SECTION 1. IDENTIFICATION

Product identifier

Trade name : **B 2905**

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

Use of the Sub-stance/Mixture : Manufacture of plastics products
Polymer additive
Stabilizer

Recommended restrictions on use : None known.

Details of the supplier of the safety data sheet

Company : Baerlocher Production USA LLC
5890 Highland Ridge Drive
Cincinnati, OH 45232

Telephone : Day 330-602-1528 or 330-602-1531
: Night 513-207-1620 or 513-604-2327

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

Responsible/issuing person : Product Safety Department

Emergency telephone number (0 - 24 h)

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

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

Acute toxicity (Oral) : Category 4

Acute toxicity (Inhalation) : Category 4

Serious eye damage : Category 1

Skin sensitisation : Category 1

Reproductive toxicity : Category 2

GHS label elements

Hazard pictograms :

Signal word : Danger

Hazard statements : H302 + H332 Harmful if swallowed or if inhaled.
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 dust/ fume/ gas/ mist/ vapours/ spray.
P264 Wash skin thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P271 Use only outdoors or in a well-ventilated area.
P272 Contaminated work clothing should not be allowed out of the workplace.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response:

P301 + P312 + P330 IF SWALLOWED: Call a POISON CENTER/ doctor if you feel unwell. Rinse mouth.
P302 + P352 IF ON SKIN: Wash with plenty of soap and water.
P304 + P340 + P312 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/ doctor if you feel unwell.
P305 + P351 + P338 + P310 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/ doctor.
P308 + P313 IF exposed or concerned: Get medical advice/ attention.
P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.
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)
Barium Compounds*	Trade Secret	< 20*
White mineral oil (petroleum)	8042-47-5	< 10*
Barium Compounds*	Trade Secret	< 20*
Barium Compounds*	Trade Secret	< 20*
Zinc Compounds*	Trade Secret	< 20*
Barium Compounds*	Trade Secret	< 20*
Zinc Compounds*	Trade Secret	< 20*
1,3-Diphenylpropane-1,3-dione	120-46-7	< 10*
Zinc Compounds*	Trade Secret	< 20*
Barium Compounds*	Trade Secret	< 20*
2-(2-Butoxyethoxy) ethanol	112-34-5	< 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 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
Barium, soluble compounds (as Ba)	Not Assigned	air 8 h	0.5 mg/m3 (Barium)	ACGIH
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
2-(2-Butoxyethoxy) ethanol	112-34-5	air 8 h	10 ppm	ACGIH
White mineral oil (petroleum)	8042-47-5	PEL	5 mg/m3	OSHA
		TWA	5 mg/m3	NIOSH REL
		air 8 h	5 mg/m3	ACGIH TLV
		STEL	10 mg/m3	ACGIH TLV
Particulates Not Otherwise Regulated (PNOR) Respirable fraction		PEL	5 mg/m3	OSHA
		air 8 h	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
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.
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	:	ca. 230 °C (1,013 hPa) Value refers to the solvent.
Flash point	:	> 100 °C
Evaporation rate	:	No data available
Flammability (liquids)	:	Combustible Liquid
Upper explosion limit	:	5.9 %(V) Value refers to the solvent.
Lower explosion limit	:	0.8 %(V) Value refers to the solvent.
Vapor pressure	:	ca. 0.02 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	:	210 °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

Acute toxicity

Product:

Acute oral toxicity	:	Acute toxicity estimate: 1,423 mg/kg Method: Calculation method
Acute inhalation toxicity	:	Acute toxicity estimate: 4.91 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:

Barium Compounds:

Acute oral toxicity	:	Remarks: Classification Labelling according to EC Directives Regulation (EC) No 1272/2008, Annex VI, Table 3 Acute oral toxicity Category 4
Acute inhalation toxicity	:	Remarks: Classification Labelling according to EC Directives Regulation (EC) No 1272/2008, Annex VI, Table 3 Acute inhalation toxicity Category 4

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.

Barium Compounds:

Acute oral toxicity	:	Remarks: Classification Labelling according to EC Directives Regulation (EC) No 1272/2008, Annex VI, Table 3 Acute oral toxicity Category 4
Acute inhalation toxicity	:	Remarks: Classification Labelling according to EC Directives Regulation (EC) No 1272/2008, Annex VI, Table 3 Acute inhalation toxicity Category 4
Acute dermal toxicity	:	Remarks: Read-across (Analogy) LD50 (Rat): > 2000 mg/kg bw Method: OECD Test Guideline 402 GLP: yes Remarks: Based on available data, the classification criteria are not met.

