

Opti-Bright OB

Version number GHS 1.0

Date of compilation 2020-10-11
date format: yyyy-mm-dd

SECTION 1: Identification

- 1.1 Product Identifier(s).**
Identification of the substance **Fluorescent Brightener 184**
Trade name(s) **Opti-Bright OB**
RTECS No DM4888332
CAS number 7128-64-5
- Other means of identification**
Alternative name(s) 2,5-thiophenediylbis(5-tert-butyl-1,3-benzoxazole)
5-tert-butyl-2-[5-(5-tert-butyl-1,3-benzoxazol-2-yl)thiophen-2-yl]-1,3-benzoxazole
- Product code(s)** OB-OB-P
- 1.2 Relevant identified uses of the substance or mixture and uses advised against**
Relevant identified uses Optical brightener
Industrial use
Professional use
- Uses advised against Do not use for products which come into contact with food-stuffs. Do not use for private purposes (household). Not for use with foodstuffs, pharmaceutical products or cosmetics. This product is for industrial and professional use only; it is not intended for household use.
- 1.3 Details of the supplier of the safety data sheet**
Robert Koch Industries, Inc.
4770 N. Harback Road
Bennett, CO 80102
United States
Telephone. +1 303.644.3763
Fax. +1 303.644.3045
Normal business hours: 0800 - 1700 MST/DST (UTC-7)
e-mail: sales@kochcolor.com.
Website. www.kochcolor.com.
- e-mail (competent person)** sales@kochcolor.com
(Mark Koch)
- 1.4 Emergency telephone number**
Emergency information service 1.800.535.5053 Infotrac (24 hours) USA and Canada
Outside of USA or Canada, call +1 352.323.3500

SECTION 2: Hazard(s) identification

- 2.1 Classification of the substance or mixture**
Classification acc. to OSHA "Hazard Communication Standard" (29 CFR 1910.1200)

Section	Hazard class	Category	Hazard class and category	Hazard statement
A.1I	Acute toxicity (inhal.).	4	Acute Tox. 4	H332
B.cD	Combustible dust.	Comb. Dust	CD	OSHA003

For full text of abbreviations: see SECTION 16.

- 2.2 Label elements**
Labelling acc. to OSHA "Hazard Communication Standard" (29 CFR 1910.1200)
Signal word **Warning**

Pictograms

GHS07

**Hazard statements**

H332

Harmful if inhaled.

OSHA003

May form combustible dust concentrations in air.

Precautionary statements

P261

Avoid breathing dust, mist, spray.

P271

Use only outdoors or in a well-ventilated area.

P304+P340

If inhaled: Remove person to fresh air and keep comfortable for breathing.

P312

Call a poison center/doctor/.../ if you feel unwell.

2.3 Other hazards

Dust explosion hazards.

Results of PBT and vPvB assessment

According to the results of its assessment, this substance is not a PBT or a vPvB.

SECTION 3: Composition/information on ingredients**3.1 Substances****Name of substance**

Fluorescent Brightener 184

Identifiers**CAS No**

7128-64-5

RTECS No

DM4888332

Molecular formulaC₂₆H₂₆N₂O₂S**Molar mass**

430.6 g/mol

SECTION 4: First-aid measures**4.1 Description of first- aid measures****General notes**

If irritation or symptoms occur from any route of exposure, remove the affected individual from the area. Remove contaminated clothing and launder before reuse. In all cases of doubt, or when symptoms persist, seek medical advice.

Following inhalation

If inhalation causes irritation, remove to fresh air. If symptoms persist, get medical advice/attention.

Following skin contact

Brush off loose particles from skin.

Following eye contact

Flush eyes with clean water. Remove contact lenses if safe to do so. Continue rinsing for at least 15 minutes. Get medical advice/attention.

Following ingestion

Rinse mouth with water. Do NOT induce vomiting unless instructed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical advice/attention if symptoms occur or if the affected person does not feel well.

4.3 Indication of any immediate medical attention and special treatment needed

None known. Treat symptomatically.

SECTION 5: Fire-fighting measures**5.1 Extinguishing media****Suitable extinguishing media**

In case of fire use water fog, foam, carbon dioxide (CO₂), dry chemical.

