Safety data sheet

1. Identification of the substance/mixture and of the company/undertaking

Product identifier

TINUVIN® 1577 ED

Chemical name: 2-(4,6-Diphenyl-1,3,5-triazin-2-yl)-5-[(hexyl)oxy]-phenol
INDEX-Number: 604-064-00-6
CAS Number: 147315-50-2

REACH registration number: 01-0000015878-54-0000

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

Relevant identified uses: industrial chemicals
Not recommended use: This material is not intended for use in products for which prolonged contact with mucous membranes, body fluids or abraded skin, or implantation within the human body, is specifically intended, unless the finished product has been tested in accordance with nationally and internationally applicable safety testing requirements. Because of the wide
range of such potential uses, we are not able to recommend this material as safe and effective for such uses and assume no liability for such uses.

Details of the supplier of the safety data sheet

Company:
BASF SE
67056 Ludwigshafen
GERMANY

Contact address:
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Emergency telephone number

International emergency number:
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2. Hazards Identification

Label elements

Globally Harmonized System, EU (GHS)

Hazard Statement:
H413 May cause long lasting harmful effects to aquatic life.

Precautionary Statements (Prevention):
P273 Avoid release to the environment.

Precautionary Statements (Disposal):
P501 Dispose of contents/container to hazardous or special waste collection point.

According to Directive 67/548/EEC or 1999/45/EC

as in Annex I of Directive 67/548/EEC

R-phrase(s)
R53 May cause long-term adverse effects in the aquatic environment.

S-phrase(s)
S61 Avoid release to the environment. Refer to special instructions/safety data sheets.

Classification of the substance or mixture

According to Regulation (EC) No 1272/2008 [CLP]

Aquatic Chronic 4

According to Directive 67/548/EEC or 1999/45/EC

Possible Hazards:
May cause long-term adverse effects in the aquatic environment.

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

Other hazards

According to Regulation (EC) No 1272/2008 [CLP]

The product is under certain conditions capable of dust explosion.

3. Composition/Information on Ingredients

Substances

Chemical nature

2-(4,6-diphenyl-1,3,5-triazin-2-yl)-5-((hexyl)oxy)-phenol
CAS Number: 147315-50-2
EC-Number: 411-380-6
INDEX-Number: 604-064-00-6

Hazardous ingredients (GHS)
according to Regulation (EC) No. 1272/2008

2-(4,6-diphenyl-1,3,5-triazin-2-yl)-5-((hexyl)oxy)-phenol
Content (W/W): 100 % Aquatic Chronic 4
CAS Number: 147315-50-2 H413
EC-Number: 411-380-6
INDEX-Number: 604-064-00-6

Hazardous ingredients
according to Directive 1999/45/EC

2-(4,6-diphenyl-1,3,5-triazin-2-yl)-5-((hexyl)oxy)-phenol
Content (W/W): 100 %
CAS Number: 147315-50-2
EC-Number: 411-380-6
INDEX-Number: 604-064-00-6
R-phrase(s): 53

For the classifications not written out in full in this section, including the indication of danger, the hazard symbols, the R phrases, and the hazard statements, the full text is listed in section 16.

4. First-Aid Measures

Description of first aid measures

Remove contaminated clothing.

If inhaled:
If difficulties occur after dust 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 and then drink plenty of water.

Most important symptoms and effects, both acute and delayed

Symptoms: Further important symptoms and effects are so far not known.

The most important known symptoms and effects are described in the labelling (see section 2) and/or in section 11.

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:
dry powder, foam

Unsuitable extinguishing media for safety reasons:
carbon dioxide

Additional information:
Avoid whirling up the material/product because of the danger of dust explosion.

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:
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

Avoid dust formation. Use personal protective clothing.

Environmental precautions

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

Methods and material for containment and cleaning up

For small amounts: Pick up with suitable appliance and dispose of.
For large amounts: Contain with dust binding material and dispose of.
Avoid raising dust.

Reference to other sections

Information regarding exposure controls/personal protection and disposal considerations can be found in section 8 and 13.

7. Handling and Storage

Precautions for safe handling

Breathing must be protected when large quantities are decanted without local exhaust ventilation.

Protection against fire and explosion:
Avoid dust formation. Take precautionary measures against static discharges.

Dust explosion class: Dust explosion class 1 (Kst-value >0 up to 200 bar m s-1).

Conditions for safe storage, including any incompatibilities

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

The packed product is not damaged by low temperatures or by frost.
The packed product will not be damaged by high temperatures.

