Safety Data Sheet

According to Directive 91/155/EEC
May not comply with national legislation; shall be used only as a source of information.

TINUVIN 329

Revision 15.10.1999
(dd.mm.yyyy)

1. Identification of the Substance/Preparation and the Company/Undertaking

Chemical characterization	2-(2H-benzotriazol-2-yl)-4-(1,1,3,3-tetramethylbutyl)phenol
CAS Number	003147-75-9
Producer/Supplier	CIBA SPEZIALITÄTENCHEMIE AG KLYBECKSTRASSE 141 POSTFACH 4002 BASEL SWITZERLAND
Phone Number	+41 (61) 6361111
Telefax	+41 (61) 6361212
Information	Product Safety and Regulatory Affairs
Telefax	+41 (61) 6368601
Emergency Phone Number (24h)	+41 (61) 6965151

2. Composition/Information on Ingredients

CAS Number	Product Name	Content	Symbol(s)	R-Phrase(s)
003147-75-9	2-(2H-benzotriazol-2-yl)-4-(1,1,3,3-tetramethylbutyl)phenol	100 %		R52/53

3. Hazards Identification

Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

4. First Aid Measures

Skin contact
Wash off with soap and plenty of water. Do not use organic solvents.

Eye contact
Rinse immediately with plenty of water for at least 15 minutes. In case of eye irritation, seek medical attention.

Inhalation
Move to fresh air. In case of irritation of respiratory system or mucous membranes, seek medical attention. In case of indisposition, seek medical attention. In case of prolonged exposure, seek medical attention.

Ingestion
Immediately give plenty (> 500 ml) of water (if possible charcoal slurry). In case of spontaneous vomiting be sure that vomitus can freely drain due of danger of suffocation. Give water repeatedly. Artificial induction of vomiting should be restricted to first aid staff. Give nothing by mouth in cases of unconsciousness or convulsion. Seek medical advice.

5. Fire-Fighting Measures

Suitable extinguishing media
Water spray, Carbon dioxide (CO2), Foam, Dry powder

Extinguishing media which must not be used for safety reasons
High volume water jet

Exposure hazards
Contaminated water from fire hoses or sprinklers, etc., must be prevented from draining into watercourses, sewers, or the ground water. Sufficient measures must be taken to retain water used for extinguishing. Contaminated water and soil must be disposed of in conformity with local regulations.

Special protective equipment for firefighters
Wear full protective clothing. Wear self-contained breathing apparatus.

Hazardous decomposition products
Oxides of carbon, Oxides of nitrogen (NOx), Toxic gases/vapours

6. Accidental Release Measures

Personal precautions
Do not breathe vapours/dust. Remove all sources of ignition. Avoid contact with skin, eyes and clothing.

Environmental precautions
Do not flush into surface water, sanitary sewer or ground water system.

Methods for cleaning up
Use mechanical handling equipment. Collect the spilled product into suitable containers, which must be tightly sealed and properly labelled. Avoid dust formation.

7. Handling and Storage

Handling
Handle and open container with care. Avoid dust formation and ignition sources. Ensure good local exhaust ventilation. Do not eat, drink or smoke at the workplace.

Storage
Keep away from food and drink. Store in the original container securely closed.

Danger! Explosion risk. Risk of explosion if an air-dust mixture forms. Avoid creating dusty conditions. Empty only into earthed containers. If container is larger than 2000 liter in volume, or when flammable solvents are present inert container or use a system otherwise designed to prevent or contain an explosion -- seek expert advice.

8. Exposure Controls / Personal Protection

Exposure limit(s) *CIEL-TWA Ciba internal exposure limit (8 hour time weighted average)*
Value 10 mg/m3
Justification to exposure limit Exposure limit for inhalable dust.

Technical measures/Precautions
Exposure limit(s) should be monitored using suitable analytical equipments.

Respiratory protection
Effective dust mask

Hand protection
Protective gloves

Eye protection
Suitable goggles or face protection

Skin and body protection
Working clothes , Closed footwear

9. Physical and Chemical Properties

Form	powder	
Colour	slightly yellow	
Odour	odourless	
Melting/freezing temperature	103 - 105 °C	
Boiling point/range	not applicable	
Density *20 °C*	1.18 g/cm3	
Flash point	> 150 °C	DIN 51584
Ignition Temperature	420 °C	BAM
Oxidising properties	not tested	
Self-ignition temperature	not tested	
Water solubility *20 °C*	< 1 mg/l	
Vapour pressure *25 °C*	1E-5 Pa	

Partition coefficient; Log Pow *20 - 25 °C*	> 6
pH-value *1 % suspension in water 20 - 25 °C*	5.6
Explosive properties	not tested

10. Stability and Reactivity

Decomposition temperature	> 350 °C
Conditions to avoid	Static discharges.
Materials to avoid	Strong acids, strong bases and strong oxidising agents.
Hazardous decomposition products	Oxides of carbon, Oxides of nitrogen (NOx), Toxic gases/vapours

11. Toxicological Information

Acute oral toxicity *Rat*	LD50	> 2000 mg/kg
Acute dermal irritation/corrosion *Rabbit*		not irritant
Acute eye irritation/corrosion *Rabbit*		not irritant
Acute skin sensitisation *Guinea pig*		not sensitising

12. Ecological Information

Acute toxicity to fish *Zebra fish (Brachydanio rerio) 96 h*	LC50	> 100 mg/l
Acute toxicity to daphnia *Daphnia magna 24 h*	EC50	15 mg/l
Acute toxicity to bacteria *Sewage sludge 3 h*	IC50	> 100 mg/l
Acute toxicity to algae *Scenedesmus sp. 72 h*	EC50	> 100 mg/l
Biodegradability		Not biodegradable

Ecotoxic effects
Do not discharge product unmonitored into the environment.

13. Disposal Considerations

Waste from residues / unused products
Residual chemical should be disposed by incineration or by other modes of disposal in compliance with local legislation.

Contaminated packaging
Contaminated packaging material should be treated equivalent to residual chemical. Clean packaging material should be subjected to waste management schemes (recovery recycling, reuse) according to local legislation.

14. Transport Information

Flash point	> 150 °C
ADR/RID	Class: Free
IMO	Class: Free
ICAO	Class: Free

15. Regulatory Information

EC-Number	221-573-5
Contains	2-(2H-benzotriazol-2-yl)-4-(1,1,3,3-tetramethylbutyl)phenol
Classification	Self-classification
R-Phrase(s)	R52/53 Harmful to aquatic organisms, 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.

16. Other Information

Essential changes: New layout

TINUVIN is a registered trademark.

Important

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, CIBA IS NOT ABLE TO RECOMMEND THIS MATERIAL AS SAFE AND EFFECTIVE FOR SUCH USES AND ASSUMES NO LIABILITY FOR SUCH USES.

This product should be stored, handled and used in accordance with good industrial hygiene practices and in conformity with any legal regulation. The information contained herein is based on the present state of our knowledge and is intended to describe our products from the point of view of safety requirements. It should not therefore be construed as guaranteeing specific properties.