

# Safety data sheet

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Date / Revised: 06.04.2023

Version: 1.0

Date previous version: not applicable

Previous version: none

Date / First version: 06.04.2023

Product: **Dry Vitamin A-Palmitate 500**

(ID no. 30041047/SDS\_GEN\_DE/EN)

Date of print 16.10.2025

## SECTION 1: Identification of the substance/mixture and of the company/undertaking

### 1.1. Product identifier

## Dry Vitamin A-Palmitate 500

UFI: RD0A-U0X5-N006-3WX6

### 1.2. Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses: Vitamin

### 1.3. Details of the supplier of the safety data sheet

Company:

BASF SE

67056 Ludwigshafen

GERMANY

Operating Division Nutrition and Health

Telephone: +49 621 60-48434

E-mail address: EN-global-safety-data@basf.com

### 1.4. Emergency telephone number

International emergency number:

Telephone: +49 180 2273-112

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## SECTION 2: Hazards Identification

### 2.1. Classification of the substance or mixture

For the classification of the mixture the following methods have been applied: extrapolation on the concentration levels of the hazardous substances, on basis of test results and after evaluation of experts. The methodologies used are mentioned at the respective test results.

According to Regulation (EC) No 1272/2008 [CLP]

Repr. 1B

H360D May damage the unborn child.

Aquatic Chronic 2

H411 Toxic to aquatic life with long lasting effects.

For the classifications not written out in full in this section the full text can be found in section 16.

### 2.2. Label elements

According to Regulation (EC) No 1272/2008 [CLP]

Pictogram:



Signal Word:

Danger

Hazard Statement:

H360D

May damage the unborn child.

H411

Toxic to aquatic life with long lasting effects.

Precautionary Statements (Prevention):

P273

Avoid release to the environment.

P280

Wear protective gloves, protective clothing and eye protection or face protection.

P201

Obtain special instructions before use.

Precautionary Statements (Response):

P308 + P313

IF exposed or concerned: Get medical attention.

Precautionary Statements (Storage):

P405

Store locked up.

Precautionary Statements (Disposal):

P501

Dispose of contents and container to hazardous or special waste collection point.

Hazard determining component(s) for labelling: Retinyl palmitate

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## 2.3. Other hazards

According to Regulation (EC) No 1272/2008 [CLP]

The product is under certain conditions capable of dust explosion.

The product does not contain a substance fulfilling the PBT (persistent/bioaccumulative/toxic) criteria or the vPvB (very persistent/very bioaccumulative) criteria. Product does not contain a substance above legal limits included in the list established in accordance with Article 59(1) of Regulation (EC) No 1907/2006 for having endocrine disrupting properties or is identified to have endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605.

## SECTION 3: Composition/Information on Ingredients

### 3.1. Substances

Not applicable

### 3.2. Mixtures

Chemical nature

Preparation based on: Retinyl palmitate 500 000 I.U./g

embedded in: carbohydrates, Gelatins  
stabilized with: 2,6-di-tert-Butyl-p-cresol

Regulatory relevant ingredients

Retinyl palmitate

Content (W/W): $\geq 25\%$ - $< 50\%$	Repr. 1B (unborn child)
CAS Number: 79-81-2	Aquatic Chronic 4
EC-Number: 201-228-5	H360D, H413
REACH registration number: 01-2119480425-37	

2,6-di-tert-Butyl-p-cresol

Content (W/W): $\geq 1\%$ - $< 3\%$	Aquatic Acute 1
CAS Number: 128-37-0	Aquatic Chronic 1
EC-Number: 204-881-4	M-factor chronic: 1
REACH registration number: 01-2119555270-46, 01-2119565113-46	H400, H410

For the classifications not written out in full in this section, including the hazard classes and the hazard statements, the full text is listed in section 16.

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## SECTION 4: First-Aid Measures

### 4.1. Description of first aid measures

First aid personnel should pay attention to their own safety. If the patient is likely to become unconscious, place and transport in stable sideways position (recovery position). Immediately remove contaminated clothing.

If inhaled:

Keep patient calm, remove to fresh air, seek medical attention.

On skin contact:

Immediately wash thoroughly with soap and water, seek medical attention.

