

White mineral oil (petroleum):

Species: Rabbit
Exposure time: 24 h
Method: OECD Test Guideline 404
Result: No skin irritation
GLP: yes
Remarks: Based on available data, the classification criteria are not met.

Zinc Compounds:

Remarks: Read-across (Analogy)

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

1,3-diphenylpropane-1,3-dione:

Species: reconstructed human epidermis (RhE)
Method: OECD Test Guideline 439
Result: No skin irritation
GLP: yes
Remarks: Based on available data, the classification criteria are not met.

Zinc Compounds:

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

Serious eye damage/eye irritation

Components:

triisotridecyl phosphite:

Species: Rabbit
Result: No eye irritation
Method: OECD Test Guideline 405
GLP: yes
Remarks: Based on available data, the classification criteria are not met.

Calcium Compounds:

Remarks: Read-across (Analogy)

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

White mineral oil (petroleum):

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

Zinc Compounds:

Remarks: Read-across (Analogy)

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

1,3-diphenylpropane-1,3-dione:

Species: Rabbit
Result: No eye irritation
Method: OECD Test Guideline 405
Remarks: Based on available data, the classification criteria are not met.

Zinc Compounds:

Species: Rabbit
Result: Irreversible effects on the eye
Method: OECD Test Guideline 405
GLP: yes

Respiratory or skin sensitisation

Components:

triisotridecyl phosphite:

Remarks: Skin sensitisation

Test Type: Local lymph node assay (LLNA)
Species: Mouse
Method: OECD Test Guideline 429
Result: May cause sensitisation by skin contact.
GLP: yes

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

Calcium Compounds:

Remarks: Skin sensitisation
Read-across (Analogy)

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

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

White mineral oil (petroleum):

Remarks: Skin sensitisation

Test Type: Buehler Test
Species: Guinea pig
Method: OECD Test Guideline 406
Result: Does not cause skin sensitisation.
GLP: yes
Remarks: Based on available data, the classification criteria are not met.

Remarks: Respiratory sensitisation

Remarks: Not classified due to lack of data.

Zinc Compounds:

Remarks: Skin sensitisation

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

Remarks: Respiratory sensitisation

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

1,3-diphenylpropane-1,3-dione:

Remarks: Skin sensitisation

Test Type: Local lymph node assay (LLNA)
Species: Mouse
Method: OECD Test Guideline 429
Result: May cause sensitisation by skin contact.
GLP: yes

Remarks: Respiratory sensitisation

Remarks: Not classified due to lack of data.

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.

Germ cell mutagenicity

Components:

triisotridecyl phosphite:

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

: Test Type: DNA repair-suspension assay

Species: Bacteria
Method: No information available.
Result: negative
GLP: yes

: Test Type: In vitro gene mutation study in mammalian cells
Species: Chinese hamster ovary cells
Method: OECD Test Guideline 476
Result: negative
GLP: yes

Genotoxicity in vivo : Test Type: In vivo micronucleus test
Species: Mouse
Application Route: Oral
Method: OECD Test Guideline 474
Result: negative
GLP: yes
Remarks: Based on available data, the classification criteria are not met.

Calcium Compounds:

Genotoxicity in vitro : Test Type: Ames test
Species: Bacteria
Method: standardised international/national methodology
Result: negative
GLP: no
Remarks: Based on available data, the classification criteria are not met.

White mineral oil (petroleum):

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

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

: Remarks: Read-across (Analogy)

: Test Type: Mutagenicity (in vitro mammalian cytogenetic test)
Species: Chinese hamster ovary cells
Method: OECD Test Guideline 473
Result: negative
GLP: yes
Remarks: Based on available data, the classification criteria are not met.

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

Test Type: In vivo micronucleus test
Species: Mouse
Application Route: intraperitoneally
Method: OECD Test Guideline 474
Result: negative
Remarks: Based on available data, the classification criteria are not met.

Zinc Compounds:

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

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

1,3-diphenylpropane-1,3-dione:

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

Genotoxicity in vivo : Test Type: comet assay
Species: Rat
Application Route: Oral
Method: OECD Test Guideline 489
Result: negative
GLP: yes
Remarks: Based on available data, the classification criteria are not met.

