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SECTION 1. IDENTIFICATION

Product identifier

Trade name : **B 650**
Other means of identification : Liquid Barium Zinc Compound

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

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

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
Skin irritation : Category 2
Serious eye damage : Category 1
Skin sensitisation : Category 1
Reproductive toxicity : Category 2
Specific target organ toxicity : Category 3 (Central nervous system)
- single exposure
Aspiration hazard : Category 1



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GHS label elements

Hazard pictograms :



Signal word : Danger

Hazard statements : H302 + H332 Harmful if swallowed or if inhaled.
H304 May be fatal if swallowed and enters airways.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H318 Causes serious eye damage.
H336 May cause drowsiness or dizziness.
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 + P310 IF SWALLOWED: Immediately call a POISON CENTER/doctor.
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.
P331 Do NOT induce vomiting.
P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.
P362 Take off contaminated clothing and wash before reuse.

Storage:

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



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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)
Isodecyl diphenyl phosphite	26544-23-0	$\geq 25^*$
Barium Compounds*	Trade Secret	$\geq 20^*$
Distillates (petroleum), hydrotreated light	64742-47-8	$\geq 25^*$
2-(2-Butoxyethoxy) ethanol	112-34-5	$< 10^*$
2-Ethyl-hexanoic acid	149-57-5	$< 10^*$
Diisodecyl phenyl phosphite	25550-98-5	$< 20^*$
Triphenyl phosphite	101-02-0	$< 10^*$

*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 : No information available.



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delayed

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.

Further information : Release of Phenol by hydrolysis.

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.



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SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Barium, soluble compounds (as Ba)	Not Assigned	air 8 h	0.5 mg/m ³ (Barium)	ACGIH
		PEL	0.5 mg/m ³ (Barium)	OSHA
		TWA	0.5 mg/m ³ (Barium)	NIOSH REL
Distillates (petroleum), hydrotreated light	64742-47-8	air 8 h	200 mg/m ³	ACGIH
		TWA	100 ppm	NIOSH REL
		PEL	100 ppm 400 mg/m ³	Z1A
2-(2-Butoxyethoxy) ethanol	112-34-5	air 8 h	10 ppm	ACGIH
2-Ethyl-hexanoic acid	149-57-5	air 8 h	5 mg/m ³	ACGIH
Particulates Not Otherwise Regulated (PNOR) Respirable fraction		PEL	5 mg/m ³	OSHA Z-1
			3 mg/m ³	ACGIH

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.



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Do not smoke.
Wash hands before breaks and at the end of workday.
Shower or bathe at the end of working.
Keep working clothes separately.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	: liquid
Color	: yellowish
Odor	: characteristic
Odor Threshold	: No data available
pH	: No data available
Melting point/range	: No data available
Boiling point/boiling range	: 235 - 282 °C Value refers to the solvent.
Flash point	: > 100 °C
Evaporation rate	: No data available
Flammability (liquids)	: Combustible Liquid
Upper explosion limit	: 5.5 %(V) Value refers to the solvent.
Lower explosion limit	: 0.6 %(V) Value refers to the solvent.
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/cm ³
Solubility(ies) Water solubility	: slightly soluble
Partition coefficient: n- octanol/water	: No data available
Auto-ignition temperature	: > 220 °C Value refers to the solvent.
Decomposition temperature	: No data available



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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: 1,630 mg/kg Method: Calculation method
Acute inhalation toxicity	:	Acute toxicity estimate: 4.98 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:

Isodecyl diphenyl phosphite:

Acute oral toxicity	:	LD50 (Rat): 3,840 mg/kg Method: standardised international/national methodology Remarks: Based on available data, the classification criteria are not met.
Acute inhalation toxicity	:	LC50 (Rat): > 8.4 mg/l Exposure time: 1 h Test atmosphere: dust/mist Method: OECD Test Guideline 403



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

Acute dermal toxicity : LD50 (Rabbit): > 5,000 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 3.1
Acute oral toxicity
Category 4

Acute inhalation toxicity : Remarks: Classification
Labelling according to EC Directives
Regulation (EC) No 1272/2008, Annex VI, Table 3.1
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.

Distillates (petroleum), hydrotreated light:

Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg
Method: OECD Test Guideline 420
GLP: yes
Remarks: Based on available data, the classification criteria are not met.

Acute inhalation toxicity : LC50 (Rat): > 5.28 mg/l
Exposure time: 4 h
Test atmosphere: vapour
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.



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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.

2-Ethyl-hexanoic acid:

Acute oral toxicity : LD50 (Rat): 2,043 mg/kg
Method: OECD Test Guideline 401
GLP: yes
Remarks: Based on available data, the classification criteria are not met.

