

Safety Data Sheet

Optical Brightener OB

1. Identification

Product identifier used on the label

Optical Brightener OB

Recommended use of the chemical and restriction on use

Recommended use*: optical brighteners; stabilizer

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.

* The "Recommended use" identified for this product is provided solely to comply with a Federal requirement and is not part of the seller's published specification. The terms of this Safety Data Sheet (SDS) do not create or infer any warranty, express or implied, including by incorporation into or reference in the seller's sales agreement.

Details of the supplier of the safety data sheet

Company:

Guangdong Taojiayue chemical technology Ltd

Address: No.106, Feng Zhe east road, Nansha area, Guangzhou city, China

Tel 020-39009190

Mail info@opticalwhitener.com

Other means of identification

Molecular formula: C₂₆ H₂₆ N₂ O₂ S

Synonyms: 2,5-Thiophenediylbis(5-tert-butyl-1,3-benzoxazole)

2. Hazards Identification

According to Regulation 2012 OSHA Hazard Communication Standard; 29 CFR Part 1910.1200

Classification of the product

Combustible Dust

Combustible Dust (1)

Combustible Dust

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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.

According to Regulation 1994 OSHA Hazard Communication Standard; 29 CFR Part 1910.1200

Emergency overview

CAUTION:
May cause mechanical irritation to eyes, skin and respiratory system.
Avoid inhalation of dusts.
Use NIOSH approved respirator as needed to mitigate exposure.
Wear NIOSH-certified chemical goggles.
Take precautionary measures against static discharges.

3. Composition / Information on Ingredients

According to Regulation 2012 OSHA Hazard Communication Standard; 29 CFR Part 1910.1200

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

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 irritation develops, seek medical attention.

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.

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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.

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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:

Breathing protection if breathable aerosols/dust are formed. Wear respiratory protection if ventilation is inadequate. Wear a NIOSH-certified (or equivalent) organic vapour/particulate respirator.

Observe OSHA regulations for respirator use (29 CFR 1910.134).

Hand protection:

Wear chemical resistant protective gloves.

Eye protection:

Safety glasses with side-shields.

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).

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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 safety practice.

9. Physical and Chemical Properties

Form:	powder		
Odour:	odourless		
Odour threshold:	No data available.		
Colour:	yellowish		
pH value:	6.2 (1 %(m), 22.5 °C)		
Melting point:	196 - 200 °C		
Boiling point:	not applicable		
Sublimation point:	No data available.		
Flash point:	> 350 °C	(Directive	
92/69/EEC, A.9)			
Flammability:	not flammable	(UN Test N.1 (ready	
combustible solids))			
Lower explosion limit:	For solids not relevant for	classification and labelling.	
Upper explosion limit:	For solids not relevant for	classification and labelling.	
Autoignition:	490 °C		
Vapour pressure:	< 0.00001 Pa	(calculated)	
		(25 °C)	
Density:	1.272 g/cm ³	(EN ISO 1183-1)	
		(20 °C)	
Relative density:	1.272	(OECD Guideline	
		(20 °C)	
		No data available.	109)
Bulk density:	not determined		
Vapour density:	No data available.		
Partitioning coefficient n-octanol/water (log Pow):	> 6	(calculated)	
Self-ignition temperature:	not self-igniting		
	not self-igniting	(Regulation	
440/2008/EC, A.16)			
Thermal decomposition:	> 350 °C		
Viscosity, dynamic:	not determined		
Particle size:	D50 17 µm	(134001)	
% volatiles:	<= 0.5 %		
Solubility in water:	< 0.01 mg/l	(20 °C)	
Molar mass:	430.57 g/mol		
Evaporation rate:	The product is a non-volatile solid.		
Other Information:	If necessary, information on other physical and chemical parameters is indicated in this section.		

10. Stability and Reactivity

Reactivity

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

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Corrosion to metals:
No corrosive effect on metal.

Oxidizing properties:
not fire-propagating

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.

