1. Identification

Product identifier used on the label

UV 234

Recommended use of the chemical and restriction on use
Unsuitable for 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.
Recommended use*: additive for the plastics industry; stabilizer; UV absorber

Details of the supplier of the safety data sheet

Dongguan Baoxu Chemical Technology.,ltd.
Caijin Business Bldg DongGuan CN 523071
+86 0769 22821082 Fax 86 0769 22821083
www.additivesforpolymer.com
info@additivesforpolymer.com

Other means of identification

2. Hazards Identification

Combustible Dust Combustible Dust (1) Combustible Dust

Label elements
Signal Word: Warning

Hazard Statement: May form combustible dust concentration in air.

Hazards not otherwise classified

The product is under certain conditions capable of dust explosion.


CAUTION: Chronic exposure may cause liver effects.
May cause mechanical irritation to eyes, skin and respiratory system.
AVOID CREATING DUST.
Avoid inhalation of dusts.
Use NIOSH approved respirator as needed to mitigate exposure.
Take precautionary measures against static discharges.

3. Composition / Information on Ingredients


This product does not contain any components classified as hazardous under the referenced regulation.


<table>
<thead>
<tr>
<th>CAS Number</th>
<th>Content (W/W)</th>
<th>Chemical name</th>
</tr>
</thead>
<tbody>
<tr>
<td>70321-86-7</td>
<td>60.0 - 100.0 %</td>
<td>Phenol, 2-(2H-benzotriazol-2-yl)-4,6-bis(1-methyl-1-phenylethyl)-</td>
</tr>
</tbody>
</table>

4. First-Aid Measures

Description of first aid measures

General advice: Remove contaminated clothing.

If inhaled: If difficulties occur after dust has been inhaled, remove to fresh air and seek medical attention. If on skin: Wash thoroughly with soap and water.

If in eyes: Wash affected eyes for at least 15 minutes under running water with eyelids held open.
If irritation develops, seek medical attention.

**If swallowed:**
Rinse mouth and then drink plenty of water. Do not induce vomiting. Immediate medical attention required.

**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**

- **Note to physician**
  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**
   - Hazards during fire-fighting: harmful vapours
   - Evolution of fumes/fog. The substances/groups of substances mentioned can be released in case of fire.

   **Advice for fire-fighters**
   - Protective equipment for fire-fighting:
     Firefighters should be equipped with self-contained breathing apparatus and turn-out gear.

   **Further information:**
   Dusty conditions may ignite explosively in the presence of an ignition source causing flash fire.

6. **Accidental release measures**

   **Further accidental release measures:**
   Avoid dispersal of dust in the air (i.e., clearing dust surfaces with compressed air). Avoid the formation and build-up of dust - danger of dust explosion. Dust in sufficient concentration can result in an explosive mixture in air. Handle to minimize dusting and eliminate open flame and other sources of ignition.

**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
Nonsparking tools should be used.

7. Handling and Storage

Precautions for safe handling
Breathing must be protected when large quantities are decanted without local exhaust ventilation.

Closed containers should only be opened in well-ventilated areas. Avoid dust formation. Do not use any sparking tools.

Protection against fire and explosion:
Avoid dust formation. Dust in sufficient concentration can result in an explosive mixture in air. Handle to minimize dusting and eliminate open flame and other sources of ignition. Routine housekeeping should be instituted to ensure that dusts do not accumulate on surfaces. Dry powders can build static electricity charges when subjected to the friction of transfer and mixing operations. Provide adequate precautions, such as electrical grounding and bonding, or inert atmospheres. Refer to NFPA 654, Standard for the Prevention of Fire and Dust Explosions from the Manufacturing, Processing, and Handling of Combustible Particulate Solids (2013 Edition) for safe handling.

Conditions for safe storage, including any incompatibilities
No applicable information available.

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

8. Exposure Controls/Personal Protection

Advice on system design:
It is recommended that all dust control equipment such as local exhaust ventilation and material transport systems involved in handling of this product contain explosion relief vents or an explosion suppression system or an oxygen deficient environment. Ensure that dust-handling systems (such as exhaust ducts, dust collectors, vessels, and processing equipment) are designed in a manner to prevent the escape of dust into the work area (i.e., there is no leakage from the equipment). Use only appropriately classified electrical equipment and powered industrial trucks.

