

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Version 7.15

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GENERIC EU MSDS - NO COUNTRY SPECIFIC DATA - NO OEL DATA

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

### 1.1 Product identifiers

Product name : BNAs in Soil

Product Number : SQC003

Brand : Sigma-Aldrich

REACH No. :

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

Identified uses : Scientific research and development

Uses advised against : For R&D use only. Not for pharmaceutical, household or other uses.

### 1.3

CHEMIKART

### 1.4 Emergency telephone

Emergency Phone # : 000 800 1007 141 (CHEMTREC)

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

Skin sensitization, (Category 1) H317: May cause an allergic skin reaction.

Carcinogenicity, (Category 1B) H350: May cause cancer.

Long-term (chronic) aquatic hazard, (Category 3) H412: Harmful to aquatic life with long lasting effects.

### 2.2 Label elements

#### Labelling according Regulation (EC) No 1272/2008

Pictogram

Signal Word

Danger

Hazard Statements	
H317	May cause an allergic skin reaction.
H350	May cause cancer.
H412	Harmful to aquatic life with long lasting effects.
Precautionary Statements	
P202	Do not handle until all safety precautions have been read and understood.
P261	Avoid breathing dust.
P273	Avoid release to the environment.
P280	Wear protective gloves/ protective clothing/ eye protection/ face protection.
P302 + P352	IF ON SKIN: Wash with plenty of water.
P308 + P313	IF exposed or concerned: Get medical advice/ attention.
Supplemental Hazard Statements	none
Restricted to professional users.	

### Reduced Labeling (<= 125 ml)

Pictogram

Signal Word	Danger
Hazard Statements	
H317	May cause an allergic skin reaction.
H350	May cause cancer.
H412	Harmful to aquatic life with long lasting effects.
Precautionary Statements	
P202	Do not handle until all safety precautions have been read and understood.
P261	Avoid breathing dust.
P280	Wear protective gloves/ protective clothing/ eye protection/ face protection.
P302 + P352	IF ON SKIN: Wash with plenty of water.
P308 + P313	IF exposed or concerned: Get medical advice/ attention.
Supplemental Hazard Statements	none

### 2.3 Other hazards

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.

Ecological information:

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Toxicological information:

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

## SECTION 3: Composition/information on ingredients

### 3.2 Mixtures

Component		Classification	Concentration
<b>N-Nitrosodimethylamine</b>			
CAS-No.	62-75-9	Acute Tox. 2; Acute Tox. 1; Carc. 1B; STOT RE 1; Aquatic Chronic 2; H300, H330, H350, H372, H411 Concentration limits: >= 0,001 %: Carc. 1B, H350;	>= 0,001 - < 0,0025 %
EC-No.	200-549-8		
Index-No.	612-077-00-3 *		
<b>N-Nitroso dipropylamine</b>			
CAS-No.	621-64-7	Acute Tox. 4; Carc. 1B; Aquatic Chronic 2; H302, H350, H411 Concentration limits: >= 0,001 %: Carc. 1B, H350;	>= 0,001 - < 0,0025 %
EC-No.	210-698-0		
Index-No.	612-098-00-8 *		
<b>maleic anhydride</b>			
CAS-No.	108-31-6	Acute Tox. 4; Skin Corr. 1B; Eye Dam. 1; Resp. Sens. 1; Skin Sens. 1A; STOT RE 1; H302, H314, H318, H334, H317, H372 Concentration limits: >= 0,001 %: Skin Sens. 1A, H317;	>= 0,001 - < 0,1 %
EC-No.	203-571-6		
Index-No.	607-096-00-9		
Registration number	01-2119472428-31-XXXX		
<b>Hexachlorobenzene</b>			
CAS-No.	118-74-1	Carc. 1B; STOT RE 1; Aquatic Acute 1; Aquatic Chronic 1; H350, H372, H400, H410 M-Factor - Aquatic Acute: 100 M-Factor - Aquatic Chronic: 100	>= 0,0002 - < 0,0025 %
EC-No.	204-273-9		
Index-No.	602-065-00-6 *		
<b>1,2,3,4,5,5-Hexachlorocyclopentadiene</b>			
CAS-No.	77-47-4	Acute Tox. 4; Acute Tox. 1; Acute Tox. 3; Skin Corr. 1B; Eye Dam. 1; Aquatic Acute 1; Aquatic Chronic 1; H302, H330, H311, H314, H318, H400, H410 M-Factor - Aquatic Acute: 100 M-Factor - Aquatic Chronic: 10	>= 0,0002 - < 0,0025 %
EC-No.	201-029-3		
Index-No.	602-078-00-7 *		