On contact with eyes:

Wash affected eyes for at least 15 minutes under running water with eyelids held open.

On ingestion:

Immediately rinse mouth and then drink 200-300 ml of water, seek medical attention.

### 4.2. Most important symptoms and effects, both acute and delayed

Symptoms: Information, i.e. additional information on symptoms and effects may be included in the GHS labeling phrases available in Section 2 and in the Toxicological assessments available in Section 11., (Further) symptoms and / or effects are not known so far

### 4.3. Indication of any immediate medical attention and special treatment needed

Treatment: Treat according to symptoms (decontamination, vital functions), no known specific antidote.

## SECTION 5: Fire-Fighting Measures

### 5.1. Extinguishing media

Suitable extinguishing media:

dry powder, carbon dioxide, water spray, foam

Unsuitable extinguishing media for safety reasons:

water spray

Additional information:

Avoid whirling up the material/product because of the danger of dust explosion.

### 5.2. Special hazards arising from the substance or mixture

Endangering substances: carbon oxides, harmful vapours

Advice: The substances/groups of substances mentioned can be released in case of fire. Evolution of fumes/fog. Dust explosion hazard.

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### 5.3. Advice for fire-fighters

Special protective equipment:

Wear self-contained breathing apparatus and chemical-protective clothing.

Further information:

Cool endangered containers with water-spray. Collect contaminated extinguishing water separately, do not allow to reach sewage or effluent systems. Dispose of fire debris and contaminated extinguishing water in accordance with official regulations.

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## SECTION 6: Accidental Release Measures

Dust can form an explosive mixture with air.

### 6.1. Personal precautions, protective equipment and emergency procedures

Use personal protective clothing. Information regarding personal protective measures, see section 8. Ensure adequate ventilation. Avoid dust formation. Do not breathe dust.

### 6.2. Environmental precautions

Do not discharge into drains/surface waters/groundwater. Inform authorities in the event of product spillage to water courses or sewage systems.

### 6.3. Methods and material for containment and cleaning up

For small amounts: Contain with dust binding material and dispose of.

For large amounts: Sweep/shovel up. Collect waste in suitable containers, which can be labeled and sealed.

Dispose of absorbed material in accordance with regulations. Avoid raising dust. Cleaning operations should be carried out only while wearing breathing apparatus.

### 6.4. Reference to other sections

Information regarding exposure controls/personal protection and disposal considerations can be found in section 8 and 13.

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## SECTION 7: Handling and Storage

### 7.1. Precautions for safe handling

Avoid dust formation. Provide exhaust ventilation. This product may cause irritations; wash your hands after every contact.

Protection against fire and explosion:

Avoid dust formation. The product is capable of dust explosion. Prevent electrostatic charge - sources of ignition should be kept well clear - fire extinguishers should be kept handy. Use explosion-proof apparatus and fittings.

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#### Control of exposure and risk management measures

Emission factor air:	5 %
Emission factor water:	0,003 %
Emission factor soil:	0 %

#### Exposure estimate and reference to its source

Assessment method:	ECETOC TRA v2.0 Environment
Maximum amount of safe use:	180.000 kg/d
Remarks:	Risk from environmental exposure is driven by marine water.

### **7.2. Conditions for safe storage, including any incompatibilities**

Suitable materials for containers: High density polyethylene (HDPE), Low density polyethylene (LDPE), Aluminium

Further information on storage conditions: Keep container tightly closed and dry; store in a cool place. Protect from air. Protect from the effects of light.

Storage class according to TRGS 510 (originally VCI, Germany): (6.1C) Combustible substances of acute toxicity, category 3 / hazardous substances that are toxic or produce chronic effects

### **7.3. Specific end use(s)**

For the relevant identified use(s) listed in Section 1 the advice mentioned in this section 7 is to be observed.

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## **SECTION 8: Exposure Controls/Personal Protection**

### **8.1. Control parameters**

Components with occupational exposure limits

The surveillance of the workplace by exposure measurements may be necessary, in order to prove the efficiency of safety measures, for example ventilation or the need of respiratory protection. Since this requires a specific competency, only accredited laboratories should be contracted. Regarding suitable methods to assess inhalation exposure, the European Standards EN 482, 689 and 14042 are to be considered. In addition, the TRGS 402 has to be observed in Germany.

