

Safety Data Sheet

According to regulation (EC) No. 1907/2006 (REACH)



78170 Vulkanox® BKF

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Revised edition: 06.12.2023

Version: 4.0

Printed: 23.09.2025

1. Identification of the Substance/Mixture and of the Company/Undertaking

1.1. Product Identifier

Product Name: Vulkanox® BKF

Article No.: 78170

UFI: --

1.2. Relevant identified Uses of the Substance or Mixture and Uses advised against

Identified uses:
Anti-aging agent

Uses advised against:

Widespread use by professional workers: non-industrial (professional) spraying (PROC 11) of adhesives, sealants, inks and toners, lubricants, and similar products (PC1, PC17, PC18, PC24, PC25)

Consumer uses: Spraying adhesives (PC1); All lubricant uses (PC24) with the exception of filling a vehicle engine with a lubricant (Concawe_SCED_24_1)

Lifespan of items - Consumers:

- Rubber and plastic items that come into daily contact with the skin and have a skin contact surface area equivalent to the inside and outside of two or more hands (e.g., floor coverings, furniture (e.g., plastic chairs), gloves, and shoes) (AC10a, AC10e, AC10f, AC10g, AC13a, AC13f, AC13g)

- Rubber and plastic articles that come into daily contact with the skin and have a skin contact surface equivalent to the inside of two hands (e.g., rubber handles and steering wheels) and where the concentration in the product exceeds 1% (AC10g, AC13g)

- Rubber and plastic articles that come into daily contact with the skin and have a skin contact surface equivalent to the inside of a hand (e.g., shoe soles and belts) and where the concentration in the product exceeds 3% (AC10g, AC13g)

- Rubber and plastic articles used as toys or childcare articles (AC10b, AC13b)

- Rubber and plastic articles used as materials in contact with food (AC10d, AC13d)

1.3. Details of the Supplier of the Safety Data Sheet (Producer/Importer)

Company: Kremer Pigmente GmbH & Co. KG

Address: Hauptstr. 41-47, 88317 Aichstetten, Germany

Tel./Fax.: Tel +49 7565 914480, Fax +49 7565 1606

Internet: www.kremer-pigmente.com

EMail: info@kremer-pigmente.com

Importer: --

1.4. Emergency No.

Emergency No.: +49 7565 914480 (Mon-Fri 8:00 - 17:00)

1.4.2 Poison Center:

2. Hazards Identification

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2.1. Classification of the Substance or Mixture

Classification according to Regulation (EC) No. 1272/2008 (CLP/GHS)

H360f
Cat.: 1A

Reproductive toxicity, hazard category 1B
May damage fertility.

Possible Environmental Effects:

2.2. Label Elements

Classification according to Regulation (EC) No. 1272/2008 (CLP/GHS)

Hazard designation:



GHS08-2

Signal word:

Danger

Hazard designation:

H360f

May damage fertility.

Safety designation:

P202

Do not handle until all safety precautions have been read and understood.

P280

Wear protective gloves/ clothing/ eye/ face protection.

P308+P313

If exposed or concerned: Get medical advice/attention.

P405

Store locked up.

P501

Dispose of contents/ container according to regional, national and international regulations.

Hazardous components for labelling:

2.3. Other Hazards

May form an explosive dust-air mixture when dispersed.

3. Composition/Information on Ingredients

3.1. Substance

This product is a substance: see details under 3.2.