Zinc Compounds:

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

: Test Type: Mutagenicity (Salmonella typhimurium - reverse mutation assay)
Result: negative

: Remarks: Read-across (Analogy)

: Test Type: Chromosome aberration test in vitro
Result: negative

: Remarks: Read-across (Analogy)

: Test Type: In vitro gene mutation study in mammalian cells
Result: negative

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

Test Type: Cytogenetic assay
Result: negative
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:

triisotridecyl phosphite:

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

Calcium Compounds:

Remarks: Not classified due to lack of data.

White mineral oil (petroleum):

Species: Mouse
Application Route: Dermal
Method: OECD Test Guideline 453

Species: Rat
Application Route: Oral
Method: OECD Test Guideline 453
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.

1,3-diphenylpropane-1,3-dione:

Remarks: Not classified due to lack of data.

Zinc Compounds:

Remarks: Read-across (Analogy)

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

Reproductive toxicity

Components:

triisotridecyl phosphite:

Effects on fertility : Test Type: Screening for reproductive/developmental toxicity
Species: Rat
Application Route: Oral
General Toxicity - Parent: NOAEL: 1,000 mg/kg body weight
Fertility: NOAEL Mating/Fertility: 1,000 mg/kg body weight
Early Embryonic Development: NOAEL: 1,000 mg/kg body weight
Method: OECD Test Guideline 422
GLP: yes
Remarks: Based on available data, the classification criteria are not met.

Effects on foetal development : Species: Rat
Application Route: Oral
General Toxicity Maternal: NOAEL: 1,000 mg/kg body weight
Teratogenicity: NOAEL: 1,000 mg/kg body weight
Embryo-foetal toxicity: NOAEL: 1,000 mg/kg body weight
Method: OECD Test Guideline 414
GLP: yes
Remarks: Based on available data, the classification criteria are not met.

Calcium Compounds:

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

Remarks: Suspected of damaging the unborn child.

Remarks: Read-across (Analogy)

Test Type: Reproduction Test
Species: Rat
Application Route: Oral

GLP: no

Effects on foetal development : Remarks: Read-across (Analogy)
Species: Rat
Application Route: Oral
Method: standardised international/national methodology

GLP: yes
Remarks: Read-across (Analogy)
Species: Rabbit
Application Route: Oral
Method: standardised international/national methodology
GLP: yes

White mineral oil (petroleum):

Effects on fertility : Test Type: Screening for reproductive/developmental toxicity
Species: Rat
Application Route: Dermal
General Toxicity - Parent: >= 1,000
Method: OECD Test Guideline 421

Test Type: One-generation reproduction toxicity test
Species: Rat
Application Route: Dermal
General Toxicity - Parent: >= 2,000
Method: OECD Test Guideline 415
Remarks: Based on available data, the classification criteria are not met.

Test Type: Screening for reproductive/developmental toxicity
Species: Rat
Application Route: Dermal
NOAEL: >= 1,000 mg/kg,
Method: OECD Test Guideline 421

Test Type: One-generation reproduction toxicity test
Species: Rat
Application Route: Dermal
NOAEL: >= 2,000 mg/kg,
Method: OECD Test Guideline 415
Remarks: Based on available data, the classification criteria are not met.

Effects on foetal development : Species: Rat
Application Route: Oral
Teratogenicity: > 5,000
Method: OECD Test Guideline 414
Remarks: Based on available data, the classification criteria are not met.
Species: Rat
Application Route: Oral
> 5,000 mg/kg
Method: OECD Test Guideline 414
Remarks: Based on available data, the classification criteria are not met.

Zinc Compounds:

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

Remarks: Suspected of damaging the unborn child.

Remarks: Read-across (Analogy)

Remarks: Suspected of damaging the unborn child.

1,3-diphenylpropane-1,3-dione:

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

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.

STOT - single exposure

Components:

triisotridecyl phosphite:

Assessment: The substance or mixture is not classified as specific target organ toxicant, single exposure.

Calcium Compounds:

Remarks: Not classified due to lack of data.

Zinc Compounds:

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

1,3-diphenylpropane-1,3-dione:

Remarks: Not classified due to lack of data.

Zinc Compounds:

Assessment: The substance or mixture is not classified as specific target organ toxicant, single exposure.

STOT - repeated exposure

Components:

triisotridecyl phosphite:
Assessment: The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

Calcium Compounds:
Remarks: Not classified due to lack of data.