128-37-0: 2,6-di-tert-Butyl-p-cresol

OEL 10 mg/m<sup>3</sup> (TRGS 900 (DE)), Inhalable fraction

Ceiling limit value/factor: 4

If the occupational exposure limit value (AGW) and the biological limit value (BGW) are complied with, there should be no risk of damage for the unborn child (see TRGS 900, Number 2.7)

Short Term Exposure Classification: (TRGS 900 (DE)), Inhalable fraction

Category II: Substances with a resorptive effect

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### PNEC

Data refer to the lead substance

### Components with PNEC

128-37-0: 2,6-di-tert-Butyl-p-cresol

freshwater: 0,004 mg/l

marine water: 0,0004 mg/l

intermittent release: 0,004 mg/l

STP: 100 mg/l

sediment (freshwater): 1,29 mg/kg

sediment (marine water):

Exposure of sediment is not expected

soil: 1,04 mg/kg

oral (secondary poisoning): 16,7 mg/kg

### DNEL

Data refer to the lead substance

### Components with DNEL

79-81-2: Retinyl palmitate

worker: Long-term exposure- systemic effects, dermal: 1,6 mg/kg

## **8.2. Exposure controls**

### Personal protective equipment

Respiratory protection:

Suitable respiratory protection for lower concentrations or short-term effect: Particle filter with high efficiency for solid and liquid particles (e.g. EN 143 or 149, Type P3 or FFP3).

Hand protection:

Wear chemically resistant gloves in combination with 'basic' employee training.

Suitable chemical resistant safety gloves (EN ISO 374-1) also with prolonged, direct contact (Recommended: Protective index 6, corresponding > 480 minutes of permeation time according to EN ISO 374-1): E.g. nitrile rubber (0.4 mm), chloroprene rubber (0.5 mm), butyl rubber (0.7 mm) etc. Supplementary note: The specifications are based on tests, literature data and information of glove manufacturers or are derived from similar substances by analogy. Due to many conditions (e.g. temperature) it must be considered, that the practical usage of a chemical-protective glove in practice may be much shorter than the permeation time determined through testing. Manufacturer's directions for use should be observed because of great diversity of types.

Eye protection:

Safety glasses with side-shields (frame goggles) (e.g. EN 166)

Body protection:

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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).

#### General safety and hygiene measures

Under no circumstances should the product come into contact with the skin of pregnant women or be inhaled by them. Wearing of closed work clothing is required additionally to the stated personal protection equipment. Handle in accordance with good industrial hygiene and safety practice. No eating, drinking, smoking or tobacco use at the place of work. Hands and/or face should be washed before breaks and at the end of the shift. Store work clothing separately.

#### Environmental exposure controls

Do not discharge product into the environment without control.

## SECTION 9: Physical and Chemical Properties

### 9.1. Information on basic physical and chemical properties

State of matter:	solid	
Form:	free flowing fine granules	
Colour:	light yellow	
Odour:	not applicable	
Odour threshold:	Not determined due to potential health hazard by inhalation.	
melting range:	The substance / product decomposes therefore not determined.	
Boiling point:	not applicable	
Flammability:	not highly 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.	
Flash point:	not applicable, the product is a solid	
Thermal decomposition:	> 160 °C (DSC (DIN 51007)) self-accelerating reaction	
SADT:	Not a substance liable to self-decomposition according to UN transport regulations, class 4.1.	
pH value:	5,5 (10 %(m), 20 °C)	



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Viscosity, kinematic:

not applicable, the product is a solid

Solubility in water:

dispersible  
(35 - 40 °C)

Partitioning coefficient n-octanol/water (log Kow):

not applicable for mixtures

Vapour pressure:

not applicable

Density:

No information is available for the absolute density. Instead the bulk density was determined as a more relevant value.

Relative vapour density (air):

not applicable, The product is a non-volatile solid.

#### Particle characteristics

Particle size distribution: typically > 200 µm

(D50, Volumetric Distribution, ISO 13320-1)

## **9.2. Other information**

### **Information with regard to physical hazard classes**

#### Explosives

Explosion hazard:

Product is not explosive, however a dust explosion could result from an air / dust mixture.