Personal protective equipment Respiratory protection:
Respiratory protection may not be required under normal operating conditions if adequate ventilation is provided.

Hand protection:
Wear chemical resistant protective gloves.

Eye protection:
Safety glasses with side-shields.
Body protection:

Body protection must be chosen based on level of activity and exposure.

General safety and hygiene measures:

Wear protective clothing as necessary to minimize contact. Handle in accordance with good industrial hygiene and safety practice. Handle in accordance with good industrial hygiene and practice.

9. Physical and Chemical Properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Form</td>
<td>granules</td>
</tr>
<tr>
<td>Odour</td>
<td>odourless</td>
</tr>
<tr>
<td>Odour threshold</td>
<td>No applicable information available.</td>
</tr>
<tr>
<td>Colour</td>
<td>slightly yellow</td>
</tr>
<tr>
<td>pH value</td>
<td>5.4 - 6.5 (1 % (m), 20 - 25 °C) (as aqueous solution)</td>
</tr>
<tr>
<td>Melting point</td>
<td>137 - 141 °C</td>
</tr>
<tr>
<td>Boiling point</td>
<td>not applicable</td>
</tr>
<tr>
<td>Sublimation point</td>
<td>No applicable information available.</td>
</tr>
<tr>
<td>Flash point</td>
<td>&gt;150 °C</td>
</tr>
<tr>
<td>Flammability</td>
<td>not highly flammable</td>
</tr>
<tr>
<td>Flash point</td>
<td>not highly flammable</td>
</tr>
<tr>
<td>Lower explosion limit</td>
<td>For solids not relevant for classification and labelling.</td>
</tr>
<tr>
<td>Upper explosion limit</td>
<td>For solids not relevant for classification and labelling.</td>
</tr>
<tr>
<td>Autoignition</td>
<td>400 °C (BAM)</td>
</tr>
<tr>
<td>Vapour pressure</td>
<td>&lt; 0.000001 hPa (25 °C) (OECD Guideline 104)</td>
</tr>
<tr>
<td>Density</td>
<td>1.22 g/cm³ (20 °C)</td>
</tr>
<tr>
<td>Bulk density</td>
<td>300 - 450 g/m³</td>
</tr>
<tr>
<td>Partitioning coefficient</td>
<td>approx. 6.5 (20 - 25 °C) (OECD Guideline 107)</td>
</tr>
<tr>
<td>octanol/water (log Pow)</td>
<td>not self-igniting</td>
</tr>
<tr>
<td>Self-ignition temperature</td>
<td>&gt; 350 °C</td>
</tr>
<tr>
<td>Viscosity, dynamic</td>
<td>not determined (measured)</td>
</tr>
<tr>
<td>Particle size</td>
<td>0.5 %</td>
</tr>
<tr>
<td>% volatiles</td>
<td></td>
</tr>
<tr>
<td>Solubility in water</td>
<td>&lt; 0.005 mg/l (20 °C)</td>
</tr>
<tr>
<td>Molar mass</td>
<td>447.58 g/mol</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>The product is a non-volatile solid.</td>
</tr>
<tr>
<td>Other Information</td>
<td>If necessary, information on other physical and chemical parameters is indicated in this section.</td>
</tr>
</tbody>
</table>

10. Stability and Reactivity

Reactivity

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

Corrosion to metals:
No corrosive effect on metal.

Oxidizing properties: not fire-propagating
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.

Possibility of hazardous reactions
In spite of the dedusting carried out for reasons of industrial health the product resp. the fine dust of the product is capable of dust explosion.

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
strong acids, strong bases, strong oxidizing agents

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

11. Toxicological information
Primary routes of exposure
Routes of entry for solids and liquids are ingestion and inhalation, but may include eye or skin contact. Routes of entry for gases include inhalation and eye contact. Skin contact may be a route of entry for liquefied gases.

Acute Toxicity/Effects
Acute toxicity
Assessment of acute toxicity: Virtually nontoxic after a single ingestion. Virtually nontoxic after a single skin contact.

Oral
Type of value: LD50 Species: rat
Value: > 7,750 mg/kg (similar to OECD guideline 401)

Inhalation No data available.

Dermal
Type of value: LD50 Species: rat
Value: > 2,000 mg/kg (OECD Guideline 402)
No mortality was observed.