Barium Compounds:

Acute oral toxicity	:	Remarks: Classification Labelling according to EC Directives Regulation (EC) No 1272/2008, Annex VI, Table 3 Acute oral toxicity Category 4
Acute inhalation toxicity	:	Remarks: Classification Labelling according to EC Directives Regulation (EC) No 1272/2008, Annex VI, Table 3 Acute inhalation toxicity Category 4
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.

Zinc Compounds:

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	:	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.

Barium Compounds:

Acute oral toxicity : Remarks: Classification
Labelling according to EC Directives
Regulation (EC) No 1272/2008, Annex VI, Table 3
Acute oral toxicity
Category 4

Acute inhalation toxicity : Remarks: Classification
Labelling according to EC Directives
Regulation (EC) No 1272/2008, Annex VI, Table 3
Acute inhalation toxicity
Category 4

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

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 : 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.

1,3-Diphenylpropane-1,3-dione:

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

Acute inhalation toxicity : Remarks: study scientifically unjustified

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

GLP: yes

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): > 2000 mg/kg bw
Remarks: Based on available data, the classification criteria are not met.

Barium Compounds:

Acute oral toxicity : LD50 (Rat): > 50 mg/kg
Method: OECD Test Guideline 423
GLP: yes

LD50 (Rat): <= 300 mg/kg
Method: OECD Test Guideline 423
GLP: yes

Acute inhalation toxicity : Remarks: Classification
Labelling according to EC Directives
Regulation (EC) No 1272/2008, Annex VI, Table 3
Acute inhalation toxicity
Category 4

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

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

2-(2-Butoxyethoxy) ethanol:

Acute oral toxicity : LD50 (Mouse, male): 2,410 mg/kg
Method: OECD Test Guideline 401
GLP: no
Remarks: Based on available data, the classification criteria

are not met.

Acute inhalation toxicity	:	LC50 (Rat): > 3 mg/l Exposure time: 2 h Test atmosphere: dust/mist Method: OECD Test Guideline 403 GLP: no Remarks: Based on available data, the classification criteria are not met.
Acute dermal toxicity	:	LD50 (Rabbit): 2,764 mg/kg Method: OECD Test Guideline 402 GLP: no Remarks: Based on available data, the classification criteria are not met.

Skin corrosion/irritation

Components:

White mineral oil (petroleum):

Species: Rabbit
Exposure time: 24 h
Method: OECD Test Guideline 404
Result: not irritating
GLP: yes
Remarks: Based on available data, the classification criteria are not met.

Barium Compounds:

Species: Rabbit
Exposure time: 4 h
Method: OECD Test Guideline 404
Result: not irritating
GLP: yes
Remarks: Based on available data, the classification criteria are not met.

Barium Compounds:

Species: Rabbit
Method: OECD Test Guideline 404
Result: not irritating
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.

Barium Compounds:

Species: Rabbit
Method: OECD Test Guideline 404
Result: not irritating
GLP: yes
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.

1,3-Diphenylpropane-1,3-dione:

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

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.

Barium Compounds:

Species: reconstructed human epidermis (RhE)
Method: OECD Test Guideline 439
Result: not irritating
GLP: yes
Remarks: Based on available data, the classification criteria are not met.

2-(2-Butoxyethoxy) ethanol:

Species: Rabbit
Exposure time: 1 h
Method: OECD Test Guideline 404
Result: slight irritation
GLP: no
Remarks: Based on available data, the classification criteria are not met.

Serious eye damage/eye irritation

Components:

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.

Barium Compounds:

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

Barium Compounds:

Species: in vitro assay
Result: Causes serious eye damage.
Exposure time: 240 min
Method: OECD Test Guideline 437
GLP: yes

Zinc Compounds:

Remarks: Read-across (Analogy)

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

Barium Compounds:

Species: in vitro assay
Result: Causes serious eye damage.
Method: OECD Test Guideline 437
GLP: yes

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.

1,3-Diphenylpropane-1,3-dione:

Species: Rabbit
Result: not irritating
Method: OECD Test Guideline 405
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

Barium Compounds:

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

2-(2-Butoxyethoxy) ethanol:

Species: Rabbit
Result: highly irritant
Method: OECD Test Guideline 405
GLP: no

Respiratory or skin sensitisation

Components:

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.

Barium Compounds:

Remarks: Skin sensitisation
Read-across (Analogy)

Test Type: LLNA
Species: Mouse
Method: OECD Test Guideline 429
Result: negative
GLP: yes
Remarks: Based on available data, the classification criteria are not met.

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

Barium 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.

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.

Barium Compounds:

Remarks: Skin sensitisation
Read-across (Analogy)

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

Remarks: Respiratory sensitisation

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

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.