#### Oxidizing properties

Fire promoting properties:

Based on its structural properties the product is not classified as oxidizing.

#### Flammable solids

Burning rate:

The material doesn't meet the criteria specified in paragraph 33.2.4.4 of UN manual of tests and criteria. (UN Test N.1 (ready combustible solids))  
An ignition of the test substance does not lead to a propagation by burning with flame or smouldering.

#### Self-heating substances and mixtures

Self heating ability:

It is not a substance capable of spontaneous heating according to UN transport regulations class 4.2.

(UN Test N.4 (self heating substances))

#### Corrosion to metals

Corrosive effects to metal are not anticipated.

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### Other safety characteristics

Minimum ignition energy:	(VDI 2263, sheet 1, 2.5)
	The product is capable of dust explosion.
Bulk density:	approx. 600 kg/m <sup>3</sup>
SAPT-Temperature:	
	Study scientifically not justified.
Evaporation rate:	
	The product is a non-volatile solid.

## SECTION 10: Stability and Reactivity

### 10.1. Reactivity

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

Corrosion to metals: Corrosive effects to metal are not anticipated.

### 10.2. Chemical stability

The product is stable if stored and handled as prescribed/indicated.

### 10.3. Possibility of hazardous reactions

Dust explosion hazard.

### 10.4. Conditions to avoid

Avoid heat. Avoid light. Avoid dust formation. Avoid all sources of ignition: heat, sparks, open flame. See SDS section 7 - Handling and storage.

### 10.5. Incompatible materials

Substances to avoid:  
atmospheric moisture, atmospheric oxygen

### 10.6. Hazardous decomposition products

Hazardous decomposition products:  
No hazardous decomposition products if stored and handled as prescribed/indicated.

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## SECTION 11: Toxicological Information

### 11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

#### Acute toxicity

Assessment of acute toxicity:

Virtually nontoxic after a single ingestion.

#### Irritation

Assessment of irritating effects:

Not irritating to the eyes. Skin contact causes slight irritation.

*Information on: Retinyl palmitate*

*Experimental/calculated data:*

*Skin corrosion/irritation*

*rabbit: Irritant. (BASF-Test)*

*Skin corrosion/irritation*

*rabbit: Slightly irritating. (OECD Guideline 404)*

*Information on: Retinyl palmitate*

*Experimental/calculated data:*

*Serious eye damage/irritation*

*rabbit: non-irritant (OECD Guideline 405)*

#### Respiratory/Skin sensitization

Assessment of sensitization:

Based on available data, the classification criteria are not met.

*Information on: Retinyl palmitate*

*Assessment of sensitization:*

*Skin sensitizing effects were not observed in animal studies.*

#### Germ cell mutagenicity

Assessment of mutagenicity:

Based on the ingredients, there is no suspicion of a mutagenic effect.

*Information on: Retinyl palmitate*

*Assessment of mutagenicity:*

*In the majority of tests performed (bacteria/microorganisms/cell cultures) a mutagenic effect was not found. A mutagenic effect was also not observed in in-vivo assays. The product has not been fully tested. The statements have been derived in parts from products of a similar structure or composition.*

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### Carcinogenicity

Assessment of carcinogenicity:

The whole of the information assessable provides no indication of a carcinogenic effect.

*Information on: Retinyl palmitate*

*Assessment of carcinogenicity:*

*Results from a number of long-term carcinogenicity studies and short-term tests are available. Taking into account all of the information, there is no indication that the substance itself is carcinogenic. Literature data.*

*Information on: 2,6-di-tert-Butyl-p-cresol*

*Assessment of carcinogenicity:*

*The whole of the information assessable provides no indication of a carcinogenic effect.*

### Reproductive toxicity

Assessment of reproduction toxicity:

Based on available data, the classification criteria are not met.

### Developmental toxicity

Assessment of teratogenicity:

The substance caused malformations/developmental toxicity in laboratory animals.

*Information on: Retinyl palmitate*

*Assessment of teratogenicity:*

*May cause harm to the unborn child.*

### Specific target organ toxicity (single exposure)

No data available.