3.2. Mixture

Chemical Characterization:

Information on Components / Hazardous Ingredients:

6,6 -Di-tert.-butyl-2,2 -metylendi-p-cresol (Repr. 90 - 100 %
1B; H360F)

CAS-Nr: 119-47-1

EINECS-Nr: 204-327-1

EC-Nr:

Additional information:

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4. First Aid Measures

4.1. Description of the First Aid Measures

General information:

*Take person away from hazardous area.
Show this safety data sheet to the doctor in attendance.
Do not leave affected persons unattended.
First aiders: mind self-protection!*

After inhalation:

*Supply fresh air. Consult physician if symptoms persist.
Supply fresh air or give oxygen.*

After skin contact:

*Wash off with plenty of water.
If symptoms persist, consult a physician.*

After eye contact:

*Rinse eyes with water as a precaution.
Remove contact lens.
Protect unharmed eye.
Keep eye wide open while rinsing.
Seek medical attention if irritation persists.*

After ingestion:

*Keep airways free.
Do not induce vomiting without medical advice.
Never give anything by mouth to an unconscious person.
Rinse mouth with water. Consult a physician in case of complaints.*

4.2. Most important Symptoms and Effects, both Acute and Delayed

Symptoms:

May impair fertility.

Effects:

4.3. Indication of any Immediate Medical Attention and special Treatment needed

Treatment:

Treat symptomatically.

5. Fire-Fighting Measures

5.1. Extinguishing Media

Suitable extinguishing media:

Foam, carbon dioxide (CO₂), extinguishing powder, water spray.

Unsuitable extinguishing media:

Water with full jet.

5.2. Special Hazards arising from the Substance or Mixture

Special hazards:

In case of fire: formation of carbon monoxide, carbon dioxide.

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5.3. Advice for Firefighters

Protective equipment:

*Wear self-contained respiratory protective device.
Usual measures for chemical fires.*

Further information:

6. Accidental Release Measures

6.1. Personal Precautions, Protective Equipment and Emergency Procedures

Personal precautions:

*Avoid formation of dust.
No action shall be taken involving any personal risk or without suitable training.
Prohibit access to unnecessary and unprotected personnel.
Do not touch or walk through spilt material.*

6.2. Environmental Precautions

Environmental precautions:

*Do not allow entering sewage system or water.
Contact local authorities if product pollutes waterways or the sewage system.*

6.3. Methods and Material for Containment and Cleaning Up

Methods and material:

*Remove the container from the discharge area.
Avoid dust formation.
Contain the spilled material, collect it with a spark-proof vacuum cleaner or sweep it up with a damp cloth and place it in a container for disposal in accordance with local regulations (see Section 13).*

6.4. Reference to other Sections

Protective clothing, see Section 8.

7. Handling and Storage

7.1. Precautions for Safe Handling

Instructions on safe handling:

*Avoid formation of dust. Do not inhale dust.
Wear adequate protective clothing (see para. 8).*

Hygienic measures:

Avoid contact with skin or clothing. Do not breathe dust. Avoid contact with eyes. Do not swallow. Keep dust generation and accumulation to a minimum.

7.2. Conditions for Safe Storage, including any Incompatibilities

Storage conditions:

Store in tightly sealed containers in a well ventilated location.

Requirements for storage areas and containers:

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Information on fire and explosion protection:

To dissipate electrostatic charge, e.g., during transfer, the containers must be grounded and connected via a grounding strap. Use only spark-free tools.

All storage and processing facilities where there is a risk of product decomposition must be equipped with appropriate pressure relief devices to prevent dangerous pressure build-up.

Electrical installations / working materials must comply with the technological safety standards.

Dust explosion class 3 (Kst-value >300 bar m/s).

Storage class:

6.1 C; Combustible, acute toxic cat. 3 / toxic products (TRGS 510)

Further Information:

Recommended storage temperature: < 40°C

7.3. Specific End Use(s)

Further information:

8. Exposure Controls/Personal Protection

8.1. Parameters to be Controlled

Parameters to be controlled (DE):

TRGS 900

TLV: 1.25 mg/m³ air-borne fraction (general dust limit)

TLV: 10 mg/m³ inhalable fraction (general dust limit)

Parameters to be controlled:

Derived No-Effect Level (DNEL):

6,6 -Di-tert-butyl-2,2 -methylenedi-p-cresol:

