

Safety data sheet

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BASF Safety data sheet according to UN GHS 4th rev.

Date / Revised: 21.11.2017

Version: 3.0

Product: **Tinuvin® 1130**

(ID no. 30080322/SDS_GEN_00/EN)

Date of print 22.11.2017

1. Identification

Product identifier

Tinuvin® 1130

Chemical name: reaction mass of alpha-3-(3-(2H-benzotriazol-2-yl)-5-tert-butyl-4-hydroxyphenyl)propionyl- omega-hydroxypoly(oxyethylene) and alpha-3-(3-(2H-benzotriazol-2-yl)-5-tert-butyl-4-hydroxyphenyl)propionyl-omega-3-(3-(2H-benzotriazol-2-yl)-5-tert-butyl-4-hydroxyphenyl)propionylpoly(oxyethylene)

INDEX-Number: 607-176-00-3

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

Relevant identified uses: stabilizer

Details of the supplier of the safety data sheet

Company:

BASF SE

67056 Ludwigshafen

GERMANY

Regional Business Unit Dispersions and

Resins Europe

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2. Hazards Identification

Classification of the substance or mixture

According to UN GHS criteria

Skin Sens. 1A
Aquatic Acute 2
Aquatic Chronic 2

For the classifications not written out in full in this section the full text can be found in section 16.

Label elementsGlobally Harmonized System (GHS)

Pictogram:



Signal Word:
Warning

Hazard Statement:

H317	May cause an allergic skin reaction.
H401	Toxic to aquatic life.
H411	Toxic to aquatic life with long lasting effects.

Precautionary Statements (Prevention):

P280	Wear protective gloves.
P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
P273	Avoid release to the environment.
P272	Contaminated work clothing should not be allowed out of the workplace.

Precautionary Statements (Response):

P303 + P352	IF ON SKIN (or hair): Wash with plenty of soap and water.
P333 + P311	If skin irritation or rash occurs: Call a POISON CENTER or doctor/physician.
P362 + P364	Take off contaminated clothing and wash it before reuse.
P391	Collect spillage.

Precautionary Statements (Disposal):

P501	Dispose of contents/container to hazardous or special waste collection point.
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According to UN GHS criteria

Hazard determining component(s) for labelling: Hydroxyphenyl-benzotriazole-derivative

Other hazards

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According to UN GHS criteria

No specific dangers known, if the regulations/notes for storage and handling are considered.

3. Composition/Information on Ingredients**Substances**Chemical nature

light stabilizer

Poly(oxy-1,2-ethanediyl), .alpha.-[3-[3-(2H-benzotriazol-2-yl)-5-(1,1-dimethylethyl)-4-hydroxyphenyl]-1-oxopropyl]-.omega.-hydroxy- (Content (W/W): >= 25 % - < 75 %)

CAS Number: 104810-48-2

Poly(oxy-1,2-ethanediyl), .alpha.-[3-[3-(2H-benzotriazol-2-yl)-5-(1,1-dimethylethyl)-4-hydroxyphenyl]-1-oxopropyl]-.omega.-[3-[3-(2 H- benzotriazol-2-yl)-5-(1,1-dimethylethyl)-4-hydroxyphenyl]-1-oxopropoxy]- (Content (W/W): >= 25 % - < 50 %)

CAS Number: 104810-47-1

Hazardous ingredients (GHS)

According to UN GHS criteria

Benzenepropanoic acid, 3-(2H-benzotriazol-2-yl)-5-(1,1-dimethylethyl)-4-hydroxy-, methyl ester

Content (W/W): >= 1 % - < 3 % Aquatic Chronic 4

CAS Number: 84268-33-7 H413

EC-Number: 400-820-2

Poly(oxy-1,2-ethanediyl), .alpha.-[3-[3-(2H-benzotriazol-2-yl)-5-(1,1-dimethylethyl)-4-hydroxyphenyl]-1-oxopropyl]-.omega.-[3-[3-(2H

Content (W/W): >= 25 % - < 50 % Skin Sens. 1A

CAS Number: 104810-47-1 Aquatic Acute 2

Aquatic Chronic 2

H317, H401, H411

Poly(oxy-1,2-ethanediyl), .alpha.-[3-[3-(2H-benzotriazol-2-yl)-5-(1,1-dimethylethyl)-4-hydroxyphenyl]-1-oxopropyl]-.omega.-hydroxy-

Content (W/W): >= 25 % - < 75 % Skin Sens. 1A

CAS Number: 104810-48-2 Aquatic Acute 2

Aquatic Chronic 2

H317, H401, H411

For the classifications not written out in full in this section the full text can be found in section 16.