### Repeated dose toxicity and Specific target organ toxicity (repeated exposure)

Assessment of repeated dose toxicity:

Based on available data, the classification criteria are not met.

*Information on: Retinyl palmitate*

*Assessment of repeated dose toxicity:*

*Repeated exposure to large quantities may affect certain organs.*

*Information on: 2,6-di-tert-Butyl-p-cresol*

*Assessment of repeated dose toxicity:*

*The information available on the product provides no indication of toxicity on target organs after repeated exposure.*

### Aspiration hazard

No aspiration hazard expected.

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#### Interactive effects

No data available.

## **11.2. Information on other hazards**

### Endocrine disrupting properties

Product does not contain a substance above legal limits included in the list established in accordance with Article 59(1) of Regulation (EC) No 1907/2006 for having endocrine disrupting properties or is identified to have endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605.

### Other information

Other relevant toxicity information

The product has not been tested. The statements on toxicology have been derived from the properties of the individual components.

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## **SECTION 12: Ecological Information**

### **12.1. Toxicity**

Assessment of aquatic toxicity:

Acutely toxic for aquatic organisms. May cause long-term adverse effects in the aquatic environment.

*Information on: 2,6-di-tert-Butyl-p-cresol*

*Toxicity to fish:*

*LC0 (96 h)  $\geq$  0,57 mg/l, Brachydanio rerio (OECD 203; ISO 7346; 84/449/EEC, C.1, semistatic)*

*The statement of the toxic effect relates to the analytically determined concentration. Limit concentration test only (LIMIT test).*

*Information on: 2,6-di-tert-Butyl-p-cresol*

*Aquatic invertebrates:*

*EC0 (48 h) 0,48 mg/l, Daphnia magna (OECD Guideline 202, part 1, static)*

*The statement of the toxic effect relates to the analytically determined concentration.*

*Information on: 2,6-di-tert-Butyl-p-cresol*

*Aquatic plants:*

*EC50 (72 h)  $>$  0,40 mg/l (growth rate), Scenedesmus subspicatus (Guideline 92/69/EEC, C.3, static)*

*The statement of the toxic effect relates to the analytically determined concentration.*

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*Information on: 2,6-di-tert-Butyl-p-cresol*

*Microorganisms/Effect on activated sludge:*

*EC0 (3 h) 1.000 mg/l, activated sludge (DIN EN ISO 8192-OECD 209-88/302/EEC, P. C, aerobic)*

## 12.2. Persistence and degradability

Assessment biodegradation and elimination (H<sub>2</sub>O):

Product is not expected to be readily biodegradable.

*Information on: Retinyl palmitate*

*Assessment biodegradation and elimination (H<sub>2</sub>O):*

*Not readily biodegradable (by OECD criteria). Moderately/partially biodegradable.*

*Information on: 2,6-di-tert-Butyl-p-cresol*

*Assessment biodegradation and elimination (H<sub>2</sub>O):*

*Not readily biodegradable (by OECD criteria). Poorly biodegradable.*

*Information on: Retinyl palmitate*

*Elimination information:*

*40 - 50 % BOD of the ThOD (28 d) (OECD 301F; ISO 9408; 92/69/EEC, C.4-D) (aerobic, activated sludge, domestic)*

*Information on: 2,6-di-tert-Butyl-p-cresol*

*Elimination information:*

*4,5 % BOD of the ThOD (28 d) (OECD 301C; ISO 9408; 92/69/EEC, C.4-F) (aerobic, activated sludge)*

## 12.3. Bioaccumulative potential

Assessment bioaccumulation potential:

No data available.

*Information on: Retinyl palmitate*

*Assessment bioaccumulation potential:*

*The product will not be readily bioavailable due to its consistency and insolubility in water. No significant accumulation in organisms is expected as a result of the distribution coefficient of n-octanol/water (log Pow).*

*Information on: 2,6-di-tert-Butyl-p-cresol*

*Bioaccumulation potential:*

*Bioconcentration factor (BCF): 330 - 1.800 (28 d), Cyprinus carpio (OECD Guideline 305 C)*

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*Bioconcentration factor(BCF): 230 - 2.500 (56 d), Cyprinus carpio (OECD Guideline 305 C)*  
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## 12.4. Mobility in soil

Assessment transport between environmental compartments:

Volatility: No data available.