5.2 Special hazards arising from the substance or mixture

Danger of dust explosion. Deposited combustible dust has considerable explosion potential.

Hazardous combustion products

Nitrogen oxides (NO_x). Carbon monoxide (CO). Carbon dioxide (CO₂). Sulfur oxides (SO_x). Irritating or toxic substances may be emitted upon burning, combustion or decomposition.

5.3 Advice for firefighters

In case of fire and/or explosion do not breathe fumes. Coordinate firefighting measures to the fire surroundings. Do not allow firefighting water to enter drains or water courses. Collect contaminated firefighting water separately. Fight fire with normal precautions from a reasonable distance.

SECTION 6: Accidental release measures**6.1 Personal precautions, protective equipment and emergency procedures**

Remove persons to safety. Follow emergency procedures such as the need to evacuate the area, notify authorities or to consult an expert. Keep unnecessary personnel away. Wear personal protective equipment to prevent injury. See section 8 of this SDS. Ensure adequate ventilation.

6.2 Environmental precautions

Do not flush product down drains that discharge into public sewer systems. Do not pour onto the ground. Do not release into surface waters such as lakes, rivers and streams. Dispose of unusable product, wash water, and contaminated materials properly. See section 13 for disposal considerations.

6.3 Methods and materials for containment and cleanup

Take up mechanically.

Cover floor drains. Prevent spilled material from leaving the area if safe to do so.

Suitable absorbent material(s) include:

Collect spilled material and place into suitable container(s) for reuse or disposal. Label containers appropriately.

Other information relating to spills and releases

Place in appropriate containers for disposal. Ventilate affected area.

6.4 Reference to other sections

Hazardous combustion products: see section 5. Personal protective equipment: see section 8. Incompatible materials: see section 10. Disposal considerations: see section 13.

SECTION 7: Handling and storage**7.1 Precautions for safe handling****Recommendations****Measures to prevent fire as well as aerosol and dust generation**

Use local and general ventilation. Take precautionary measures against static discharge. Use only in well-ventilated areas. Only vacuum cleaners containing no ignition sources may be used for combustible dusts. Ground/bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting/equipment. Use only non-sparking tools.

Specific notes/details

There is a risk of a dust explosion if powdered combustible dust is present in high-enough concentrations. Dust deposits can accumulate on surfaces in working area. Dust deposits have the potential to form an explosive dust-air mixture if disturbed. Carefully remove accumulated dust from surface areas on a regular basis. Only vacuum cleaners containing no ignition sources may be used for combustible dusts.

Advice on general occupational hygiene

Wash hands after use. Do not eat, drink and smoke in work areas. Remove contaminated clothing and protective equipment before entering eating areas. Never keep food or drink in the vicinity of chemicals. Never place chemicals in containers that are normally used for food or drink. Keep away from food, drink and animal feedingstuffs.

7.2 Conditions for safe storage, including any incompatibilities**Managing of associated risks****Explosive atmospheres**

Avoid generation of dust. Removal of dust deposits. Only vacuum cleaners containing no ignition sources may be used for combustible dusts.

Ventilation requirements

Keep any substance that emits harmful vapors or gases in a place that allows these to be permanently extracted. Use local and general ventilation. Ground/bond container and receiving equipment.

7.3 Specific end use(s)

See section 16 for a general overview.

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SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Country	Name of agent	Identifier	TWA [ppm]	TWA [mg/m ³]	Notation	Source
US	Particulates not otherwise classified	REL			Appx-D	NIOSH REL
US	Particulates not otherwise classified (PNOC)	PEL	1,766	15	I, dust	29 CFR 1910.1000
US	Particulates not otherwise classified (PNOC)	PEL	529.5	5	Partml, r, dust	29 CFR 1910.1000
US	Particulates not otherwise regulated	PEL (CA)		10	Dust	Cal/OSHA PEL
US	Particulates not otherwise regulated	PEL (CA)		5	R	Cal/OSHA PEL

Notation

appx-D See Appendix D - Substances with No Established RELs.
 dust As dust.
 i Inhalable fraction.
 partml Particles/ml.
 r Respirable fraction.
 TWA Time-weighted average (long-term exposure limit): measured or calculated in relation to a reference period of 8 hours time-weighted average (unless otherwise specified).