Mixtures

Not applicable

4. First-Aid Measures

Description of first aid measures

Immediately remove contaminated clothing.

If inhaled:

If difficulties occur after vapour/aerosol has been inhaled, remove to fresh air and seek medical attention.

On skin contact:

Wash thoroughly with soap and water.

On contact with eyes:

Wash affected eyes for at least 15 minutes under running water with eyelids held open.

On ingestion:

Rinse mouth immediately and then drink plenty of water, seek medical attention.

Most important symptoms and effects, both acute and delayed

Symptoms: The most important known symptoms and effects are described in the labelling (see section 2) and/or in section 11., Further important symptoms and effects are so far not known.

Indication of any immediate medical attention and special treatment needed

Treatment: Treat according to symptoms (decontamination, vital functions), no known specific antidote.

5. Fire-Fighting Measures

Extinguishing media

Suitable extinguishing media:
water spray, dry powder, foam

Unsuitable extinguishing media for safety reasons:
water jet

Special hazards arising from the substance or mixture

harmful vapours

Evolution of fumes/fog. The substances/groups of substances mentioned can be released in case of fire.

Advice for fire-fighters

Special protective equipment:

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Wear a self-contained breathing apparatus.

Further information:

The degree of risk is governed by the burning substance and the fire conditions. Contaminated extinguishing water must be disposed of in accordance with official regulations.

6. Accidental Release Measures

Personal precautions, protective equipment and emergency procedures

Use personal protective clothing. Breathing protection required.

Environmental precautions

Contain contaminated water/firefighting water. Do not discharge into drains/surface waters/groundwater.

Methods and material for containment and cleaning up

For large amounts: Pump off product.

For residues: Pick up with suitable absorbent material. Dispose of absorbed material in accordance with regulations.

7. Handling and Storage

Precautions for safe handling

No special measures necessary provided product is used correctly.

Protection against fire and explosion:

Take precautionary measures against static discharges.

Conditions for safe storage, including any incompatibilities

Further information on storage conditions: Keep container tightly closed and dry; store in a cool place.

Specific end use(s)

| See exposure scenario(s) in the attachment to this safety data sheet.

8. Exposure Controls/Personal Protection

Control parameters

Components with occupational exposure limits

25322-68-3: polyethylene glycol

Exposure controls

Personal protective equipment

Respiratory protection:

Suitable respiratory protection for higher concentrations or long-term effect: Gas filter for gases/vapours of organic compounds (boiling point >65 °C, e. g. EN 14387 Type A)

Hand protection:

Chemical resistant protective gloves (EN 374)

Suitable materials also with prolonged, direct contact (Recommended: Protective index 6, corresponding > 480 minutes of permeation time according to EN 374):

e.g. nitrile rubber (0.4 mm), chloroprene rubber (0.5 mm), polyvinylchloride (0.7 mm) and other

Supplementary note: The specifications are based on tests, literature data and information of glove manufacturers or are derived from similar substances by analogy. Due to many conditions (e.g. temperature) it must be considered, that the practical usage of a chemical-protective glove in practice may be much shorter than the permeation time determined through testing.

Manufacturer's directions for use should be observed because of great diversity of types.

Eye protection:

Safety glasses with side-shields (frame goggles) (e.g. EN 166)

Body protection:

Body protection must be chosen depending on activity and possible exposure, e.g. apron, protecting boots, chemical-protection suit (according to EN 14605 in case of splashes or EN ISO 13982 in case of dust).