1.25 mg/m³ (worker, inhalation, long-term exposure - systemic effects)

6.25 mg/m³ (workers, inhalation, short-term exposure - local effects)

0.36 mg/kg bw/d (workers, skin contact, long-term exposition - systemic effects)

1.8 mg/m³ (consumer, skin contact, short-term exposure)

0.22 mg/m³ (consumer, inhalation, long-term exposure - systemic effects)

1.1 mg/m³ (consumer, inhalation, short-term exposure - systemic effects)

0.13 mg/kg bw/d (consumer, skin contact/swallowing, long-term exposure - systemic effects)

0.65 mg/kg bw/d (consumer, skin contact/swallowing, short-term exposure - systemic effects)

PNEC (Predicted No-Effect Concentration):

6,6 -Di-tert-butyl-2,2 -methylenedi-p-cresol:

Secondary poisoning: 10.9 mg/kg

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Additional Information:

8. 2. Exposure Controls

Technical protective measures:

Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Personal Protection

General protective measures:

Keep away from foodstuffs and drinks. Do not eat, drink or smoke during work. Wash hands before breaks and at the end of work.

Respiratory protection:

In case of long-term or higher exposure.

Recommended: filter FP 3

Hand protection:

Protective gloves (EN 374)

Protective glove material:

Fluoro carbon rubber - FKM (> 480 min; 0.4 mm).

Eye protection:

Safety glasses with protective shields (EN 166).

Body protection:

Protective clothing.

Environmental precautions:

9. Physical and Chemical Properties

9. 1. Information on Basic Physical and Chemical Properties

Form: powder

Color: white - yellowish/white

Odor: light

Odor threshold:
no information available

pH-Value:
no data available

Melting temperature: > 124°C

Boiling temperature: 185 - 187°C (0.07 hPa)

Flash point: 185°C

Evaporation rate:
No information available.

Flammability (solid, gas):
May form explosive dust-air mixtures

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Upper explosion limit:

no information available

Lower explosion limit:

no information available

Vapor pressure:

< 0.01 hPa (20°C)

Vapor density:

Density:

1.04 g/cm³ (20°C)

Solubility in water:

insoluble

Coefficient of variation (n-Octanol/Water):

6.25 logPOW (20°C; OECD 117)

Auto-ignition temperature:

Decomposition temperature:

> 128°C

Viscosity, dynamic:

not available

Explosive properties:

not applicable

Oxidizing properties:

no information available

Bulk density:

320 kg/m³

9.2. Further Information

Solubility in solvents:

Viscosity, kinematic:

Burning class:

Solvent content:

Solid content:

Particle size:

No data available.

Other information:

Minimum ignition energy: < 1 mJ

10. Stability and Reactivity

10.1. Reactivity

Stable if used according to specifications.

10.2. Chemical Stability

Stable if used according to specifications.

10.3. Possibility of Hazardous Reactions

None if handled and stored according to specifications.

10.4. Conditions to Avoid

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Conditions to avoid:

*Fine dust forms flammable and explosive mixtures in the air.
Avoid formation of dust.
Avoid ignition sources.*

Thermal decomposition:

10.5. Incompatible Materials

Oxidizing agents.

10.6. Hazardous Decomposition Products

No hazardous decomposition products known.

10.7. Further Information

11. Toxicological Information

11.1. Information on Hazard Classes as defined in Regulation (EC) No. 1272/2008

Acute Toxicity

6,6'-Di-tert-butyl-2,2'-methylenedi-p-cresol:

LD50, oral:

> 5000 mg/kg (rat)

LD50, dermal:

> 10000 mg/kg (rat)

LC50, inhalation:

No information available.

Primary effects

Irritant effect on skin:

6,6'-Di-tert-butyl-2,2'-methylenedi-p-cresol: No skin irritation (4h, rabbit; OECD 404)

Irritant effect on eyes:

Inhalation:

No information available.