8.2 Exposure controls

Appropriate engineering controls

General ventilation. The use of approved dust collection equipment is recommended in high dust environments.

Individual protection measures (personal protective equipment)

Eye/face protection

Wear eye/face protection.

Hand protection

Wear chemical resistant protective gloves.

Other protection measures

Wash thoroughly after handling. An eyewash station and/or safety shower is recommended in the work area.

Respiratory protection

In case of insufficient ventilation, wear suitable respiratory equipment. If inhalation of dust, mist, or vapor is possible, wear an approved respirator in accordance with manufacturer's use limitations and OSHA standard 1910.134 (29CFR).

Environmental exposure controls

Protect against release into the environment using preventative containment measures. Keep away from drains, surface and ground water.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance

Physical state	solid
Color	yellow
Odor	characteristic

Other safety parameters

pH (value)	not applicable
Melting point/freezing point	200.6 °C
Initial boiling point and boiling range	not determined
Flash point	>350 °C
Evaporation rate	not determined
Flammability (solid, gas)	this material is combustible, but will not ignite readily
Explosion limits of dust clouds	not determined

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Vapor pressure	<0.00001 Pa
Density	1,272 kg/m ³ at 20 °C
Vapor density	this information is not available
Bulk density	0.55 – 0.75 g/cm ³
Solubility(ies)	
Water solubility	<10 µg/l at 20 °C practically insoluble
Solubility in dioxane	20.7 g/l at 20 °C
Solubility in dimethylformamide	7.6 g/l at 20 °C
Partition coefficient	
- n-octanol/water (log KOW)	>6.5 (pH value: 6.1, 23 °C)
Soil organic carbon/water (log KOC)	8.199
Auto-ignition temperature	490 °C
Viscosity	not relevant solid matter
Explosive properties	dust explosion hazards
Oxidizing properties	none
9.2 Other information	
Solid content	100 %
Temperature class (USA, acc. to NEC 500)	T1 maximum permissible surface temperature on the equipment: 450 °C

SECTION 10: Stability and reactivity

10.1 Reactivity

Concerning incompatibility: see below "Conditions to avoid" and "Incompatible materials".

10.2 Chemical stability

See below "Conditions to avoid".

10.3 Possibility of hazardous reactions

No known hazardous reactions.

10.4 Conditions to avoid

Avoid conditions that create dust.

10.5 Incompatible materials

Oxidizers.

10.6 Hazardous decomposition products

Reasonably anticipated hazardous decomposition products produced as a result of use, storage, spill and heating are not known. Hazardous combustion products: see section 5.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Classification acc. to OSHA "Hazard Communication Standard" (29 CFR 1910.1200)

Acute toxicity

Harmful if inhaled.

Acute toxicity estimate (ATE)

Inhalation: dust/mist 1.82 mg_l/4h

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Acute toxicity				
Exposure route	Endpoint	Value	Species	Source
Oral	LD50	>10,000 mg/kg	Rat	European Chemicals Agency, http://echa.europa.eu/
Inhalation: dust/ mist	LC50	>1,820 mg/m ³ /4h	Rat	European Chemicals Agency, http://echa.europa.eu/

Skin corrosion/irritation

Shall not be classified as corrosive/irritant to skin.

Serious eye damage/eye irritation

Shall not be classified as seriously damaging to the eye or eye irritant.

Respiratory or skin sensitization

Shall not be classified as a respiratory or skin sensitizer.

Germ cell mutagenicity

Shall not be classified as germ cell mutagenic.

Carcinogenicity

Shall not be classified as carcinogenic.

Reproductive toxicity

Shall not be classified as a reproductive toxicant.

Specific target organ toxicity - single exposure

Shall not be classified as a specific target organ toxicant (single exposure).

Specific target organ toxicity - repeated exposure

Shall not be classified as a specific target organ toxicant (repeated exposure).