General safety and hygiene measures

Handle in accordance with good industrial hygiene and safety practice. Wearing of closed work clothing is required additionally to the stated personal protection equipment. When using, do not eat, drink or smoke. Hands and/or face should be washed before breaks and at the end of the shift. At the end of the shift the skin should be cleaned and skin-care agents applied.

9. Physical and Chemical Properties

Information on basic physical and chemical properties

Form:	liquid, viscous	
Colour:	yellow to brownish	
Odour:	odourless	
Odour threshold:	not determined	
pH value:	approx. 6,5 (10 g/l, 20 - 25 °C) (as suspension)	
Freezing point:	> -30 °C (1.013 hPa)	(Screening test)
Boiling point:	166 °C (0,011 kPa)	(OECD Guideline 103)
Flash point:	218 °C	(DIN EN 22719; ISO 2719, closed cup)

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Evaporation rate:	not determined	
Flammability:	Product is combustible.	
Lower explosion limit:	For liquids not relevant for classification and labelling., The lower explosion point may be 5 - 15 °C below the flash point.	
Upper explosion limit:	For liquids not relevant for classification and labelling.	
Ignition temperature:	405 °C	(DIN 51794)
Vapour pressure:	0,0048 hPa (25 °C)	(OECD Guideline 104)
Density:	1,17 g/cm ³ (20 °C)	
Relative density:	approx. 1,17 (20 °C)	
Relative vapour density (air):	not determined	
Solubility in water:		(Directive 84/449/EEC, A.6)
	0,0077 g/l (20 °C, 1.013 hPa)	
Solubility (quantitative) solvent(s):	standard fat 113 g/kg (37 °C)	
Partitioning coefficient n-octanol/water (log Kow):	-1,3 - 5,9 (25 °C; pH value: 7)	(OECD Guideline 117)
Self ignition:	Based on its structural properties the product is not classified as self-igniting.	Test type: Spontaneous self-ignition at room-temperature.
Thermal decomposition:	> 250 °C	
Viscosity, dynamic:	7.400 mPa.s (20 °C, 61,9 1/s)	(DIN 53019)
Explosion hazard:	not explosive	(Directive 84/449/EEC, A.14)
Fire promoting properties:	Based on its structural properties the product is not classified as oxidizing.	

Other information

pKA:	9,23 (25 °C)	(calculated)
Adsorption/water - soil:	KOC: 14618; log KOC: 4,2	(calculated)
Adsorption/water - soil:		(OECD Guideline 106)
Surface tension:	Study technically not feasible. 47,5 mN/m (20 °C; 1 g/l)	(Directive 84/449/EEC, A.5, Ring method)
Grain size distribution:	The substance / product is marketed or used in a non solid or granular form.	

10. Stability and Reactivity

Reactivity

No hazardous reactions if stored and handled as prescribed/indicated.

Chemical stability

The product is stable if stored and handled as prescribed/indicated.

Possibility of hazardous reactions

No hazardous reactions when stored and handled according to instructions.

Conditions to avoid

See MSDS section 7 - Handling and storage.

Incompatible materials

Substances to avoid:

strong acids, strong bases, strong oxidizing agents

Hazardous decomposition products

Hazardous decomposition products:

No hazardous decomposition products if stored and handled as prescribed/indicated.

11. Toxicological Information

Information on toxicological effects

Acute toxicity

Assessment of acute toxicity:

Virtually nontoxic after a single ingestion. Virtually nontoxic by inhalation. Virtually nontoxic after a single skin contact.

Experimental/calculated data:

LD50 rat (oral): > 5.000 mg/kg (OECD Guideline 401)

No mortality was observed.

LC50 rat (by inhalation): > 5,8 mg/l 4 h (OECD Guideline 403)

No mortality was observed.

LD50 rat (dermal): > 2.000 mg/kg (OECD Guideline 402)

No mortality was observed.

Irritation

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Assessment of irritating effects:
Not irritating to the skin. Not irritating to the eyes.