1,3-diphenylpropane-1,3-dione:
Assessment: The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

Zinc Compounds:
Assessment: The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

Repeated dose toxicity

Components:

triisotridecyl phosphite:
Species: Rat
NOAEL: 125 mg/kg
Application Route: Oral
Exposure time: 90 d
Method: OECD Test Guideline 408
GLP: yes

White mineral oil (petroleum):
Species: Rat
NOAEL: >= 1,200 mg/kg
Application Route: Oral
Method: OECD Test Guideline 453
GLP: yes

Species: Rat
Application Route: Inhalation
Method: OECD Test Guideline 412

Species: Rat
NOAEL: >= 2,000 mg/kg
Application Route: Dermal
Method: OECD Test Guideline 411
GLP: yes
Remarks: Based on available data, the classification criteria are not met.

Zinc Compounds:

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

1,3-diphenylpropane-1,3-dione:

Species: Rat
NOAEL: 62.5 mg/kg
Application Route: Oral
Exposure time: 90 d
Method: OECD Test Guideline 408
GLP: yes

Zinc Compounds:

Remarks: Read-across (Analogy)

Species: Humans
NOAEL: 0.83 mg Zn/kg
Application Route: Oral

Remarks: Read-across (Analogy)

Species: Rat
NOAEL: 1000 mg carboxylic acid moiety/kg
Application Route: Oral
Exposure time: 18-24 months

Aspiration toxicity

Components:

triisotridecyl phosphite:

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

Calcium Compounds:

Not classified due to lack of data.

White mineral oil (petroleum):

May be fatal if swallowed and enters airways.

Zinc Compounds:

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

1,3-diphenylpropane-1,3-dione:

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:

triisotridecyl phosphite:

Toxicity to fish	:	Remarks: study scientifically unjustified
Toxicity to daphnia and other aquatic invertebrates	:	Remarks: study scientifically unjustified
Toxicity to algae	:	Remarks: study scientifically unjustified
Toxicity to fish (Chronic toxicity)	:	Remarks: study technically not feasible
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	Remarks: study technically not feasible
Toxicity to bacteria	:	Remarks: study scientifically unjustified

Ecotoxicology Assessment

Acute aquatic toxicity	:	This product has no known ecotoxicological effects.
Chronic aquatic toxicity	:	May cause long lasting harmful effects to aquatic life.

Calcium Compounds:

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.

White mineral oil (petroleum):

Toxicity to fish	:	LL50 (Oncorhynchus mykiss (rainbow trout)): > 100 mg/l Exposure time: 96 h Test Type: static test Method: OECD Test Guideline 203 Remarks: Value refered to the Water accumulated fraction (WAF).
Toxicity to daphnia and other aquatic invertebrates	:	LL50 (Daphnia magna (Water flea)): >= 100 mg/l Exposure time: 48 h Test Type: static test Method: OECD Test Guideline 202 Remarks: Value refered to the Water accumulated fraction (WAF).
Toxicity to algae	:	NOEL (Pseudokirchneriella subcapitata (green algae)): >= 100 mg/l Exposure time: 72 h Test Type: static test

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

Toxicity to fish (Chronic toxicity) : NOEL (Oncorhynchus mykiss (rainbow trout)): >= 1,000 mg/l
Exposure time: 28 d
Method: QSAR

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

NOEL (Daphnia magna (Water flea)): 10 mg/l
Exposure time: 21 d
Test Type: semi-static test
Method: OECD Test Guideline 211
GLP: yes
Remarks: Value refered to the Water accumulated fraction (WAF).

Toxicity to bacteria : LOEL (lowest observed effect level) (Bacteria): Exposure time: 93 d
Method: standardised international/national methodology

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 fish : Remarks: Read-across (Analogy)

EC50 (Fish): >= 0.169 mg/l
Exposure time: 48 h
Remarks: Zinc

EC50 (Fish): <= 0.78 mg/l
Exposure time: 48 h
Remarks: Zinc

LC50 (Oryzias latipes): > 100 mg/l
Exposure time: 96 h
Remarks: Carboxylic acid

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

EC50 (Ceriodaphnia dubia (water flea)): >= 0.147 mg/l
Exposure time: 48 h
Remarks: Zinc

EC50 (Daphnia magna (Water flea)): 85.4 mg/l
Exposure time: 48 h
Remarks: Carboxylic acid