1,3-Diphenylpropane-1,3-dione:

Remarks: Skin sensitisation

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

Remarks: Respiratory sensitisation

Remarks: Not classified due to lack of data.

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.

Barium Compounds:

Remarks: Skin sensitisation
Read-across (Analogy)

Test Type: LLNA
Species: Mouse
Method: OECD Test Guideline 429
Result: negative
Remarks: Based on available data, the classification criteria are not met.

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

2-(2-Butoxyethoxy) ethanol:

Remarks: Skin sensitisation

Test Type: Maximisation Test
Species: Guinea pig
Method: OECD Test Guideline 406
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.

Germ cell mutagenicity

Components:

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.

Barium 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 gene mutation study in mammalian cells
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: Chinese hamster ovary cells
Method: OECD Test Guideline 473
Result: negative
GLP: yes
Remarks: Based on available data, the classification criteria are not met.

Barium Compounds:

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

: 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.

Barium Compounds:

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

: 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
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.

Barium Compounds:

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

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

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

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

2-(2-Butoxyethoxy) ethanol:

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: Chinese hamster ovary cells
Method: OECD Test Guideline 476
Result: negative
GLP: yes

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

Genotoxicity in vivo : Test Type: Mutagenicity (in vivo mammalian bone-marrow cytogenetic test, chromosomal analysis)
Species: Mouse
Application Route: Oral
Method: OECD Test Guideline 475
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:

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.

Barium Compounds:

Remarks: Read-across (Analogy)

Species: Rat
Application Route: Oral
Exposure time: 2 a
Method: standardised international/national methodology
GLP: yes
Remarks: Based on available data, the classification criteria are not met.

Barium Compounds:

Remarks: Read-across (Analogy)

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.

Barium Compounds:

Remarks: Not classified due to lack of data.

Zinc Compounds:

Remarks: Not classified due to lack of data.

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.

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

2-(2-Butoxyethoxy) ethanol:
Remarks: Not classified due to lack of data.

Reproductive toxicity

Components:

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.

Barium Compounds:

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

Species: Rat
Application Route: Oral
Remarks: Based on available data, the classification criteria are not met.

Remarks: Read-across (Analogy)

Species: Rat
Application Route: Oral

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

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

Remarks: Study in progress (external)
Remarks: Not classified due to lack of data.
Remarks: Study in progress (external)

Barium 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.

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.

Barium Compounds:

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

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.

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.

1,3-Diphenylpropane-1,3-dione:

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

Remarks: Not classified due to lack of data.

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

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.

Barium 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.

2-(2-Butoxyethoxy) ethanol:

Effects on fertility	:	Remarks: Read-across (Analogy) Test Type: Two-generation study Species: Mouse Application Route: Oral Method: standardised international/national methodology Remarks: Based on available data, the classification criteria are not met. Remarks: Read-across (Analogy) Test Type: Two-generation study Species: Mouse Application Route: Oral Method: standardised international/national methodology Remarks: Based on available data, the classification criteria are not met.
Effects on foetal development	:	Species: Rabbit Application Route: Skin contact Method: OECD Test Guideline 414 Species: Rat Application Route: Oral Method: OECD Test Guideline 414 Remarks: Based on available data, the classification criteria are not met. Species: Rabbit Application Route: Skin contact

Method: OECD Test Guideline 414
Species: Rat
Application Route: Oral
Method: OECD Test Guideline 414
Remarks: Based on available data, the classification criteria are not met.

STOT - single exposure

Components:

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

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

Barium 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:
Remarks: Read-across (Analogy)

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

Barium Compounds:
Remarks: Read-across (Analogy)

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

2-(2-Butoxyethoxy) ethanol:
Remarks: Based on available data, the classification criteria are not met.

Repeated dose toxicity

Components:

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.

Barium Compounds:

Remarks: Read-across (Analogy)

Species: Rat
NOAEL: 61.1 mg/kg
Application Route: Oral
Exposure time: 92 d
Remarks: Based on available data, the classification criteria are not met.

Barium Compounds:

Remarks: Read-across (Analogy)
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.

Barium Compounds:

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.

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
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.

Barium Compounds:
Remarks: Read-across (Analogy)

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

2-(2-Butoxyethoxy) ethanol:
Species: Rat
Application Route: Oral
Method: standardised international/national methodology
GLP: yes

Species: Rat
Application Route: Dermal
Method: standardised international/national methodology

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

Aspiration toxicity

Components:

White mineral oil (petroleum):
May be fatal if swallowed and enters airways.

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

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

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

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

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.

Barium Compounds:
Not classified due to lack of data.