<b>anthracene</b> Included in the Candidate List of Substances of Very High Concern (SVHC) according to Regulation (EC) No. 1907/2006 (REACH)			
CAS-No.	120-12-7	Eye Irrit. 2; Aquatic Acute 1; Aquatic Chronic 1; H319, H400, H410 M-Factor - Aquatic Acute: 1.000 M-Factor - Aquatic Chronic: 100	>= 0,0002 - < 0,0025 %
EC-No.	204-371-1		
	*		
<b>Benzo[ghi]perylene</b> Included in the Candidate List of Substances of Very High Concern (SVHC) according to Regulation (EC) No. 1907/2006 (REACH)			
CAS-No.	191-24-2	Aquatic Acute 1; Aquatic Chronic 1; H400, H410 M-Factor - Aquatic Acute: 1.000 - Aquatic Chronic: 1.000	>= 0,0002 - < 0,0025 %
EC-No.	205-883-8		
	*		
<b>Quartz (SiO2)</b>			
CAS-No.	14808-60-7		>= 90 - <= 100 %
EC-No.	238-878-4		
	*		

\*A registration number is not available for this substance as the substance or its use are exempted from registration according to Article 2 REACH Regulation (EC) No 1907/2006, or the annual tonnage does not require a registration.

For the full text of the H-Statements mentioned in this Section, see Section 16.

## SECTION 4: First aid measures

### 4.1 Description of first-aid measures

#### General advice

Show this material safety data sheet to the doctor in attendance.

#### If inhaled

After inhalation: fresh air. Call in physician.

#### In case of skin contact

In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower. Consult a physician.

#### In case of eye contact

After eye contact: rinse out with plenty of water. Call in ophthalmologist. Remove contact lenses.

#### If swallowed

After swallowing: immediately make victim drink water (two glasses at most). Consult a physician.

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

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

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

No data available

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## **SECTION 5: Firefighting measures**

### **5.1 Extinguishing media**

#### **Suitable extinguishing media**

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

#### **Unsuitable extinguishing media**

For this substance/mixture no limitations of extinguishing agents are given.

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

silicon oxides

Not combustible.

Ambient fire may liberate hazardous vapours.

### **5.3 Advice for firefighters**

Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

### **5.4 Further information**

Suppress (knock down) gases/vapors/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system.

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## **SECTION 6: Accidental release measures**

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

Advice for non-emergency personnel: Avoid generation and inhalation of dusts in all circumstances. Avoid substance contact. Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert.

For personal protection see section 8.

### **6.2 Environmental precautions**

Do not let product enter drains.

### **6.3 Methods and materials for containment and cleaning up**

Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up carefully. Dispose of properly. Clean up affected area. Avoid generation of dusts.

### **6.4 Reference to other sections**

For disposal see section 13.

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## **SECTION 7: Handling and storage**

### **7.1 Precautions for safe handling**

#### **Advice on safe handling**

Work under hood. Do not inhale substance/mixture.

#### **Hygiene measures**

Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance.

For precautions see section 2.2.

## 7.2 Conditions for safe storage, including any incompatibilities

### Storage conditions

Tightly closed. Dry. Keep in a well-ventilated place. Keep locked up or in an area accessible only to qualified or authorized persons.