Acute inhalation toxicity : LC0 (Rat): 0.11 mg/l
Exposure time: 8 h
Test atmosphere: vapour
Method: OECD Test Guideline 403
GLP: no
Remarks: Based on available data, the classification criteria are not met.

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

Diisodecyl phenyl phosphite:

Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg
Method: OECD Test Guideline 401
GLP: no
Remarks: Based on available data, the classification criteria are not met.

Acute inhalation toxicity : LC50 (Rat): > 11.7 mg/l
Exposure time: 1 h
Test atmosphere: dust/mist



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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.

Skin corrosion/irritation

Components:

Isodecyl diphenyl phosphite:

Species: Rabbit
Method: standardised international/national methodology
Result: slight irritation
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.

Distillates (petroleum), hydrotreated light:

Species: Rabbit
Method: OECD Test Guideline 404
Result: irritating
GLP: yes

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.

2-Ethyl-hexanoic acid:

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



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Diisodecyl phenyl phosphite:

Species: Rabbit

Method: OECD Test Guideline 404

Result: slight irritation

GLP: yes

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

Serious eye damage/eye irritation

Components:

Isodecyl diphenyl phosphite:

Species: Rabbit

Result: Mild eye irritation

Method: standardised international/national methodology

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

Distillates (petroleum), hydrotreated light:

Species: Rabbit

Result: not irritating

Method: standardised international/national methodology

GLP: yes

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

2-(2-Butoxyethoxy) ethanol:

Species: Rabbit

Result: highly irritant

Method: OECD Test Guideline 405

GLP: no

2-Ethyl-hexanoic acid:

Species: Rabbit

Result: not irritating

Method: OECD Test Guideline 405

GLP: yes

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

Diisodecyl phenyl phosphite:

Species: Rabbit

Result: not irritating



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Method: OECD Test Guideline 405
GLP: no
Remarks: Based on available data, the classification criteria are not met.

Respiratory or skin sensitisation

Components:

Isodecyl diphenyl phosphite:

Remarks: Skin sensitisation

Test Type: Maximisation Test
Species: Guinea pig
Method: standardised international/national methodology
Result: Sensitising

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.

Distillates (petroleum), hydrotreated light:

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

2-(2-Butoxyethoxy) ethanol:

Remarks: Skin sensitisation

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



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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.

2-Ethyl-hexanoic acid:

Remarks: Skin sensitisation

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

Diisodecyl phenyl phosphite:

Remarks: Skin sensitisation

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

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

Germ cell mutagenicity

Components:

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

Genotoxicity in vivo : Test Type: In vivo micronucleus test



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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.

Barium Compounds:

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

Distillates (petroleum), hydrotreated light:

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

Genotoxicity in vivo : Test Type: Genotoxicity in vivo
Species: Rat
Application Route: intraperitoneally
Method: OECD Test Guideline 478
Result: negative

Test Type: Genotoxicity in vivo
Species: Mouse
Application Route: intraperitoneally
Method: OECD Test Guideline 478
Result: negative

Test Type: Genotoxicity in vivo
Species: Mouse
Application Route: Inhalation
Method: OECD Test Guideline 478
Result: negative

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



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GLP: yes
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.

2-Ethyl-hexanoic acid:

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

: Test Type: Mutagenicity (in vitro mammalian cytogenetic test)
Species: Lymphocytes (rat)
Method: OECD Test Guideline 473
Result: negative
GLP: yes



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

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

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

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

Carcinogenicity

Product:

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

Components:

Isodecyl diphenyl phosphite:

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

Barium Compounds:

Remarks: Read-across (Analogy)



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

Distillates (petroleum), hydrotreated light:

Species: Mouse

Application Route: Skin contact

Method: OECD Test Guideline 451

GLP: yes

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

2-(2-Butoxyethoxy) ethanol:

Remarks: Not classified due to lack of data.

2-Ethyl-hexanoic acid:

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

Diisodecyl phenyl phosphite:

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

Reproductive toxicity

Components:

Isodecyl diphenyl phosphite:

Effects on fertility :

Test Type: Screening for reproductive/developmental toxicity

Species: Rat

Exposure time: 16 w

Application Route: Oral

NOAEL: 15 mg/kg,

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

15 mg/kg

Method: OECD Test Guideline 422

GLP: yes

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

Barium Compounds:

Effects on fertility :

Remarks: Read-across (Analogy)



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Remarks: Suspected of damaging the unborn child.

Distillates (petroleum), hydrotreated light:

Effects on fertility

:

Test Type: One-generation reproduction toxicity test
Species: Rat
Application Route: Oral

Test Type: Screening for reproductive/developmental toxicity
Species: Rat
Application Route: Skin contact
NOAEL: > 494 mg/kg,
Method: OECD Test Guideline 421
Remarks: Based on available data, the classification criteria are not met.