2-(2-Butoxyethoxy) ethanol:
Not classified due to lack of data.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Components:

Barium Compounds:

Ecotoxicology Assessment

Acute aquatic toxicity	:	Not classified due to lack of data.
Chronic aquatic toxicity	:	Not classified due to lack of data.

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.

Barium Compounds:

Toxicity to fish	:	Remarks: Read-across (Analogy) LC50 (Danio rerio (zebra fish)): > 97.5 mg Ba/L Exposure time: 96 h Test Type: static test Method: OECD Test Guideline 203 GLP: yes
Toxicity to daphnia and other aquatic invertebrates	:	Remarks: Read-across (Analogy) LC50 (Daphnia magna (Water flea)): 14,5 mg Ba/L Exposure time: 48 h Test Type: static test
Toxicity to algae	:	Remarks: Read-across (Analogy) NOEC (Pseudokirchneriella subcapitata (green algae)): >= 34,31 mg Ba/L Exposure time: 72 h Test Type: static test Method: OECD Test Guideline 201 GLP: yes EC50 (Pseudokirchneriella subcapitata (green algae)): > 34,31 mg Ba/L Exposure time: 72 h Test Type: static test

Method: OECD Test Guideline 201
GLP: yes

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

EC16 (Daphnia magna (Water flea)): 5.8 mg/l
Exposure time: 21 d
Test Type: semi-static test

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

NOEC (activated sludge): >= 500,61 mg Ba/L
Exposure time: 3 h
Test Type: Respiration inhibition
Method: OECD Test Guideline 209
GLP: yes

Ecotoxicology Assessment

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

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

Barium Compounds:

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

EC50 (Danio rerio (zebra fish)): > 97.5 mg Ba/L
Exposure time: 96 h
Test Type: static test
Method: OECD Test Guideline 203
GLP: yes

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

LC50 (Daphnia magna (Water flea)): 14.5 mg Ba/L
Exposure time: 96 h
Test Type: static test
Method: standardised international/national methodology

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

EC50 (Pseudokirchneriella subcapitata (green algae)): > 34,3 mg Ba/L
Exposure time: 72 h
Test Type: static test
Method: OECD Test Guideline 201
GLP: yes

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

EC50 (activated sludge): > 500 mg Ba/L
Exposure time: 3 h
Test Type: Respiration inhibition
Method: OECD Test Guideline 209
GLP: yes

Ecotoxicology Assessment

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

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

Zinc Compounds:

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

LC50 (Cyprinus carpio (Carp)): 100 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 203
GLP: yes

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

EC50 (Daphnia magna (Water flea)): 5 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 (green algae)): 2.72 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)

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 : IC50 (activated sludge): > 100 mg/l
Exposure time: 3 h
Test Type: static test
Method: OECD Test Guideline 209
GLP:

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.

Barium Compounds:

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

LC50 (Danio rerio (zebra fish)): > 97.5 mg Ba/L
Exposure time: 96 h
Test Type: static test
Method: OECD Test Guideline 203
GLP: yes

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

LC50 (Daphnia magna (Water flea)): 14.5 mg/l
Exposure time: 48 h
Test Type: static test
Method: standardised international/national methodology

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.

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
M-Factor (Chronic aquatic toxicity)	:	1

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.

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

Ecotoxicology Assessment

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

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

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.

Barium Compounds:

Toxicity to fish	:	Remarks: Read-across (Analogy) LC50 (Lepomis macrochirus (Bluegill sunfish)): 44.6 mg/l Exposure time: 96 h Test Type: static test Method: standardised international/national methodology
Toxicity to daphnia and other aquatic invertebrates	:	Remarks: Read-across (Analogy) LC50 (Daphnia magna (Water flea)): 14.5 mg/l Exposure time: 48 h Test Type: static test Method: standardised international/national methodology
Toxicity to algae	:	Remarks: Read-across (Analogy) NOEC (Pseudokirchneriella subcapitata (green algae)): 0.11 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) NOEC (Oncorhynchus mykiss (rainbow trout)): > 120 mg/l

Exposure time: 28 d
Test Type: semi-static test
Method: standardised international/national methodology

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

NOEC (Daphnia magna (Water flea)): 25 mg/l
Exposure time: 21 d
Test Type: semi-static test
Method: OECD Test Guideline 211

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

(activated sludge): > 1,000 mg/l
Exposure time: 3 h
Test Type: static test
Method: OECD Test Guideline 209
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.