### Storage class

Storage class (TRGS 510): 6.1D: Non-combustible, acute toxic Cat.3 / toxic hazardous materials or hazardous materials causing chronic effects

## 7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

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## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

#### Ingredients with workplace control parameters

### 8.2 Exposure controls

#### Personal protective equipment

##### Eye/face protection

Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Safety glasses

##### Skin protection

This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN 16523-1 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: [www.kcl.de](http://www.kcl.de)).

##### Full contact

Material: Nitrile rubber

Minimum layer thickness: 0,11 mm

Break through time: 480 min

Material tested: KCL 741 Dermatril® L

##### Splash contact

Material: Nitrile rubber

Minimum layer thickness: 0,11 mm

Break through time: 480 min

Material tested: KCL 741 Dermatril® L

##### Body Protection

protective clothing

##### Respiratory protection

required when dusts are generated.

Our recommendations on filtering respiratory protection are based on the following standards: DIN EN 143, DIN 14387 and other accompanying standards relating to the used respiratory protection system.

Recommended Filter type: Filter type P3

The entrepreneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer. These measures have to be properly documented.

**Control of environmental exposure**

Do not let product enter drains.

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**SECTION 9: Physical and chemical properties**

**9.1 Information on basic physical and chemical properties**

- |   |  |
|---|--|
| a) Physical state                               | solid  |
| b) Color  | No data available  |
| c) Odor   | No data available  |
| d) Melting point/freezing point                 | No data available  |
| e) Initial boiling point and boiling range      | No data available  |
| f) Flammability (solid, gas)                    | The product is not flammable.  |
| g) Upper/lower flammability or explosive limits | No data available  |
| h) Flash point                                  | Not applicable   |
| i) Autoignition temperature                     | Not applicable   |
| j) Decomposition temperature                    | No data available  |
| k) pH   | No data available  |
| l) Viscosity                                    | Viscosity, kinematic: No data available<br>Viscosity, dynamic: No data available |
| m) Water solubility                             | insoluble  |
| n) Partition coefficient: n-octanol/water       | No data available  |
| o) Vapor pressure                               | No data available  |
| p) Density                                      | No data available  |
| Relative density                                | No data available  |
| q) Relative vapor density                       | No data available  |
| r) Particle characteristics                     | No data available  |
| s) Explosive properties                         | Not classified as explosive.   |
| t) Oxidizing properties                         | none   |

## 9.2 Other safety information

No data available

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## SECTION 10: Stability and reactivity

### 10.1 Reactivity

No data available

### 10.2 Chemical stability

The product is chemically stable under standard ambient conditions (room temperature) .

### 10.3 Possibility of hazardous reactions

No data available

### 10.4 Conditions to avoid

no information available

### 10.5 Incompatible materials

Strong oxidizing agents

### 10.6 Hazardous decomposition products

In the event of fire: see section 5

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## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

#### Mixture

#### Acute toxicity

Oral: No data available

Inhalation: No data available

Dermal: No data available

#### Skin corrosion/irritation

No data available

#### Serious eye damage/eye irritation

No data available

#### Respiratory or skin sensitization

Mixture may cause an allergic skin reaction.

#### Germ cell mutagenicity

No data available

#### Carcinogenicity

Possible carcinogen.

#### Reproductive toxicity

No data available

#### Specific target organ toxicity - single exposure

No data available

#### Specific target organ toxicity - repeated exposure

No data available

#### Aspiration hazard

No data available



## 11.2 Additional Information

### Endocrine disrupting properties

#### **Product:**

Assessment

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

#### **Components:**

##### **Benzyl butyl phthalate:**

Assessment

The substance is considered to have endocrine disrupting properties according to REACH Article 57(f) for human health.

##### **dibutyl phthalate:**

Assessment

The substance is considered to have endocrine disrupting properties according to REACH Article 57(f) for human health.

##### **Bis(2-ethylhexyl) phthalate:**

Assessment

The substance is considered to have endocrine disrupting properties according to REACH Article 57(f) for human health.

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.  
Other dangerous properties can not be excluded.

This substance should be handled with particular care.

### **Components**

#### **N-Nitrosodimethylamine**

##### **Acute toxicity**

LD50 Oral - Rat - 23 mg/kg

Remarks: (Lit.)