*Information on: Retinyl palmitate*

*Assessment transport between environmental compartments:*

*Volatility: The substance will not evaporate into the atmosphere from the water surface.*

*Adsorption in soil: Adsorption to solid soil phase is expected.*  
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## 12.5. Results of PBT and vPvB assessment

According to Annex XIII of Regulation (EC) No.1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH): The product does not contain a substance fulfilling the PBT (persistent/bioaccumulative/toxic) criteria or the vPvB (very persistent/very bioaccumulative) criteria. Self classification

## 12.6. Endocrine disrupting properties

Product does not contain a substance above legal limits included in the list established in accordance with Article 59(1) of Regulation (EC) No 1907/2006 for having endocrine disrupting properties or is identified to have endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605.

## 12.7. Other adverse effects

The product does not contain substances that are listed in Regulation (EC) 1005/2009 on substances that deplete the ozone layer.

## 12.8. Additional information

Other ecotoxicological advice:

The product has not been tested. The statement has been derived from the properties of the individual components.

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Date / Revised: 06.04.2023

Version: 1.0

Date previous version: not applicable

Previous version: none

Date / First version: 06.04.2023

Product: **Dry Vitamin A-Palmitate 500**

(ID no. 30041047/SDS\_GEN\_DE/EN)

Date of print 16.10.2025

## SECTION 13: Disposal Considerations

### 13.1. Waste treatment methods

Observe national and local legal requirements.

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## SECTION 14: Transport Information

### Land transport

ADR

UN number or ID number: UN3077

UN proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.  
(2,6-DI-TERT-BUTYL-P-CRESOL)

Transport hazard class(es): 9, EHS

Packing group: III

Environmental hazards: yes

Special precautions for user: None known

RID

UN number or ID number: UN3077

UN proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.  
(2,6-DI-TERT-BUTYL-P-CRESOL)

Transport hazard class(es): 9, EHS

Packing group: III

Environmental hazards: yes

Special precautions for user: None known

### Inland waterway transport

ADN

UN number or ID number: UN3077

UN proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.  
(2,6-DI-TERT-BUTYL-P-CRESOL)

Transport hazard class(es): 9, EHS

Packing group: III

Environmental hazards: yes

Special precautions for user: None known



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#### Transport in inland waterway vessel

Not evaluated

#### Sea transport

##### IMDG

UN number or ID number: UN 3077

UN proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.  
(2,6-DI-TERT-BUTYL-P-CRESOL)

Transport hazard class(es): 9, EHSM

Packing group: III

Environmental hazards: yes  
Marine pollutant: YES

Special precautions for user: EmS: F-A; S-F

#### Air transport

##### IATA/ICAO

UN number or ID number: UN 3077

UN proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.  
(2,6-DI-TERT-BUTYL-P-CRESOL)

Transport hazard class(es): 9, EHSM

Packing group: III

Environmental hazards: yes

Special precautions for user: None known

#### **14.1. UN number or ID number**

See corresponding entries for "UN number or ID number" for the respective regulations in the tables above.

#### **14.2. UN proper shipping name**

See corresponding entries for "UN proper shipping name" for the respective regulations in the tables above.

#### **14.3. Transport hazard class(es)**

See corresponding entries for "Transport hazard class(es)" for the respective regulations in the tables above.

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#### **14.4. Packing group**

See corresponding entries for "Packing group" for the respective regulations in the tables above.

#### **14.5. Environmental hazards**

See corresponding entries for "Environmental hazards" for the respective regulations in the tables above.

#### **14.6. Special precautions for user**

See corresponding entries for "Special precautions for user" for the respective regulations in the tables above.

#### **14.7. Maritime transport in bulk according to IMO instruments**

Maritime transport in bulk is not intended.

