



CSFC TAIWAN ENTERPRISE CORPORATION

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MATERIAL SAFETY DATA SHEET CSFC OB-1

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SECTION 1 IDENTIFICATION OF THE SUBSTANCE

Trade name: CSFC OB-1

Chemical name: 2,2'-(1,2-ETHENEDIYLDI –4,1-PHENYLENE)BISBENZOXAZOLE

CAS number: 1533-45-5

Product use: Optical brightener for plastics and paints

SECTION 2 COMPOSITION/INFORMATION ON INGREDIENTS

Chemical description: Substances presenting a health or environmental hazard

EC-Number	CAS Number	Chemical Name	Content	Symbol(s)	R-Phrase(s)
	1533-45-5	2,2'-(1,2-ETHENEDIYLDI – 4,1-PHENYLENE)BISBENZOXAZOLE	99.8%		

Chemical characterization: Optical Brightener

SECTION 3 HAZARDS IDENTIFICATION

Classified as hazardous according the EU directives.

Xi Irritant

N Dangerous for the environment

May cause sensitization by skin contact.

Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment

SECTION 4 FIRST AID MEASURES

Contact with skin: Wipe with absorbent paper or textile towels. Wash off with soap and plenty of water. Do not use organic solvents. In case of dermatitis, seek medical attention.

Contact with eyes: Rinse immediately with plenty of water for at least 15 minutes. In case of eye irritation, 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 to 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.

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

SECTION 5 FIRE-FIGHTING MEASURES

Suitable extinguishing media



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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.

Combustion products

Oxides of carbon; Oxides of nitrogen (NO_x); Toxic gases/vapours

SECTION 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

Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Collect the spilled product into suitable containers, which must be tightly sealed and properly labeled

SECTION 7 HANDLING AND STORAGE

Handling precautions: Dangerous for the environment. Handle and open container with care. Avoid vapor formation and ignition sources. Ensure good local exhaust ventilation. Do not eat, drink or smoke at the workplace

Storage conditions: Keep away from food and drink. Store in the original container securely closed. This product can form an ignitable vapour/air mixture. Take precautionary measures against static discharges, e.g. by using proper earthing techniques. Caution, keep this product well sealed. Keep in cool, dry place. Close containers immediately after use.

SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

Precautionary measures:

Exposure limit(s) should be monitored using suitable analytical equipments.

Respiratory protection: In case of insufficient ventilation wear suitable respiratory equipment.

Protection for hands: Protective gloves.

Eye protection: Suitable goggles or face protection

Protection for skin: Working clothes, Closed footwear



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SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Form	crystalline powder
Colour	yellowish
Melting/freezing temperature	356-362 °C
Boiling point/range	N/D
Relative density 20 °C	Insoluble
Flash point	not tested
Flammability	not tested
Oxidising properties	not tested
Self-ignition temperature	not tested
Water solubility 20 °C	< 0.01 % Tested as preparation
Solubility	not tested
Vapor pressure 20 °C	N/D Tested as preparation
pH-value 1 % suspension in water 20 - 25°C	not tested Tested as preparation
Explosive properties	not tested
Evaporation rate	not tested
Vapor density	not tested

SECTION 10 STABILITY AND REACTIVITY

Decomposition temperature	350°C	Tested as preparation
Conditions to avoid	No special conditions.	
Materials to avoid	Strong acids, strong bases and strong oxidizing agents.	
Hazardous decomposition products	Oxides of carbon, Oxides of nitrogen (NOx), Toxic gases/vapors	

SECTION 11 TOXICOLOGICAL INFORMATION

Acute oral toxicity <i>Rat</i>	LD50 > 2000 mg/kg	Tested as preparation
Acute dermal toxicity <i>Rat</i>	L D50 > 2000 mg/kg	Tested as preparation
Acute Inhalation Toxicity	not tested	
Acute eye irritation/corrosion <i>Rabbit</i>	not irritant	Tested as preparation
Acute dermal irritation/corrosion <i>Rabbit</i>	not irritant	EPA-Guideline Tested as preparation
Acute skin sensitization <i>Guinea pig</i>	sensitizing	OECD 406 Tested as preparation



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SECTION 12 ECOLOGICAL INFORMATION

Acute toxicity to fish <i>Bluegill 96 h</i>	LC50 >100mg/l	OECD 203	Tested as preparation
Acute toxicity to fish <i>Rainbow trout 96 h</i>	LC50 >100 mg/l	OECD 203	Tested as preparation
Acute toxicity to daphnia <i>Daphnia magna 24 h</i>	EC50 >100 mg/l	OECD 202	Tested as preparation
Acute toxicity to bacteria <i>Sewage sludge 3 h</i>	IC50 > 200 mg/l	OECD 209	Tested as preparation
Acute toxicity to algae	not tested		
Biodegradability	Partially but not readily Biodegradable	OECD 301 E	Tested as preparation

Eco toxic effects

Do not discharge product uncontrolled into the environment.

SECTION 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.

SECTION 14 TRANSPORT INFORMATION

Flash point	> 350 °C
ADR/RID	Class: free
IMO	Class: free
ICAO	Class: free

SECTION 15 REGULATORY INFORMATION

Classification	Self-classification
Symbol(s)	Xi Irritant N Dangerous for the environment
R-Phrase(s)	R43 May cause sensitization by skin contact. R50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
S-Phrase(s)	S24 Avoid contact with skin. S37 Wear suitable gloves. S61 Avoid release to the environment. Refer to special instructions/Safety datasheets.
Contains	bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate



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methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate

SECTION 16 OTHER INFORMATION

Essential changes

New layout

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