Aspiration hazard

Shall not be classified as presenting an aspiration hazard.

SECTION 12: Ecological information

12.1 Toxicity

Shall not be classified as hazardous to the aquatic environment.

12.2 Persistence and degradability

Process of degradability		
Process	Degradation rate	Time
Carbon dioxide generation	4 %	28 d

12.3 Bioaccumulative potential

The substance fulfills the very bioaccumulative criterion.

n-octanol/water (log KOW)	>6.5 (pH value: 6.1, 23 °C)
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12.4 Mobility in soil

The Organic Carbon normalised adsorption coefficient	8.199
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12.5 Results of PBT and vPvB assessment

Data are not available.

12.6 Other adverse effects

Endocrine disrupting potential

Not listed.

SECTION 13: Disposal considerations**13.1 Waste Treatment Methods / Disposal Instructions**

Avoid release to the environment. Do not contaminate ponds, waterways or ditches with product or container. Dispose of contents/container in accordance with applicable local, regional, national, and international regulations.

Sewage disposal-relevant information

Do not allow this material to enter floor drains, sewer drains or storm drains.

Waste treatment of containers/packages

Containers containing product or product residue should be disposed of in the same manner as the product. Completely emptied and thoroughly cleaned containers can be recycled.

SECTION 14: Transport information**Information for each of the UN Model Regulations****14.8.3 Transport of dangerous goods by road or rail (49 CFR US DOT)**

Not subject to transport regulations.

14.8.6 International Maritime Dangerous Goods Code (IMDG)

Not subject to IMDG.

14.8.7 International Civil Aviation Organization (ICAO-IATA/DGR)

Not subject to ICAO-IATA.

SECTION 15: Regulatory information**15.1 Safety, health and environmental regulations specific for the product in question****National regulations (United States)**

Toxic Substance Control Act (TSCA) substance is listed

Superfund Amendment and Reauthorization Act (SARA TITLE III)

The List of Extremely Hazardous Substances and Their Threshold Planning Quantities (EPCRA Section 302, 304)

not listed

Specific Toxic Chemical Listings (EPCRA Section 313)

not listed

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)

List of Hazardous Substances and Reportable Quantities (CERCLA section 102a) (40 CFR 302.4)

not listed

Clean Air Act

not listed

Cleaning Product Right to Know Act Substance List (CA-RTK)

not listed

Toxic or Hazardous Substance List (MA-TURA)

not listed

Hazardous Substances List (MN-ERTK)

not listed

Hazardous Substance List (NJ-RTK)

not listed

Hazardous Substance List (Chapter 323) (PA-RTK)

not listed

Hazardous Substance List (RI-RTK)

not listed

California Environmental Protection Agency (Cal/EPA): Proposition 65 - Safe Drinking Water and Toxic Enforcement Act of 1987

not listed

Drug precursorsChemicals designated within the Controlled Substances Act, 21 U.S.C. § 802, paragraphs 34 (list I) and 35 (list II)

not listed

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VOC content

Regulated Volatile Organic Compounds (VOC-EPA): 0 %.
Regulated Volatile Organic Compounds (VOC-Cal ARB): 0 %.

Industry or sector specific available guidance(s)

NFPA® 704

National Fire Protection Association: Standard System for the Identification of the Hazards of Materials for Emergency Response (United States).

Category	Degree of hazard	Description
Flammability	3	Material that can be ignited under almost all ambient temperature conditions
Health	3	Material that, under emergency conditions, can cause serious or permanent injury
Instability	0	Material that is normally stable, even under fire conditions
Special hazard		

National inventories

Country	Inventory	Status
AU	AICS	Substance is listed
CA	DSL	Substance is listed
CN	IECSC	Substance is listed
EU	ECSI	Substance is listed
EU	REACH Reg.	Substance is listed
JP	CSCL-ENCS	Substance is listed
KR	KECI	Substance is listed
MX	INSQ	Substance is listed
NZ	NZIoC	Substance is listed
PH	PICCS	Substance is listed
TR	CICR	Substance is listed
TW	TCSI	Substance is listed
US	TSCA	Substance is listed