Toxicity to algae	:	Remarks: Read-across (Analogy) IC50 (Selenastrum capricornutum (green algae)): 0.136 mg/l Remarks: Zinc NOEC (Pseudokirchneriella subcapitata (green algae)): 0.019 mg/l Remarks: Zinc NOEC (Marine species): >= 0.0078 mg/l Remarks: Zinc NOEC (Marine species): <= 0.67 mg/l Remarks: Zinc EC50 (Desmodesmus subspicatus (green algae)): 49.3 mg/l Remarks: Carboxylic acid
M-Factor (Acute aquatic toxicity)	:	1
Toxicity to fish (Chronic toxicity)	:	Remarks: Read-across (Analogy) NOEC (Fish): >= 0.044 mg/l Test Type: Fresh water Remarks: Zinc NOEC (Fish): <= 0.530 mg/l Test Type: Fresh water Remarks: Zinc NOEC (Fish): 0.025 mg/l Test Type: Marine water Remarks: Zinc Chronic Toxicity Value (Fish): 17.7 mg/l Test Type: Fresh water Method: QSAR Remarks: Carboxylic acid Chronic Toxicity Value (Fish): 40.2 mg/l Test Type: Marine water Method: QSAR Remarks: Carboxylic acid
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	Remarks: Read-across (Analogy) NOEC: >= 0.014 mg/l Test Type: Fresh water Remarks: Zinc NOEC: <= 0.4 mg/l Test Type: Fresh water

Remarks: Zinc

NOEC: >= 0.0056 mg/l
Test Type: Marine water
Remarks: Zinc

NOEC: <= 0.9 mg/l
Test Type: Marine water
Remarks: Zinc

NOEC: 18 mg/l
Test Type: Fresh water
Remarks: Carboxylic acid

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

NOEC (activated sludge): 0.1 mg/l
Exposure time: 4 h
Test Type: static test
Remarks: Zinc

EC50 (Pseudomonas putida): 112.1 mg/l
Exposure time: 17 h
Test Type: static test
Remarks: Carboxylic acid

Ecotoxicology Assessment

Acute aquatic toxicity : Very toxic to aquatic life.

Chronic aquatic toxicity : Harmful to aquatic life with long lasting effects.

1,3-diphenylpropane-1,3-dione:

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 : EC50: 2.68 mg/l
Exposure time: 96 h
Method: QSAR

Toxicity to fish (Chronic toxicity) : Chronic Toxicity Value: 0.552 mg/l
Exposure time: 30 d
Method: QSAR

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : Chronic Toxicity Value: 0.309 mg/l
Exposure time: 21 d
Method: QSAR

Toxicity to bacteria : Remarks: study scientifically unjustified

Ecotoxicology Assessment

Acute aquatic toxicity : This product has no known ecotoxicological effects.

Chronic aquatic toxicity : This product has no known ecotoxicological effects.

Zinc Compounds:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 0,169
Exposure time: 96 h
Test Type: static test
Method: standardised international/national methodology

LC50 (Pimephales promelas (fathead minnow)): 0,330 - 0,780
Exposure time: 96 h

LC50 (Lepomis macrochirus (Bluegill sunfish)): 44,6
Exposure time: 96 h
Test Type: static test
Method: standardised international/national methodology

(Oncorhynchus mykiss (rainbow trout)): 47,3
Test Type: static test
Method: standardised international/national methodology

Toxicity to daphnia and other aquatic invertebrates : LC50 (Ceriodaphnia dubia (water flea)): 0,147 - > 0,53
Exposure time: 48 h
Method: standardised international/national methodology

LC50 (Daphnia magna (Water flea)): >100
Exposure time: 48 h
Method: standardised international/national methodology

Toxicity to algae : EC50 (Raphidocelis subcapitata (freshwater green alga)): 0.199 mg/l
Exposure time: 72 h
Test Type: static test
Method: OECD Test Guideline 201
GLP: yes

M-Factor (Acute aquatic toxicity) : 1

Toxicity to fish (Chronic toxicity) : NOEC: 0,044 - 0,530
Test Type: Fresh water

NOEC: 0,025
Test Type: Marine water

NOEC (Oncorhynchus mykiss (rainbow trout)): > 120
Exposure time: 28 d
Test Type: semi-static test
Method: OECD Test Guideline 204