Effects on foetal development

:

Species: Rat
Application Route: Inhalation
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.

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.

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.

2-Ethyl-hexanoic acid:

Effects on fertility

:

Test Type: Reproduction Test



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Species: Rat
Application Route: Oral
NOAEL:
F1: 100 mg/kg,
Remarks: Suspected of damaging the unborn child.

Effects on foetal development : Species: Rat
Application Route: Oral
100 mg/kg
Method: standardised international/national methodology
GLP: yes
Remarks: Suspected of damaging the unborn child.
Species: Rabbit
Application Route: Oral
> 250 mg/kg
Method: standardised international/national methodology
GLP: yes

Diisodecyl phenyl phosphite:

Effects on fertility :

Remarks: Read-across (Analogy)

Test Type: Screening for reproductive/developmental toxicity
Species: Rat
Application Route: Oral
Test period: 8 weeks
NOAEL: 1,000 mg/kg,
Method: OECD Test Guideline 422
GLP: yes
Remarks: Based on available data, the classification criteria are not met.

Effects on foetal development : Remarks: Read-across (Analogy)
Species: Rat
Application Route: Oral
1,000 mg/kg
Method: OECD Test Guideline 422
GLP: yes
Remarks: Based on available data, the classification criteria are not met.

STOT - single exposure

Components:

Isodecyl diphenyl phosphite:

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

Barium Compounds:

Remarks: Not classified due to lack of data.



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Distillates (petroleum), hydrotreated light:

Assessment: May cause drowsiness or dizziness.

2-(2-Butoxyethoxy) ethanol:

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

Diisodecyl phenyl phosphite:

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

Repeated dose toxicity

Components:

Isodecyl diphenyl phosphite:

Species: Rat

NOAEL: 15 mg/kg

Application Route: Oral

Exposure time: 16 w

Method: OECD Test Guideline 422

GLP: yes

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.

Distillates (petroleum), hydrotreated light:

Species: Rat

Application Route: Oral

Exposure time: <= 90 d

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

Species: rat / mouse

Application Route: Inhalation

Exposure time: 90 d

Method: OECD Test Guideline 413

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

Species: Rat

Application Route: Dermal

Exposure time: 28 d

Method: OECD Test Guideline 410

GLP: yes

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



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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.

2-Ethyl-hexanoic acid:

Species: Mouse
NOAEL: 200 mg/kg
Application Route: Oral
Exposure time: 91 - 93 d
Method: standardised international/national methodology
GLP: yes

Species: Rat
NOAEL: 300 mg/kg
Application Route: Oral
Exposure time: 91 - 93 d
Method: standardised international/national methodology
GLP: yes
Remarks: Based on available data, the classification criteria are not met.

Diisodecyl phenyl phosphite:

Remarks: Read-across (Analogy)

Species: Rat
NOAEL: 1,000 mg/kg
Application Route: Oral
Method: OECD Test Guideline 422
GLP: yes
Remarks: Based on available data, the classification criteria are not met.

Aspiration toxicity

Components:

Isodecyl diphenyl phosphite:

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

Barium Compounds:

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

Distillates (petroleum), hydrotreated light:

May be fatal if swallowed and enters airways.



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2-(2-Butoxyethoxy) ethanol:

Not classified due to lack of data.

2-Ethyl-hexanoic acid:

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

Diisodecyl phenyl phosphite:

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

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Components:

Isodecyl diphenyl phosphite:

- Toxicity to fish : Remarks: study technically not feasible
- Toxicity to daphnia and other aquatic invertebrates : Remarks: study technically not feasible
- Toxicity to algae : Remarks: study technically not feasible
- Toxicity to bacteria : Remarks: study technically not feasible

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



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- 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
- Diisodecyl phenyl phosphite:**
- Toxicity to fish : (Leuciscus idus (Golden orfe)): > 100 mg/l
Exposure time: 48 h
Test Type: static test
Method: OECD Test Guideline 203
- Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 0.2 mg/l
Exposure time: 48 h
Test Type: static test
Method: OECD Test Guideline 202
GLP: yes
- Toxicity to algae : EC50 (Desmodesmus subspicatus (green algae)): 45 mg/l
Exposure time: 72 h
Test Type: static test
Method: OECD Test Guideline 201
GLP: yes
- Ecotoxicology Assessment**
- Acute aquatic toxicity : Based on available data, the classification criteria are not met.
- Chronic aquatic toxicity : Based on available data, the classification criteria are not met.
- Distillates (petroleum), hydrotreated light:**
- Toxicity to fish : LL50 (Oncorhynchus mykiss (rainbow trout)): 2 mg/l
Exposure time: 96 h
Test Type: semi-static test
Method: OECD Test Guideline 203
GLP: yes
Remarks: Value referred to the Water accumulated fraction (WAF).
- Toxicity to daphnia and other aquatic invertebrates : EL50 (Daphnia magna (Water flea)): 1.4 mg/l
Exposure time: 48 h
Test Type: static test
Method: OECD Test Guideline 202



