



## CSFC TAIWAN ENTERPRISE CORPORATION

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### MATERIAL SAFETY DATA SHEET CSFC KCB

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#### SECTION 1 IDENTIFICATION OF THE SUBSTANCE

**Trade name:** CSFC KCB  
**Product:** 2,2'-(1,4-Naphthalenediyl))bis-benzoxazole  
**CAS number:** 5089-22-5

#### SECTION 2 COMPOSITION/INFORMATION ON INGREDIENTS

**Chemical description:** Substances presenting a health or environmental hazard

EC-Number	CAS Number	Chemical Name	Content
	5089-22-5	2,2'-(1,4-Naphthalenediyl))bis-benzoxazole	100%

**Chemical characterisation:** 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 indisposition, seek medical attention. In case of prolonged exposure, seek medical attention.

#### SECTION 5 FIRE-FIGHTING MEASURES

**Suitable extinguishing media**

Water spray, Carbon dioxide (CO<sub>2</sub>), Foam, Dry powder.

**Extinguishing media which must not be used for safety reasons**



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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<sub>x</sub>); 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 labelled

## SECTION 7 HANDLING AND STORAGE

**Handling precautions:** Dangerous for the environment. Handle and open container with care. Avoid vapour 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

**Exposure limit(s) (ACGIH): (8 hour time weighted average)**

1 mg/m<sup>3</sup>

Skin sensitising in animal study



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### SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

<b>Form</b>	Green yellowish powder
<b>Colour</b>	Green yellowish
<b>Melting/freezing temperature</b>	210-212 °C
<b>Boiling point/range</b>	> 350 °C
<b>Relative density<sub>20 °C</sub></b>	0.99 g/cm <sup>3</sup>
<b>Flash point</b>	117 °C
<b>Flammability</b>	not tested
<b>Ignition Temperature</b>	380 °C
<b>Oxidising properties</b>	not tested
<b>Self-ignition temperature</b>	not tested
<b>Water solubility<sub>20 °C</sub></b>	< 0.01 %
<b>Solubility</b>	not tested
<b>Vapour pressure<sub>20 °C</sub></b>	1.0E-4 Pa
<b>Partition coefficient; Log Pow<sub>20 - 25°C</sub></b>	2.37
<b>pH-value 1 % suspension in water<sub>20 - 25°C</sub></b>	8.4
<b>Dynamic Viscosity<sub>20 °C</sub></b>	400 mPa.s
<b>Explosive properties</b>	not tested
<b>Evaporation rate</b>	not tested
<b>Vapour density</b>	not tested

### SECTION 10 STABILITY AND REACTIVITY

<b>Decomposition temperature</b>	325 °C
<b>Conditions to avoid</b>	No special conditions.
<b>Materials to avoid</b>	Strong acids, strong bases and strong oxidising agents.
<b>Hazardous decomposition products</b>	Oxides of carbon, Oxides of nitrogen (NO <sub>x</sub> ), Toxic gases/vapours

### SECTION 11 TOXICOLOGICAL INFORMATION

<b>Acute oral toxicity</b>	LD <sub>50</sub> > 2000 mg/kg
<i>Rat</i>	
<b>Acute dermal toxicity</b>	L D <sub>50</sub> > 2000 mg/kg
<i>Rat</i>	
<b>Acute Inhalation Toxicity</b>	not tested
<b>Acute eye irritation/corrosion</b>	not irritant



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*Rabbit*

**Acute dermal irritation/corrosion** not irritant

*Rabbit*

**Acute skin sensitisation** sensitising

*Guinea pig*

### SECTION 12 ECOLOGICAL INFORMATION

**Acute toxicity to fish** LC50 0.97 mg/l

*Bluegill 96 h*

**Acute toxicity to fish** LC50 7.9 mg/l

*Rainbow trout 96 h*

**Acute toxicity to daphnia** EC50 20 mg/l

*Daphnia magna 24 h*

**Acute toxicity to bacteria** IC50 > 100 mg/l

*Sewage sludge 3 h*

**Acute toxicity to algae** not tested

**Biodegradability** Partially but not readily Biodegradable

**Ecotoxic 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** 117 °C

**ADR/RID**

Class: 9

UN No.: 3082

Packaging group: III

Proper shipping name: ENVIRONMENTALLY HAZARDOUS  
 SUBSTANCE,  
 LIQUID, N.O.S.

Additional Information: (BIS-(TETRAMETHYL-4-PIPERIDYL)  
 SEBACATE)

**IMO**

Class: 9

UN No.: 3082



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### ICAO

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SUBSTANCE,  
LIQUID, N.O.S.  
Additional Information: (BIS-(TETRAMETHYL-4-PIPERIDYL)  
SEBACATE)

## SECTION 15 REGULATORY INFORMATION

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

## SECTION 16 OTHER INFORMATION

**Essential changes** New layout

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