Experimental/calculated data:
Skin corrosion/irritation rabbit: non-irritant (OECD Guideline 404)

Serious eye damage/irritation rabbit: non-irritant (OECD Guideline 405)

Respiratory/Skin sensitization

Assessment of sensitization:
Caused skin sensitization in animal studies.

Experimental/calculated data:
Guinea pig maximization test guinea pig: skin sensitizing (OECD Guideline 406)

Germ cell mutagenicity

Assessment of mutagenicity:
The substance was not mutagenic in bacteria. The substance was not mutagenic in mammalian cell culture. The substance was not mutagenic in studies with mammals.

Carcinogenicity

Assessment of carcinogenicity:
No data was available concerning carcinogenic activity.

Reproductive toxicity

Assessment of reproduction toxicity:
The results of animal studies gave no indication of a fertility impairing effect. Animal studies gave no indication of a developmental toxic effect at doses that were not toxic to the parental animals.

Developmental toxicity

Assessment of teratogenicity:
In animal studies the substance did not cause malformations.

Specific target organ toxicity (single exposure)

Assessment of STOT single:
Based on the available information there is no specific target organ toxicity to be expected after a single exposure.

Repeated dose toxicity and Specific target organ toxicity (repeated exposure)

Assessment of repeated dose toxicity:
The substance may cause damage to the liver after repeated ingestion.

Aspiration hazard

not applicable

12. Ecological Information

Toxicity

Assessment of aquatic toxicity:

Acutely toxic for aquatic organisms. Toxic to aquatic organisms based on long-term (chronic) toxicity study data. The inhibition of the degradation activity of activated sludge is not anticipated when introduced to biological treatment plants in appropriate low concentrations.

Toxicity to fish:

LC50 (96 h) 2,8 mg/l, *Oncorhynchus mykiss* (OECD 203; ISO 7346; 84/449/EEC, C.1, static)

The product has low solubility in the test medium. An aqueous solution prepared with solubilizers has been tested. Nominal concentration.

Aquatic invertebrates:

EC50 (48 h) 4 mg/l, *Daphnia magna* (static)

The product has low solubility in the test medium. An aqueous solution prepared with solubilizers has been tested. Nominal concentration.

Aquatic plants:

EC50 (72 h) > 100 mg/l (growth rate), *Pseudokirchneriella subcapitata* (OECD Guideline 201, static)
Nominal concentration.

EC10 (72 h) 10 mg/l (growth rate), *Pseudokirchneriella subcapitata* (OECD Guideline 201, static)
Nominal concentration.

Microorganisms/Effect on activated sludge:

EC50 (3 h) > 1.000 mg/l, activated sludge, domestic (OECD Guideline 209, static)

Chronic toxicity to fish:

Study scientifically not justified.

Chronic toxicity to aquatic invertebrates:

No observed effect concentration (21 d) 0,78 mg/l, *Daphnia magna* (OECD Guideline 202, part 2, semistatic)

The product has low solubility in the test medium. An aqueous solution prepared with solubilizers has been tested. Nominal concentration.

Assessment of terrestrial toxicity:

No effects at the highest test concentration.

Soil living organisms:

LC0 (14 d) > 1.000 mg/kg, *Eisenia foetida* (OECD Guideline 207, artificial soil)

No effects at the highest test concentration.

No observed effect concentration (56 d) 100 mg/kg, Eisenia foetida (OECD Guideline 207, artificial soil)

No effects at the highest test concentration.

Terrestrial plants:

EC50 > 100 mg/l, Brassica rapa (OECD Guideline 208)

No effects at the highest test concentration.

Other terrestrial non-mammals:

Study scientifically not justified.

Persistence and degradability

Assessment biodegradation and elimination (H₂O):

Not readily biodegradable (by OECD criteria). Moderately/partially biodegradable.

Elimination information:

24 % CO₂ formation relative to the theoretical value (28 d) (OECD 301B; ISO 9439; 92/69/EEC, C.4-C) (aerobic, activated sludge, domestic, non-adapted)

1 % C-14 labelling (100 d) (OECD 308) (aerobic, sediment)

The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

0,2 % C-14 labelling (100 d) (OECD 308) (anaerobic, sediment)

The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Assessment of stability in water:

Study scientifically not justified.