Acute toxicity estimate Oral - 23 mg/kg

(Calculation method)

LC50 Inhalation - Rat - 4 h - 0,24 mg/l - vapor

Remarks: (Lit.)

Acute toxicity estimate Inhalation - 0,24 mg/l - vapor

(Calculation method)

Dermal: No data available

##### **Skin corrosion/irritation**

No data available

**Serious eye damage/eye irritation**

No data available

**Respiratory or skin sensitization**

No data available

**Germ cell mutagenicity**

No data available

**Carcinogenicity**

Presumed to have carcinogenic potential for humans

**Reproductive toxicity**

No data available

**Specific target organ toxicity - single exposure**

No data available

**Specific target organ toxicity - repeated exposure**

Causes damage to organs through prolonged or repeated exposure.

- Liver

Remarks: Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

**Aspiration hazard**

No data available

**N-Nitroso dipropylamine****Acute toxicity**

LD50 Oral - Rat - 480,0 mg/kg

Remarks: (RTECS)

Acute toxicity estimate Oral - 480 mg/kg

(Calculation method)

Inhalation: No data available

Dermal: No data available

**Skin corrosion/irritation**

No data available

**Serious eye damage/eye irritation**

No data available

**Respiratory or skin sensitization**

No data available

**Germ cell mutagenicity**

No data available

**Carcinogenicity**

Possible human carcinogen

**Reproductive toxicity**

No data available

**Specific target organ toxicity - single exposure**

No data available

**Specific target organ toxicity - repeated exposure**

No data available

**Aspiration hazard**

No data available

## maleic anhydride

### Acute toxicity

LD50 Oral - Rat - male and female - 1.090 mg/kg

(OECD Test Guideline 401)

Symptoms: If ingested, severe burns of the mouth and throat, as well as a danger of perforation of the esophagus and the stomach.

Acute toxicity estimate Oral - 1.090 mg/kg

(ATE value derived from LD50/LC50 value)

Symptoms: mucosal irritations, Cough, Shortness of breath, Asthmatic appearance, Lung edema, Possible damages: , damage of respiratory tract

Inhalation: Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

LD50 Dermal - Rabbit - female - 2.620 mg/kg

Remarks: (ECHA)

### Skin corrosion/irritation

Skin - Rabbit

Result: Causes burns. - 4 h

Remarks: (ECHA)

### Serious eye damage/eye irritation

Eyes - Rabbit

Result: Irreversible effects on the eye - 2 s

(OECD Test Guideline 405)

### Respiratory or skin sensitization

Local lymph node assay (LLNA) - Mouse

Result: positive

(OECD Test Guideline 429)

- Rat

Result: positive

Remarks: (ECHA)

### Germ cell mutagenicity

Method: OECD Test Guideline 475

Species: Rat - male and female - Bone marrow

Result: negative

### Carcinogenicity

No data available

### Reproductive toxicity

No data available

### Specific target organ toxicity - single exposure

Acute oral toxicity - If ingested, severe burns of the mouth and throat, as well as a danger of perforation of the esophagus and the stomach.

Acute inhalation toxicity - mucosal irritations, Cough, Shortness of breath,

Asthmatic appearance, Lung edema, Possible damages: , damage of respiratory tract

### Specific target organ toxicity - repeated exposure

Inhalation - Causes damage to organs through prolonged or repeated exposure.

- Respiratory system

Remarks: Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

### Aspiration hazard

No data available

## Hexachlorobenzene

### Acute toxicity

LD50 Oral - Rat - 10.000 mg/kg

LD50 Oral - Mouse - 4.000 mg/kg

LD50 Oral - Cat - 1.700 mg/kg

LD50 Oral - Rabbit - 2.600 mg/kg

LD50 Oral - Guinea pig - > 3.000 mg/kg

LD50 Oral - Quail - > 6.400 mg/kg

LD50 Oral - Mammal - > 5.000 mg/kg

Remarks: Behavioral:Somnolence (general depressed activity).