#### **Further information**

Product may be shipped as non-hazardous in suitable packages containing a net quantity of 5 kg or less under the provisions of various regulatory agencies: ADR, RID, ADN: Special Provision 375; IMDG: 2:10.2.7; IATA: A197; TDS: Special Provision 99(2); 49CFR: §171.4 (c) (2) and also the Special Provision 375 in Appendix B which is regulated in China "Regulations Concerning Road Transportation of Dangerous Goods Part 3: Index of dangerous goods name and transportation requirements" (JT/T 617.3)

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### **SECTION 15: Regulatory Information**

#### **15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture**

##### Prohibitions, Restrictions and Authorizations

Chemical Prohibition Ordinance (DE): Annex 2

Restriction Type:           Restricted substance

Hazardous Incident Ordinance (Germany):

List entry in regulation: 1.3.2

Directive 2012/18/EU - Control of Major Accident Hazards involving dangerous substances (EU):

List entry in regulation: E2

Classification according to 'TA-Luft' (Germany):

5.2.1: total dust, including fine dust

Water hazard class (§8/§10 AwSV (Self-classification of the mixture according to calculation method)): (2) significantly water polluting.

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If other regulatory information applies that is not already provided elsewhere in this safety data sheet, then it is described in this subsection.

Law on the Protection of Working Youth

The Maternity Protection Act needs to be considered.

Observe TRGS 910 on cmr substances (German Technical Rule for Hazardous Substances)

Regulation on prohibitions and restrictions on the marketing of dangerous substances, preparations and goods in accordance with the chemical law (Germany)

German Ordinance on the Federal Immission Control – regulation on accidental releases, 12.

BImSchV–Störfall-Verordnung

## 15.2. Chemical Safety Assessment

Assessment of safe use has been performed for the mixture and the result is documented in section 7 and 8 of the SDS

## SECTION 16: Other Information

Assessment of the hazard classes according to UN GHS criteria (most recent version)

Skin Corr./Irrit. 3

Repr. 1B (unborn child)

Aquatic Acute 2

Aquatic Chronic 2

Any other intended applications should be discussed with the manufacturer. Corresponding occupational protection measurements must be followed.

Full text of the classifications, including the hazard classes and the hazard statements, if mentioned in section 2 or 3:

Repr.	Reproductive toxicity
Aquatic Chronic	Hazardous to the aquatic environment - chronic
Aquatic Acute	Hazardous to the aquatic environment - acute
H360D	May damage the unborn child.
H411	Toxic to aquatic life with long lasting effects.
H413	May cause long lasting harmful effects to aquatic life.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.

### Abbreviations

ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road.

ADN = The European Agreement concerning the International Carriage of Dangerous Goods by Inland

waterways. ATE = Acute Toxicity Estimates. CAO = Cargo Aircraft Only. CAS = Chemical Abstract

Service. CLP = Classification, Labelling and Packaging of substances and mixtures. DIN = German

national organization for standardization. DNEL = Derived No Effect Level. EC50 = Effective

concentration median for 50% of the population. EC = European Community. EN = European Standards.

IARC = International Agency for Research on Cancer. IATA = International Air Transport Association.

IBC-Code = Intermediate Bulk Container code. IMDG = International Maritime Dangerous Goods Code.

ISO = International Organization for Standardization. STEL = Short-Term Exposure Limit. LC50 = Lethal

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concentration median for 50% of the population. LD50 = Lethal dose median for 50% of the population. TLV = Threshold Limit Value. MARPOL = The International Convention for the Prevention of Pollution from Ships. NEN = Dutch Norm. NOEC = No Observed Effect Concentration. OEL = Occupational Exposure Limit. OECD = Organization for Economic Cooperation and Development. PBT = Persistent, Bioaccumulative and Toxic. PNEC = Predicted No Effect Level. PPM = Parts per million. RID = The European Agreement concerning the International Carriage of Dangerous Goods by Rail. TWA = Time Weight Average. UN-number = UN number at transport. vPvB = very Persistent and very Bioaccumulative.

The data contained in this safety data sheet are based on our current knowledge and experience and describe the product only with regard to safety requirements. This safety data sheet is neither a Certificate of Analysis (CoA) nor technical data sheet and shall not be mistaken for a specification agreement. Identified uses in this safety data sheet do neither represent an agreement on the corresponding contractual quality of the substance/mixture nor a contractually designated use. It is the responsibility of the recipient of the product to ensure any proprietary rights and existing laws and legislation are observed.

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Vertical lines in the left hand margin indicate an amendment from the previous version.