Possibility of hazardous reactions

The product may contain explosive fine dust or such dust may be produced by abrasion during transport or product transfer.

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.

Thermal decomposition:
> 350 °C

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.

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Acute Toxicity/Effects

Acute toxicity

Assessment of acute toxicity: No known acute effects.

Oral

Type of value: LD50

Species: rat (male/female)

Value: 10,000 mg/kg (similar to OECD guideline 401)

Inhalation

Type of value: LC50

Species: rat (male/female)

Value: 1.82 mg/l (similar to OECD guideline 403)

Exposure time: 4 h

Dermal

Type of value: LD50

Species: rat

Value: > 2,000 mg/kg

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 eyes and skin.

Skin

Species: rabbit

Result: non-irritant

Method: similar to OECD guideline 404

Eye

Species: rabbit

Result: non-irritant

Method: similar to OECD guideline 405

Sensitization

Assessment of sensitization: Based on available Data, the classification criteria are not met.

Maurer optimisation test

Species: guinea pig

Result: Non-sensitizing.

Aspiration Hazard

not applicable

Chronic Toxicity/Effects

Repeated dose toxicity

Assessment of repeated dose toxicity: Adaptive effects were observed after repeated exposure in animal studies.

Genetic toxicity

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

Genetic toxicity in vitro: OECD Guideline 471 Ames-test negative

Carcinogenicity

Assessment of carcinogenicity: In long-term studies in rats and mice in which the substance was given by feed, a carcinogenic effect was not observed.

None of the components in this product at concentrations greater than 0.1% are listed by IARC; NTP, OSHA or ACGIH as a carcinogen.

Reproductive toxicity

Assessment of reproduction toxicity: The results of animal studies gave no indication of a fertility impairing effect.

Symptoms of Exposure

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.

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) > 100 mg/l, Brachydanio rerio (OECD Guideline 203, static)

Nominal concentration. No toxic effects occur within the range of solubility.

Aquatic invertebrates

EL50 (48 h) > 100 mg/l, Daphnia magna (OECD Guideline 202, part 1, semistatic)

Limit concentration test only (LIMIT test). Nominal concentration. No toxic effects occur within the range of solubility. The product has low solubility in the test medium. A saturated solution has been tested.

Aquatic plants

EC10 (72 h) > 100 mg/l (growth rate), Pseudokirchneriella subcapitata (OECD Guideline 201, static)

The product has low solubility in the test medium. A saturated solution has been tested. Limit concentration test only (LIMIT test). Nominal concentration. No toxic effects occur within the range of solubility.

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

The product has low solubility in the test medium. A saturated solution has been tested. Limit concentration test only (LIMIT test). Nominal concentration. No toxic effects occur within the range of solubility.

Microorganisms/Effect on activated sludge

Toxicity to microorganisms

OECD Guideline 209 static

activated sludge, domestic/EC50 (3 h): > 100 mg/l

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Nominal concentration.

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

4 % 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) Poorly biodegradable.

Assessment of stability in water

According to structural properties, hydrolysis is not expected/probable.

Information on Stability in Water (Hydrolysis)

According to structural properties, hydrolysis is not expected/probable.

Bioaccumulative potential

Assessment bioaccumulation potential

Significant accumulation in organisms is not to be expected.

Bioaccumulation potential

Bioconcentration factor: < 500 (calculated)

The product has not been tested. The statement has been derived from the structure of the product.

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

Not classified as a dangerous good under transport regulations

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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);

CA Prop. 65:

WARNING: THIS PRODUCT CONTAINS A CHEMICAL(S) KNOWN TO THE STATE OF CALIFORNIA TO CAUSE BIRTH DEFECTS OR OTHER REPRODUCTIVE HARM.

NFPA Hazard codes:

Health : 1 Fire: 2 Reactivity: 0 Special:

HMIS III rating

Health: 1 Flammability: 2 Physical hazard:0

16. Other Information

SDS Prepared by:

BAOXU CHEMICAL, SDS Prepared on: 2016010