2-(2-Butoxyethoxy) ethanol:

Toxicity to fish : LC50 (Lepomis macrochirus (Bluegill sunfish)): 1,300 mg/l
Exposure time: 96 h
Test Type: static test
Method: OECD Test Guideline 203
GLP: no

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

Toxicity to algae : NOEC (Desmodesmus subspicatus (green algae)): > 100 mg/l
Exposure time: 96 h
Test Type: static test
Method: OECD Test Guideline 201
GLP: yes

Toxicity to bacteria : EC10 (activated sludge): > 1,995 mg/l
Exposure time: 0.5 h
Test Type: Respiration inhibition
Method: OECD Test Guideline 209
GLP: no

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:

Barium Compounds:

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

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

Barium Compounds:

Biodegradability : Remarks: The organic components of the product are biodegradable.

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

Barium Compounds:

Biodegradability : Result: Readily biodegradable.
Remarks: The organic components of the product are biodegradable.

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

Zinc Compounds:

Biodegradability : Remarks: Read-across (Analogy)

aerobic
Inoculum: activated sludge
Result: Readily biodegradable.
Biodegradation: 70 %
Exposure time: 28 d
Method: OECD Test Guideline 301D
GLP: yes

Barium 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
Remarks: Organic acids

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

Zinc Compounds:

Biodegradability : Remarks: Read-across (Analogy)

Result: Not readily biodegradable.

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 : Result: Readily biodegradable.
Remarks: The organic components of the product are biodegradable.

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

Barium Compounds:

Biodegradability : Result: Readily biodegradable.
Remarks: The organic components of the product are biodegradable.

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

2-(2-Butoxyethoxy) ethanol:

Biodegradability : aerobic
Inoculum: activated sludge
Result: Readily biodegradable.
Biodegradation: 85 %
Exposure time: 28 d

Method: OECD Test Guideline 301C
GLP: no

Bioaccumulative potential

Components:

Barium Compounds:

Bioaccumulation : Remarks: Read-across (Analogy)

Remarks: Bioaccumulation is unlikely.

White mineral oil (petroleum):

Bioaccumulation : Remarks: No data available

Partition coefficient: n-octanol/water : Pow: > 3.5

Barium Compounds:

Bioaccumulation : Remarks: Read-across (Analogy)

Bioconcentration factor (BCF): 6.4 - 74.4
Remarks: Barium

Barium Compounds:

Bioaccumulation : Remarks: Read-across (Analogy)

Remarks: This substance is not considered to be bioaccumulating.

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

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

Barium Compounds:

Bioaccumulation : Remarks: Read-across (Analogy)

Remarks: This substance is not considered to be bioaccumulating.

Zinc Compounds:

Bioaccumulation : Remarks: Read-across (Analogy)

Remarks: This substance is not considered to be bioaccumu-

lating.

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

1,3-Diphenylpropane-1,3-dione:

Bioaccumulation : Remarks: study scientifically unjustified

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

Zinc Compounds:

Bioaccumulation : Remarks: Bioaccumulation is unlikely.

Barium Compounds:

Bioaccumulation : Remarks: No data available

2-(2-Butoxyethoxy) ethanol:

Bioaccumulation : Remarks: Bioaccumulation is unlikely.

Partition coefficient: n-octanol/water : log Pow: 1 (20 °C)
pH: 7
Method: OECD Test Guideline 117

Mobility in soil

Components:

Barium Compounds:

Mobility : Remarks: No data available

White mineral oil (petroleum):

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

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

Barium Compounds:

Mobility : Remarks: No data available

Barium Compounds:

Mobility : Remarks: Not applicable

Zinc Compounds:

Mobility : Remarks: Not applicable

Barium Compounds:

Mobility : Remarks: No data available

Zinc Compounds:

Mobility : Remarks: Not applicable

1,3-Diphenylpropane-1,3-dione:

Mobility : Remarks: No data available

Zinc Compounds:

Mobility : Remarks: No data available

Barium Compounds:

Mobility : Remarks: No data available

2-(2-Butoxyethoxy) ethanol:

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

Other adverse effects

Components:

Barium 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.

Barium Compounds:

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

Endocrine disrupting potential : No information available.

Barium Compounds:

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.

Barium Compounds:

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.

Barium Compounds:

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

2-(2-Butoxyethoxy) ethanol:

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., %
Barium Compounds (N040)	Not Assigned	31.4
Zinc Compounds (N982)	Not Assigned	20.9
Glycol ethers (N230)	112-34-5	1.5

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

EINECS	Not listed
TSCA	listed
DSL	Not listed
NDSL	listed
AICS	Not listed
ENCS	Not listed
ECL	Not listed
PICCS	Not listed
CHINA	Not listed

SECTION 16. OTHER INFORMATION

Full text of other abbreviations

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

Further information

HMIS III:

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

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

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The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

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