Specific end use(s)

For the relevant identified use(s) listed in Section 1 the advice mentioned in this section 7 is to be observed.

8. Exposure Controls/Personal Protection

Control parameters

Components with workplace control parameters

No occupational exposure limits known.

Exposure controls

Personal protective equipment

Respiratory protection:
Suitable respiratory protection for lower concentrations or short-term effect: Particle filter with medium efficiency for solid and liquid particles (e.g. EN 143 or 149, Type P2 or FFP2)

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)

General safety and hygiene measures
Handle in accordance with good industrial hygiene and safety practice. Wearing of closed work clothing is recommended.

9. Physical and Chemical Properties

Information on basic physical and chemical properties

Form:	granules	
Colour:	yellow	
Odour:	odourless	
pH value:	No data available.	
Melting point:	148.8 °C	(Directive 92/69/EEC, A.1)
Boiling point:	515 °C Extrapolated value	
Flammability:	not highly flammable	(Directive 92/69/EEC, A.10)
Ignition temperature:	400 °C	(BAM)
Vapour pressure:	< 0.000003 Pa (20 °C) Extrapolated value	(OECD Guideline 104)
Density:	1.19 g/cm3 (23 °C)	(Directive 92/69/EEC, A.3)
Relative density:	1.19 (23 °C, 1,013 hPa)	(Directive 84/449/EEC, A.3)
Solubility in water:	< 0.0003 mg/l (20 °C)	(Directive 92/69/EEC, A.6)
Solubility (quantitative) solvent(s):	trichloromethane; chloroform 254 g/l (20 °C)	
Solubility (quantitative) solvent(s):	dichloromethane; methylene chloride 169 g/l (20 °C)	
Solubility (quantitative) solvent(s):	toluene 51 g/l (20 °C)	
Solubility (quantitative) solvent(s):	acetone; propan-2-one; propanone 3.1 g/l (20 °C)	
Solubility (quantitative) solvent(s):	n-hexane 0.7 g/l (20 °C)	
Solubility (quantitative) solvent(s):	ethanol; ethyl alcohol 0.2 g/l (20 °C)	
Solubility (quantitative) solvent(s):	standard fat 10 g/kg (37 °C)	
Partitioning coefficient n-octanol/water (log Kow):	7.18 (20 - 25 °C)	(OECD Guideline 117)
Self ignition:	not self-igniting	(Method: Directive 92/69/EEC, A.16)
Thermal decomposition:	226 - 371 °C (DSC (OECD 113)) 240 - 500 °C (dynamic (Lütolf oven)) > 350 °C (VDI 2263, sheet 1, 1.4.1)	
Explosion hazard:	not explosive	(Directive 92/69/EEC, A.14)
Fire promoting properties:	not fire-propagating	(Directive 92/69/EEC, A.17)

Other information

Self heating ability:	It is not a substance capable of spontaneous heating.	
Minimum ignition energy:	No data available.	
Radioactivity:		not radioactive for transport purposes
Bulk density:	450 - 500 kg/m3	
pKA:	11.45	(calculated)
Hygroscopy:	not applicable	
Surface tension:	72 - 73 mN/m (20 °C)	(Directive 84/449/EEC, A.5)
Molar mass:	425.54 g/mol	

Other Information:
If necessary, information on other physical and chemical parameters is indicated in this section.

10. Stability and Reactivity

Reactivity

Corrosion to metals:	No corrosive effect on metal.	
Reactions with water/air:	Reaction with:	water
	Flammable gases:	no
	Toxic gases:	no
	Corrosive gases:	no
	Smoke or fog:	no
	Peroxides:	no
	Reaction with:	air
	Flammable gases:	no
	Toxic gases:	no
	Corrosive gases:	no
	Smoke or fog:	no
	Peroxides:	no
Formation of flammable gases:	Remarks:	Forms no flammable gases in the presence of water.

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

Peroxides:	0 % The product does not contain peroxides.

Possibility of hazardous reactions
Dust explosion hazard.

Conditions to avoid

Avoid dust formation. Avoid deposition of dust. Avoid all sources of ignition: heat, sparks, open flame. Avoid electro-static charge.

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

Experimental/calculated data:
LD50 rat (oral): > 2,000 mg/kg (OECD Guideline 401)

LD50 rat (dermal): > 1,333 mg/kg (OECD Guideline 402)
The value meets the highest applied test concentration.