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	NOEC: 0,037 - 0,400 Test Type: Fresh water NOEC: 0,0056 - 0,9 Test Type: Marine water NOEC (Daphnia magna (Water flea)): > 25 Exposure time: 21 d Test Type: semi-static test Method: OECD Test Guideline 211
M-Factor (Chronic aquatic toxicity)	:	1
Toxicity to bacteria	:	EC50 (activated sludge): 5,2 Exposure time: 3 h Test Type: static test Method: OECD Test Guideline 209 GLP: IC50 (activated sludge): > 1000 Exposure time: 3 h Test Type: static test Method: OECD Test Guideline 209 GLP:

Ecotoxicology Assessment

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

Persistence and degradability

Components:

triisotridecyl phosphite:

Biodegradability	:	aerobic Inoculum: activated sludge Result: Inherently biodegradable. Biodegradation: 63 % Exposure time: 42 d Method: OECD Test Guideline 301D GLP: yes

Calcium Compounds:

Biodegradability	:	Remarks: The methods for determining biodegradability are not applicable to inorganic substances. Remarks: The organic components of the product are biodegradable.

White mineral oil (petroleum):

Biodegradability : Remarks: Read-across (Analogy)

aerobic
Inoculum: activated sludge
Result: Inherently biodegradable.
Biodegradation: 31 %
Exposure time: 28 d
Method: OECD Test Guideline 301F
GLP: yes

Zinc Compounds:

Biodegradability : Remarks: Read-across (Analogy)

aerobic
Inoculum: activated sludge
Result: Readily biodegradable.
Biodegradation: 99 %
Exposure time: 28 d
Method: OECD Test Guideline 301E
GLP: no

1,3-diphenylpropane-1,3-dione:

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

Zinc Compounds:

Biodegradability : Remarks: Read-across (Analogy)

aerobic
Inoculum: activated sludge
Result: Readily biodegradable.
Biodegradation: >= 89 %
Exposure time: <= 35 d
Method: OECD Test Guideline 311
Remarks: The organic components of the product are biodegradable.

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

Bioaccumulative potential

Components:

triisotridecyl phosphite:

Bioaccumulation	:	Remarks: study scientifically unjustified
Partition coefficient: n-octanol/water	:	log Pow: 16.73 (25 °C) Method: calculated

Calcium Compounds:

Bioaccumulation	:	Remarks: No data available

White mineral oil (petroleum):

Bioaccumulation	:	Remarks: No data available
Partition coefficient: n-octanol/water	:	Pow: > 3.5

Zinc Compounds:

Bioaccumulation	:	Remarks: Read-across (Analogy) This substance is not considered to be bioaccumulating.
Partition coefficient: n-octanol/water	:	log Pow: > 5.7 Method: OECD Test Guideline 107 GLP: no

1,3-diphenylpropane-1,3-dione:

Bioaccumulation	:	Remarks: study scientifically unjustified
Partition coefficient: n-octanol/water	:	log Pow: 4.59 (25 °C) Method: OECD Test Guideline 117 GLP: no

Zinc Compounds:

Bioaccumulation	:	Remarks: Read-across (Analogy) Remarks: Bioaccumulation is unlikely.
Partition coefficient: n-octanol/water	:	Remarks: Not applicable

Mobility in soil

Components:

triisotridecyl phosphite:

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

Calcium Compounds:

Mobility	:	Remarks: Predicted distribution to environmental compartments Soil

Water

White mineral oil (petroleum):

Mobility : Remarks: The product is insoluble and floats on water.

Method: QSAR
Remarks: Predicted distribution to environmental compartments
Sediment
Soil

Zinc Compounds:

Mobility : Remarks: Read-across (Analogy)

Method: QSAR
Remarks: Predicted distribution to environmental compartments
Water

1,3-diphenylpropane-1,3-dione:

Mobility : Remarks: No data available

Zinc Compounds:

Mobility : Remarks: No data available

Other adverse effects

Product:

Results of PBT and vPvB assessment : This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Components:

triisotridecyl phosphite:

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.

White mineral oil (petroleum):

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.

1,3-diphenylpropane-1,3-dione:

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.

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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	18.76

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

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

SECTION 16. OTHER INFORMATION

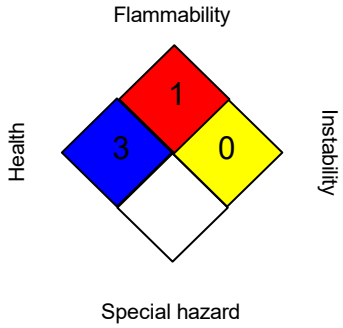
Full text of other abbreviations

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, Bioaccumu-

lative 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	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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