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

Irritation / corrosion
Assessment of irritating effects: Not irritating to the skin. Not irritating to the eyes.

Skin
Species: rabbit Result: non-irritant Method: Draize test

Eye
Species: rabbit Result: non-irritant Method: Draize test

Sensitization
Assessment of sensitization: Skin sensitizing effects were not observed in animal studies.
Species: guinea pig Result: Non-sensitizing.
Method: OECD Guideline 406

Aspiration Hazard not applicable

**Chronic Toxicity/Effects**

Repeated dose toxicity
Assessment of repeated dose toxicity: The substance may cause damage to the liver after repeated ingestion of high doses, as shown in animal studies. The effects were only observed at doses/concentrations not relevant for classification and/or practical use conditions.

Genetic toxicity
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: Based on the ingredients there is no suspicion of a carcinogenic effect in humans.

Reproductive toxicity
Assessment of reproduction toxicity: Repeated oral uptake of the substance did not cause damage to the reproductive organs.

Teratogenicity
Assessment of teratogenicity: No indications of a developmental toxic / teratogenic effect were seen in animal studies.
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.
12. Ecological Information

Toxicity

Aquatic toxicity
Assessment of aquatic toxicity:
There is a high probability that the product is not acutely harmful to aquatic organisms. Based on long-term (chronic) toxicity study data, the product is very likely not harmful to aquatic organisms. 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) > 67 mg/l, Brachydanio rerio (OECD Guideline 203)
No effects at the highest test concentration. Tested above maximum solubility.

Aquatic invertebrates
EC50 (48 h) > 100 mg/l, Daphnia magna (OECD Guideline 202, part 1)
The product has low solubility in the test medium. A saturated solution has been tested. Limit concentration test only (LIMIT test). No toxic effects occur within the range of solubility. Nominal concentration.

Aquatic plants
EC50 (72 h) > 100 mg/l, Scenedesmus subspicatus (Screening test)

Chronic toxicity to
fish No data available.

Chronic toxicity to aquatic invertebrates
No observed effect concentration (21 d) >= 10 mg/l, Daphnia magna (OECD Guideline 211, semistatic)
Limit concentration test only (LIMIT test). No toxic effects occur within the range of solubility. Nominal concentration.

Assessment of terrestrial toxicity
No toxic effects have been observed in studies with soil living organisms.

Soil living organisms
Toxicity to soil dwelling organisms:
No observed effect concentration (56 d) > 1,000 mg/kg, Eisenia foetida (OECD Guideline 222, artificial soil)
No effects at the highest test concentration.

Toxicity to terrestrial plants
No data available.

Other terrestrial non-mammals No data available.

Microorganisms/Effect on activated sludge

Toxicity to microorganisms
OECD Guideline 209 activated sludge/EC50 (3 h): > 100 mg/l
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

Not readily biodegradable (by OECD criteria).

Assessment of stability in water No data available.
Study scientifically not justified. Study technically not feasible.

Information on Stability in Water (Hydrolysis)
Study scientifically not justified. Study technically not feasible.

Bioaccumulative potential

Assessment bioaccumulation potential Accumulation in organisms is not to be expected.

Bioaccumulation potential Bioconcentration factor: 12.3

Mobility in soil

Assessment transport between environmental compartments
The substance will not evaporate into the atmosphere from the water surface.

Additional information

Other ecotoxicological advice:
Do not discharge product into the environment without control.

13. Disposal considerations

Waste disposal of substance:
Do not discharge into drains/surface waters/groundwater. Dispose of in accordance with national, state and local regulations.

Container disposal:
Dispose of in accordance with national, state and local regulations. Recommend crushing, puncturing or other means to prevent unauthorized use of used containers.

RCRA:
Not a hazardous waste under RCRA (40 CFR 261).

14. Transport Information

Land transport
USDOT

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

**Federal Regulations Registration status:** Chemical TSCA, US released / listed

**EPCRA 311/312 (Hazard categories):** Fire (Combustible Dust);

**NFPA Hazard codes:**
Health: 1 Fire: 1 Reactivity: 0 Special: **HMIS III rating**
Health: 1 Flammability: 1 Physical hazard:0

16. Other Information

**SDS Prepared by:**
BASF NA Product Regulations SDS Prepared on: 2015/02/19