Irritation

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

Experimental/calculated data:
guinea pig: Non-sensitizing. (OECD Guideline 406)

Germ cell mutagenicity

Experimental/calculated data:
Ames-test
negative (OECD Guideline 471)

Chromosomal Aberration Test
negative (OECD Guideline 473)

Carcinogenicity

Assessment of carcinogenicity:
No data available concerning carcinogenic effects.

Reproductive toxicity

Assessment of reproduction toxicity:
No data available concerning reproduction toxicity.

Developmental toxicity

Assessment of teratogenicity:
No data available concerning teratogenic effects.

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:
No adverse effects were observed after repeated oral exposure in animal studies.

12. Ecological Information

Toxicity

Assessment of aquatic toxicity:
May cause long-term adverse effects in the aquatic environment.

Toxicity to fish:
LC50 (96 h) > 9.2 mg/l, Brachydanio rerio (OECD Guideline 203)
The statement of the toxic effect relates to the analytically determined concentration. The product has low solubility in the test medium. An aqueous solution prepared with solubilizers has been tested. No effects at the highest test concentration.

Aquatic invertebrates:
EC50 (48 h) > 11.2 mg/l, Daphnia magna (OECD Guideline 202, part 1)
The statement of the toxic effect relates to the analytically determined concentration. The product has low solubility in the test medium. An aqueous solution prepared with solubilizers has been tested. No effects at the highest test concentration.

Aquatic plants:
EC50 (72 h) > 74.5 mg/l, Scenedesmus sp. (OECD Guideline 201)
The statement of the toxic effect relates to the analytically determined concentration. No effects at the highest test concentration.

Microorganisms/Effect on activated sludge:
EC50 (3 h) > 100 mg/l, activated sludge (Directive 88/302/EEC, part C, p. 118)

Persistence and degradability

Assessment biodegradation and elimination (H2O):
The product is virtually insoluble in water and can thus be separated from water mechanically in suitable effluent treatment plants.

Elimination information:
0 - 2 % (28 d) (OECD 301B; ISO 9439; 92/69/EEC, C.4-C) Not readily biodegradable (by OECD criteria).

Bioaccumulative potential

Assessment bioaccumulation potential:
Does not significantly accumulate in organisms.

Bioaccumulation potential:
Bioconcentration factor: < 8.1 (56 d), Cyprinus carpio (OECD Guideline 305 C)

Mobility in soil (and other compartments if available)

Assessment transport between environmental compartments:
Adsorption to solid soil phase is expected.

Results of PBT and vPvB assessment

According to Annex XIII of Regulation (EC) No.1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH): The product does not contain a substance fullfilling the PBT (persistent/bioaccumulative/toxic) criteria or the vPvB (very persistent/very bioaccumulative) criteria.

Additional information

Sum parameter

Chemical oxygen demand (COD): (Directive 84/449/EEC, C.9) 2,100 mg/g

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.

The UK Environmental Protection (Duty of Care) Regulations (EP) and amendments should be noted (United Kingdom).

This product and any uncleaned containers must be disposed of as hazardous waste in accordance with the 2005 Hazardous Waste Regulations and amendments (United Kingdom)

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

Not classified as a dangerous good under transport regulations

RID

Not classified as a dangerous good under transport regulations

Inland waterway transport
ADN

Not classified as a dangerous good under transport regulations

Sea transport
IMDG

Not classified as a dangerous good under transport regulations

Air transport
IATA/ICAO

Not classified as a dangerous good under transport regulations

15. Regulatory Information

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

If other regulatory information applies that is not already provided elsewhere in this safety data sheet, then it is described in this subsection.

The data should be considered when making any assessment under the Control of Substances Hazardous to Health Regulations (COSHH), and related guidance, for example, 'COSHH Essentials' (United Kingdom).
This product is classified under the Chemicals (Hazard Information and Packaging) Regulations, (CHIP) (United Kingdom).

Chemical Safety Assessment

Chemical Safety Assessment not yet performed due to registration timelines

16. Other Information

Full text of the classifications, including the indication of danger, the hazard symbols, the R phrases, and the hazard statements, if mentioned in section 2 or 3:
53 May cause long-term adverse effects in the aquatic environment.

Aquatic Chronic	Hazardous to the aquatic environment - chronic
H413	May cause long lasting harmful effects to aquatic life.

If you have any queries relating to this MSDS, it's contents or any other product safety related questions, please write to the following e-mail address: product-safety-north@basf.com

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. The data do not describe the product's properties (product specification). Neither should any agreed property nor the suitability of the product for any specific purpose be deduced from the data contained in the safety data sheet. 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.