Ingestion:

No information available

Sensitization:

6,6'-Di-tert-butyl-2,2'-methylenedi-p-cresol: no sensitization caused (mouse; OECD 429)

Mutagenicity:

6,6'-Di-tert-butyl-2,2'-methylenedi-p-cresol:

In vitro genetic-toxicity: Ames-Test negative (Salmonella typhimurium; OECD 471)

Gentoxizität in vitro: Ames-Test negative (Escherichia coli; OECD 471)

In vitro genetic-toxicity: Chromosomal Aberration Test (lung cells from Chinese hamsters; OECD 473): negative

In vitro genetic toxicity: Mammalian Cell Test (fibroblasts of the chinese hamster, OECD 476): negative

Reproductive toxicity:

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6,6'-di-tert-butyl-2,2'-methylendi-p-cresol:

Effect on fertility:

General toxicity Parents: NOAEL: 12.5 mg/kg bw (oral, rat (m));

General toxicity F1: NOAEL: 12.5 mg/kg bw (oral, rat (m));

Symptoms: Damage to the testes in animals (OECD 421)

General toxicity F1: NOAEL: 50 mg/kg bw (oral, rat (f); OECD 421)

Effects on the development of the unborn child:

General maternal toxicity (oral, rat; Dosis: 200 mg/kg): NOAEL: 50 mg/kg bw; embryo-fetal toxicity: 50 mg/kg bw (OECD 421)

Assessment: Clear evidence of harmful effects on sexual reproduction and fertility in animal experiments.

Carcinogenicity:

Not classified based on available information.

6,6'-Di-tert-butyl-2,2'-methylendi-p-cresol: NOAEL: 12.7 mg/kg bw/day (oral, rat (m), exposure period: 18 months)

Teratogenicity:

No information available.

Specific target organ toxicity (STOT):

Single exposure: Not classified based on available information.

Repeated exposure: Not classified based on available information.

Repeated exposure:

6,6'-Di-tert-butyl-2,2'-methylendi-p-cresol: Chronic toxicity: 12.7 mg/kg (oral, rat (m), daily)

Aspiration hazard:

Not classified according to the available information.

11. 2. Information on other Hazards

Endocrine Disrupting Properties:

This substance/mixture does not contain any components with endocrine disrupting properties in a percentage of 0.1 or greater, according to Article 57(f) of the REACH Regulation (EC) No. 1907/2006 or the Delegated Regulation (EC) 2017/2100 or the Delegated Regulation (EC) 2018/605.

12. Ecological Information

12. 1. Aquatic Toxicity

6,6'-Di-tert-butyl-2,2'-methylendi-p-cresol:

Fish toxicity:

LC50: >5 mg/l (Oryzias latipes, 8h; OECD 203)

Daphnia toxicity:

EC50: > 4.8 mg/l (48h, Daphnia magna; OECD 202)

NOEC: 0.34 mg/l (21d, Daphnia magna, OECD 202)

Bacteria toxicity:

EC50: > 10000 mg/l (3h, active sludge; OECD 209)

Algae toxicity:

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	<i>EC50: > 5 mg/l (72h, Pseudokirchneriella subcapitata; OECD 201); NOEC: 1.3 mg/l (72h, Pseudokirchneriella subcapitata; OECD 201)</i>
12. 2.	Persistency and Degradability <i>6,6 -Di-tert.-butyl-2,2 -methylendi-p-cresol: Biodegradabilidad: no fácilmente biodegradable (0 %, 28 días, lodos activados; OCDE 301C)</i>
12. 3.	Bioaccumulation <i>6,6´-Di-tert-butyl-2,2´methylendi-p-cresol: Bioaccumulation: Bioconcentration factor (BCF): 840 (Cyprinus carpio; OECD 305) Distribution coefficient: log POW: 6.25 (20°C; OECD 117)</i>
12. 4.	Mobility <i>No information available.</i>
12. 5.	Results of PBT- und vPvP Assessment <i>This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1 % or higher.</i>
12. 6.	Endocrine Disrupting Properties <i>This substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delgated Regulation (EU) No. 2017/2100 or Commission Regulaton (EU) 2018/605 at levels of 0.1 % or higher.</i>
12. 7.	Other Adverse Effects <i>Water hazard class: 2 (German Regulation) (Assessment by list): hazardous. Not toxic under test conditions in terms of water solubility. Behaviour in sewage systems: Further ecological effects: AOX Value:</i>