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- GLP: yes
Remarks: Value referred to the Water accumulated fraction (WAF).
- Toxicity to algae : EL50 (*Pseudokirchneriella subcapitata* (green algae)): 1 mg/l
Exposure time: 72 h
Test Type: static test
Method: OECD Test Guideline 201
GLP: yes
Remarks: Value referred to the Water accumulated fraction (WAF).
- Toxicity to fish (Chronic toxicity) : NOEL (*Oncorhynchus mykiss* (rainbow trout)): 0.098 mg/l
Exposure time: 28 d
Method: QSAR
GLP: no
- Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEL (*Daphnia magna* (Water flea)): 0.48 mg/l
Exposure time: 21 d
Test Type: semi-static test
Method: OECD Test Guideline 211
GLP: yes
Remarks: Value referred to the Water accumulated fraction (WAF).
- Toxicity to bacteria : LL50 (*Tetrahymena pyriformis*): 677.9 mg/l
Exposure time: 72 h
Method: QSAR
GLP: no
- 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



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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.

2-Ethyl-hexanoic acid:

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

LC50 (*Oryzias latipes*): > 100 mg/l

Exposure time: 96 h

Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates : EC50 (*Daphnia magna* (Water flea)): 85.4 mg/l
Exposure time: 48 h
Test Type: static test
Method: standardised international/national methodology
GLP: yes

Toxicity to algae : EC50 (*Desmodesmus subspicatus* (green algae)): 49.3 mg/l
Exposure time: 96 h
Test Type: static test
Method: standardised international/national methodology
GLP: no

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : EC50 (*Daphnia magna* (Water flea)): 75 mg/l
Exposure time: 21 d
Test Type: semi-static test
Method: OECD Test Guideline 211
GLP: no

Toxicity to bacteria : EC50 (*Pseudomonas putida*): 112.1 mg/l
Exposure time: 17 h
Test Type: static test
Method: standardised international/national methodology
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:

Isodecyl diphenyl phosphite:

Biodegradability : aerobic
Inoculum: activated sludge



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Biodegradation: 0.14 %
Exposure time: 28 d
Method: OECD Test Guideline 301D
Remarks: Not readily biodegradable.

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.

Distillates (petroleum), hydrotreated light:

Biodegradability : aerobic
Inoculum: activated sludge
Result: Readily biodegradable.
Biodegradation: 61 %
Exposure time: 28 d
Method: OECD Test Guideline 301F
GLP: yes

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

2-Ethyl-hexanoic acid:

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

Diisodecyl phenyl phosphite:

Biodegradability : aerobic
Inoculum: activated sludge
Result: Inherently biodegradable.
Biodegradation: 10 %
Exposure time: 28 d
Method: OECD Test Guideline 301B
GLP: yes



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Bioaccumulative potential

Components:

Isodecyl diphenyl phosphite:

Bioaccumulation : Bioconcentration factor (BCF): 606.5
Method: QSAR

Partition coefficient: n-
octanol/water : log Pow: 8.52 (25 °C)

Barium Compounds:

Bioaccumulation : Remarks: Read-across (Analogy)

Remarks: This substance is not considered to be bioaccumulating.

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

Distillates (petroleum), hydrotreated light:

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

2-Ethyl-hexanoic acid:

Bioaccumulation : Remarks: No data available

Partition coefficient: n-
octanol/water : log Pow: 2.7
Method: OECD Test Guideline 107
Remarks: see user defined free text

Diisodecyl phenyl phosphite:

Bioaccumulation : Bioconcentration factor (BCF): 33.27 - 606.5
Method: QSAR

Partition coefficient: n-
octanol/water : log Pow: 9.32 (20 °C)

Mobility in soil

Components:

Isodecyl diphenyl phosphite:

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



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Sediment
Soil

Barium Compounds:

Mobility : Remarks: Not applicable

Distillates (petroleum), hydrotreated light:

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

2-(2-Butoxyethoxy) ethanol:

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

2-Ethyl-hexanoic acid:

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

Diisodecyl phenyl phosphite:

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

Other adverse effects

Components:

Isodecyl diphenyl phosphite:

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.

Distillates (petroleum), hydrotreated light:

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



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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.

2-Ethyl-hexanoic acid:

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

Endocrine disrupting potential : No information available.

Diisodecyl phenyl phosphite:

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



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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.
Barium Compounds (N040)	Not Assigned	24.3

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

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



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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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