Behavioral:Change in motor activity (specific assay).

LC50 Inhalation - Rat - 3.600 mg/m<sup>3</sup> - dust/mist

LC50 Inhalation - Mouse - 4.000 mg/m<sup>3</sup> - dust/mist

LC50 Inhalation - Cat - 1.600 mg/m<sup>3</sup> - dust/mist

LC50 Inhalation - Rabbit - 1.800 mg/m<sup>3</sup> - dust/mist

Dermal: No data available

### Skin corrosion/irritation

Remarks: No data available

### Serious eye damage/eye irritation

Remarks: No data available

### Respiratory or skin sensitization

Causes photosensitivity. Exposure to light can result in allergic reactions resulting in dermatologic lesions, which can vary from sunburnlike responses to edematous, vesiculated lesions, or bullae

### Germ cell mutagenicity

No data available

### Carcinogenicity

This product is or contains a component that has been reported to be probably carcinogenic based on its IARC, OSHA, ACGIH, NTP, or EPA classification.

Possible human carcinogen

### Reproductive toxicity

No data available

### Specific target organ toxicity - single exposure

No data available

### Specific target organ toxicity - repeated exposure

Ingestion - Causes damage to organs through prolonged or repeated exposure.

### Aspiration hazard

No data available

## 1,2,3,4,5,5-Hexachlorocyclopentadiene

### Acute toxicity

LD50 Oral - Rat - male and female - 1.400 mg/kg

(OECD Test Guideline 401)

Remarks: Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

LC50 Inhalation - Rat - male - 4,0 h - 0,018 mg/l - vapor  
(OECD Test Guideline 403)  
LD50 Dermal - Rabbit - 430,0 mg/kg  
Remarks: (RTECS)

**Skin corrosion/irritation**

Skin - Rabbit  
Result: Severe skin irritation - 4 h  
Remarks: (RTECS)  
Remarks: Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

**Serious eye damage/eye irritation**

Eyes - Rabbit  
Result: Causes serious eye damage.  
(OECD Test Guideline 405)

**Respiratory or skin sensitization**

No data available

**Germ cell mutagenicity**

Method: OECD Test Guideline 478  
Species: Mouse - male and female  
Result: negative

**Carcinogenicity**

No data available

**Reproductive toxicity**

No data available

**Specific target organ toxicity - single exposure**

No data available

**Specific target organ toxicity - repeated exposure**

**Aspiration hazard**

No data available

**anthracene**

**Acute toxicity**

LD50 Oral - Rat - male and female - > 16.000 mg/kg  
Remarks: (ECHA)  
Symptoms: Nausea, Diarrhea, gastric pain  
Inhalation: No data available  
LD50 Dermal - Rat - male and female - > 1.320 mg/kg  
Remarks: (ECHA)

**Skin corrosion/irritation**

Skin - Rabbit  
Result: No skin irritation - 24 h  
Remarks: (ECHA)  
Remarks: Possible damages:  
Dermatitis

**Serious eye damage/eye irritation**

Remarks: Causes serious eye irritation.

**Respiratory or skin sensitization**

Intracutaneous test - Guinea pig

Result: negative  
Remarks: (ECHA)

**Germ cell mutagenicity**

Test Type: In vitro mammalian cell gene mutation test  
Test system: Mouse lymphoma test  
Result: negative  
Test Type: Ames test  
Test system: Salmonella typhimurium  
Result: negative  
Remarks: (ECHA)  
Test Type: Chromosome aberration test in vitro  
Test system: rat hepatocytes  
Result: negative  
Method: OECD Test Guideline 474  
Species: Mouse - Bone marrow  
Result: negative

**Carcinogenicity**

No data available

**Reproductive toxicity**

No data available

**Specific target organ toxicity - single exposure**

Acute oral toxicity - Nausea, Diarrhea, gastric pain

**Specific target organ toxicity - repeated exposure**

No data available

**Aspiration hazard**

No data available

**Benzo[ghi]perylene**

**Acute toxicity**

Oral: No data available  
Inhalation: No data available  
Dermal: No data available

**Skin corrosion/irritation**

No data available

**Serious eye damage/eye irritation**

No data available

**Respiratory or skin sensitization**

No data available

**Germ cell mutagenicity**

No data available

**Carcinogenicity**

This product is or contains a component that is not classifiable as to its carcinogenicity based on its IARC, ACGIH, NTP, or EPA classification.