13. Disposal Considerations

13. 1.	Waste Treatment Methods <i>Product: Do not pour waste down the drain. Do not contaminate standing or flowing water with chemicals or packaging material. Dispose with a licensed waste disposal company. European Waste Code (EWC): Uncleaned packaging: Empty leftovers. Do not reuse empty containers. Waste Code No.:</i>
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14. Transport Information

14.1. UN Number

ADR, IMDG, IATA

14.2. UN Proper Shipping Name

ADR/RID:

No hazardous goods according to ADR / DOT (US) (land transportation).

IMDG/IATA:

Not hazardous goods

14.3. Transport Hazard Classes

ADR Class:

not applicable

Hazard no.:

Classification code:

Tunnel restriction code:

IMDG Class (sea):

not applicable

Hazard no.:

EmS No.:

IATA Class:

not applicable

Hazard no.:

14.4. Packaging Group

ADR/RID:

not applicable

IMDG:

IATA:

14.5. Environmental Hazards

Not classified as environmentally hazardous.

14.6. Special Precautions for User

Not classified as a dangerous good under transport regulations.

14.7. Maritime Transport in Bulk according to IMO Instruments

14.8. Further Information

Protect against moisture.

Do not store together with foodstuffs.

15. Regulatory Information

15.1. Safety, Health and Environmental Regulations/Legislation specific for the Substance or Mixture

Water hazard class:

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2, hazardous for water (according to the German Regulation AwSV)

Local regulations on chemical accidents:

Seveso III Directive: not applicable under Directive 2012/18/EC.

Employment restrictions:

Observe employment restrictions in accordance with the law on the protection of mothers at work, in training, and in education (Mutterschutzgesetz – MuSchG).

The employment restrictions for young workers in accordance with the Youth Employment Protection Law (§ 22 JArbSchG) are to be observed.

Restriction and prohibition of application:

The product underlies the sales restrictions of the Chemical Prohibition Ordinance.

EC. REACH, Section XVII, Restrictions on the Manufacture, Placing on the Market and Use of Certain Dangerous Substances, Preparations and Articles, Registered no. 75

Technical instructions on air quality:

15. 2. Chemical Safety Assessment

A Chemical Safety Assessment has been carried out for this product.

REACH - Candidate List of Substances of Very High Concern for Authorization (Article 59): 6,6'-Di-tert.-butyl-2,2'-methylendi-p-cresol

15. 3. Further Information

EC. REACH, Annex XIV, Candidate List of Substances of very High Concern (SVHC): not regulated / not applicable
International Chemical Weapons Convention (CWC), list of the toxic chemicals and toxic chemical precursors: not forbidden and/or restricted

Regulation (EC) 1005/2009 - Substances that Deplete the Ozone Layer: not regulated / not applicable

Regulation (EU) 2019/1021 - Persistent organic pollutants: not regulated / not applicable

Regulation (EC) No. 111/2005 laying down rules for the monitoring of trade between the Community and third countries in drug precursors: not forbidden and/or not restricted

Regulation (EC) 649/2012 concerning the export and import of dangerous chemicals: Not applicable

16. Other Information

This product should be stored, handled and used in accordance with good hygiene practices and in conformity with any legal regulations. This information contained herein is based on the present state of knowledge and is intended to describe our product from the point of view of safety requirements. It should be therefore not be construed as guaranteeing specific properties.