Legend

AICS Australian Inventory of Chemical Substances.
CICR Chemical Inventory and Control Regulation.
CSCL-ENCS List of Existing and New Chemical Substances (CSCL-ENCS).
DSL Domestic Substances List (DSL).
ECSI EC Substance Inventory (EINECS, ELINCS, NLP).
IECSC Inventory of Existing Chemical Substances Produced or Imported in China.
INSQ National Inventory of Chemical Substances.
KECI Korea Existing Chemicals Inventory.
NZIoC New Zealand Inventory of Chemicals.
PICCS Philippine Inventory of Chemicals and Chemical Substances (PICCS).
REACH Reg. REACH registered substances.
TCSI Taiwan Chemical Substance Inventory.
TSCA Toxic Substance Control Act.

15.2 Chemical Safety Assessment

No Chemical Safety Assessment has been carried out for this substance.

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SECTION 16: Other information, including date of preparation or last revision

Abbreviations and acronyms

Abbr.	Descriptions of used abbreviations
29 CFR 1910.1000	29 CFR 1910.1000, Tables Z-1, Z-2, Z-3 - Occupational Safety and Health Standards: Toxic and Hazardous Substances (permissible exposure limits)
49 CFR US DOT	49 CFR U.S. Department of Transportation
Cal/OSHA PEL	California Division of Occupational Safety and Health (Cal/OSHA): Permissible Exposure Limits (PELs)
Cal ARB	California Air Resources Board
CAS	Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)
DGR	Dangerous Goods Regulations (see IATA/DGR)
EINECS	European Inventory of Existing Commercial Chemical Substances
ELINCS	European List of Notified Chemical Substances
EPA	Environmental Protection Agency. An agency of the federal government of the United States charged with protecting human health and the environment
IATA	International Air Transport Association
IATA/DGR	Dangerous Goods Regulations (DGR) for the air transport (IATA)
ICAO	International Civil Aviation Organization
IMDG	International Maritime Dangerous Goods Code
LC50	Lethal Concentration 50%: the LC50 corresponds to the concentration of a tested substance causing 50 % lethality during a specified time interval
LD50	Lethal Dose 50 %: the LD50 corresponds to the dose of a tested substance causing 50 % lethality during a specified time interval
NIOSH REL	National Institute for Occupational Safety and Health (NIOSH): Recommended Exposure Limits (RELs)
NLP	No-Longer Polymer
OSHA	Occupational Safety and Health Administration (United States)
PBT	Persistent, Bioaccumulative and Toxic
PEL	Permissible exposure limit
Ppm	Parts per million
RTECS	Registry of Toxic Effects of Chemical Substances (database of NIOSH with toxicological information)
TWA	Time-weighted average
VOC	Volatile Organic Compounds
VPvB	Very Persistent and very Bioaccumulative

Key literature references and sources for data

OSHA Hazard Communication Standard (HCS), 29 CFR 1910.1200.

Transport of dangerous goods by road or rail (49 CFR US DOT). International Maritime Dangerous Goods Code (IMDG). Dangerous Goods Regulations (DGR) for the air transport (IATA).

List of relevant phrases (code and full text as stated in chapter 2 and 3)

Code	Text
H332	Harmful if inhaled.
OSHA003	May form combustible dust concentrations in air.

Disclaimer

This information is based upon the present state of our knowledge. As the conditions or methods of use are beyond our control, Robert Koch Industries, Inc. do not assume any responsibility and expressly disclaims any liability for any use of this product. Information contained herein is believed to be true and accurate and is made in good faith but all statements or suggestions are made without warranty, expressed or implied, regarding accuracy of the information, the hazards connected with the use of the material, or the results to be obtained from the use thereof. Compliance with all applicable federal, state, and local laws and local regulations remains the responsibility of the user.

This Safety Data Sheet (SDS) cannot cover all possible situations which the user may experience during use of this product. Each aspect of your operation should be examined to determine if, or where, additional precautions may be necessary. All health and safety information contained in this bulletin should be provided to your employees or customers. It is your responsibility to develop appropriate work practice guidelines and employee instructional programs for your operation.