**Reproductive toxicity**

No data available

**Specific target organ toxicity - single exposure**

No data available

**Specific target organ toxicity - repeated exposure**

No data available

**Aspiration hazard**

No data available

**Quartz (SiO<sub>2</sub>)****Acute toxicity**

Oral: No data available

Inhalation: No data available

Dermal: No data available

**Skin corrosion/irritation**

No data available

**Serious eye damage/eye irritation**

No data available

**Respiratory or skin sensitization**

No data available

**Germ cell mutagenicity**

No data available

**Carcinogenicity**

No data available

**Reproductive toxicity**

No data available

**Specific target organ toxicity - single exposure**

No data available

**Specific target organ toxicity - repeated exposure**

No data available

**Aspiration hazard**

No data available

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**SECTION 12: Ecological information****12.1 Toxicity****Mixture**

No data available

**12.2 Persistence and degradability**

No data available

**12.3 Bioaccumulative potential**

No data available

**12.4 Mobility in soil**

No data available

**12.5 Results of PBT and vPvB assessment**

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.

## 12.6 Endocrine disrupting properties

### **Product:**

Assessment : The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

### **Components:**

#### **dibutyl phthalate:**

Assessment : The substance is considered to have endocrine disrupting properties according to REACH Article 57(f) for the environment.

#### **Bis(2-ethylhexyl) phthalate:**

Assessment : The substance is considered to have endocrine disrupting properties according to REACH Article 57(f) for the environment.

## 12.7 Other adverse effects

No data available

### **Components**

#### **N-Nitrosodimethylamine**

Toxicity to fish LC50 - Pimephales promelas (fathead minnow) - 832,00 - 1.062,00 mg/l - 96 h  
Remarks: (ECOTOX Database)

Toxicity to algae EC50 - Pseudokirchneriella subcapitata (green algae) - 4,00 mg/l - 96 h  
Remarks: (ECOTOX Database)

#### **N-Nitroso dipropylamine**

No data available

#### **maleic anhydride**

Toxicity to fish static test LC50 - Oncorhynchus mykiss (rainbow trout) - 75 mg/l - 96 h  
(OECD Test Guideline 203)

Toxicity to daphnia and other aquatic invertebrates static test EC50 - Daphnia magna (Water flea) - 42,81 mg/l - 48 h  
(OECD Test Guideline 202)  
Remarks: (in analogy to similar products)  
The value is given in analogy to the following substances: maleic acid

Toxicity to algae static test ErC50 - Pseudokirchneriella subcapitata (green algae) - 74,35 mg/l - 72 h



(OECD Test Guideline 201)

Remarks: The value is given in analogy to the following substances: maleic acid

Toxicity to daphnia  
and other aquatic  
invertebrates(Chronic  
toxicity)

NOEC - Daphnia magna (Water flea) - 10 mg/l - 21 d  
Remarks: (ECHA)

#### **Hexachlorobenzene**

Toxicity to fish

LC50 - Lepomis macrochirus (Bluegill) - 7,6 mg/l - 96,0 h  
NOEC - Pimephales promelas (fathead minnow) - > 0,0048  
mg/l - 96,0 h

Toxicity to daphnia  
and other aquatic  
invertebrates

Immobilization EC50 - Daphnia magna (Water flea) - > 0,005  
mg/l - 48 h

#### **1,2,3,4,5,5-Hexachlorocyclopentadiene**

Toxicity to fish

static test LC50 - Lepomis macrochirus (Bluegill) - 0,13 mg/l -  
96 h  
(OECD Test Guideline 203)