Information on Stability in Water (Hydrolysis):

Study technically not feasible.

Bioaccumulative potential

Assessment bioaccumulation potential:

Does not significantly accumulate in organisms.

Bioaccumulation potential:

Bioconcentration factor: 34 (502 d), Oncorhynchus mykiss (OECD-Guideline 305)

Mobility in soil

Assessment transport between environmental compartments:

Adsorption in soil: Adsorption to solid soil phase is expected.

Other adverse effects

The substance is not listed in Regulation (EC) 1005/2009 on substances that deplete the ozone layer.

Additional information

Add. remarks environm. fate & pathway:

Treatment in biological waste water treatment plants has to be performed according to local and administrative regulations.

Other ecotoxicological advice:

Do not discharge product into the environment without control.

13. Disposal Considerations

Waste treatment methods

Must be disposed of or incinerated in accordance with local regulations.

Waste key:

07 02 08⁰ other still bottoms and reaction residues

Contaminated packaging:

Uncontaminated packaging can be re-used.

Packs that cannot be cleaned should be disposed of in the same manner as the contents.

14. Transport Information

Land transport

ADR

UN number	UN3082
UN proper shipping name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (contains BENZOTRIAZOLE DERIVATIVE)
Transport hazard class(es):	9, EHSM
Packing group:	III
Environmental hazards:	yes
Special precautions for user:	None known

RID

UN number	UN3082
UN proper shipping name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (contains BENZOTRIAZOLE DERIVATIVE)
Transport hazard class(es):	9, EHSM
Packing group:	III
Environmental hazards:	yes
Special precautions for user:	None known

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user:

Inland waterway transport

ADN

UN number: UN3082
UN proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,
N.O.S. (contains BENZOTRIAZOLE DERIVATIVE)
Transport hazard class(es): 9, EHSM
Packing group: III
Environmental hazards: yes
Special precautions for user: None known

Transport in inland waterway vessel

Not evaluated

Sea transport

IMDG

UN number: UN 3082
UN proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,
N.O.S. (contains BENZOTRIAZOLE DERIVATIVE)
Transport hazard class(es): 9, EHSM
Packing group: III
Environmental hazards: yes
Marine pollutant: YES
Special precautions for user: None known

Air transport

IATA/ICAO

UN number: UN 3082
UN proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,
N.O.S. (contains BENZOTRIAZOLE DERIVATIVE)
Transport hazard class(es): 9, EHSM
Packing group: III
Environmental hazards: yes
Special precautions for user: None known

Transport in bulk according to Annex II of MARPOL and the IBC Code

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Regulation:	Not evaluated
Shipment approved:	Not evaluated
Pollution name:	Not evaluated
Pollution category:	Not evaluated
Ship Type:	Not evaluated

15. Regulatory Information

Safety, health and environmental regulations/legislation specific for the substance or mixture

Not applicable

16. Other Information

Full text of classifications, hazard symbols and hazard statements, if mentioned in section 2 or 3:

Skin Sens.	Skin sensitization
Aquatic Acute	Hazardous to the aquatic environment - acute
Aquatic Chronic	Hazardous to the aquatic environment - chronic
H413	May cause long lasting harmful effects to aquatic life.
H317	May cause an allergic skin reaction.
H401	Toxic to aquatic life.
H411	Toxic to aquatic life with long lasting effects.

The data contained in this safety data sheet are based on our current knowledge and experience and describe the product only with regard to safety requirements. This safety data sheet is neither a Certificate of Analysis (CoA) nor technical data sheet and shall not be mistaken for a specification agreement. Identified uses in this safety data sheet do neither represent an agreement on the corresponding contractual quality of the substance/mixture nor a contractually designated use. It is the responsibility of the recipient of the product to ensure any proprietary rights and existing laws and legislation are observed.

Vertical lines in the left hand margin indicate an amendment from the previous version.