Toxicity to daphnia  
and other aquatic  
invertebrates

static test EC50 - Daphnia magna (Water flea) - 0,04 mg/l - 48  
h  
(OECD Test Guideline 202)

#### **anthracene**

Toxicity to fish

flow-through test LC50 - Lepomis macrochirus (Bluegill) - 0,002  
mg/l - 96,0 h  
Remarks: (ECHA)

Toxicity to daphnia  
and other aquatic  
invertebrates

static test LC50 - Daphnia magna (Water flea) - 0,036 mg/l -  
48 h  
(OECD Test Guideline 202)

Toxicity to daphnia  
and other aquatic  
invertebrates(Chronic  
toxicity)

semi-static test EC10 - Ceriodaphnia dubia (water flea) - >  
0,0034 mg/l - 7 d  
Remarks: (ECHA)

#### **Benzo[ghi]perylene**

Toxicity to daphnia  
and other aquatic  
invertebrates

static test EC50 - Daphnia magna (Water flea) - 0,0002 mg/l -  
48 h

Toxicity to algae

Growth rate EC10 - Pseudokirchneriella subcapitata (green  
algae) - > 0,0016 mg/l - 72 h

#### **Components**

##### **Quartz (SiO<sub>2</sub>)**

No data available

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## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

No data available

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## SECTION 14: Transport information

### 14.1 UN number

ADR/RID: -

IMDG: -

IATA: -

### 14.2 UN proper shipping name

ADR/RID: Not dangerous goods

IMDG: Not dangerous goods

IATA: Not dangerous goods

### 14.3 Transport hazard class(es)

ADR/RID: -

IMDG: -

IATA: -

### 14.4 Packaging group

ADR/RID: -

IMDG: -

IATA: -

### 14.5 Environmental hazards

ADR/RID: no

IMDG Marine pollutant: no

IATA: no

### 14.6 Special precautions for user

No data available

#### Further information

Not classified as dangerous in the meaning of transport regulations.

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

Not applicable for product as supplied.

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## SECTION 15: Regulatory information

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

This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006.

#### Authorisations and/or restrictions on use

REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles (Annex XVII)

: 3,3'-Dichlorobenzidine  
Benzidine

REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles (Annex XVII)

: N-Nitrosodimethylamine  
N-Nitroso dipropylamine

This product contains a substance listed on Annex XIV of the REACH Regulation (EC) Nr. 1907/2006.

Listed substance / Sunset Date	: Benzyl butyl phthalate / 21.02.2015 dibutyl phthalate / 21.02.2015 Bis(2-ethylhexyl) phthalate / 21.02.2015 2,4-dinitrotoluene / 21.08.2015
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After the sunset date the use of this substance requires either an authorization or can only be used for exempted uses, e.g. use in scientific research and development which includes routine analytics or use as intermediate.

REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles (Annex XVII)	: Hexachloroethane
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REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles (Annex XVII)	: 4-chloroaniline 3,3'-Dichlorobenzidine Benzidine 2-Toluidine
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Regulation (EU) 2019/1021 on persistent organic pollutants (recast)	: Pentachlorophenol Hexachlorobenzene Hexachlorobuta-1,3-diene Pentachlorobenzene
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REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles (Annex XVII)	: chrysene
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REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles (Annex XVII)	: Benzo[k]fluoranthene
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REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles (Annex XVII)	: benzo[a]pyrene
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REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles (Annex XVII)	: Dibenz[a,h]anthracene
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REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles (Annex XVII)	: Benz[a]anthracene
--	---------------------

REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles (Annex XVII)	: Benzo[b]fluoranthene chrysene Benzo[k]fluoranthene benzo[a]pyrene Dibenz[a,h]anthracene Benz[a]anthracene
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REACH - Restrictions on the manufacture, placing on the market and use of certain	: Benzo[b]fluoranthene
---	------------------------

dangerous substances, mixtures and articles  
(Annex XVII)

#### **National legislation**

Seveso III: Directive 2012/18/EU of the E2 ENVIRONMENTAL HAZARDS  
European Parliament and of the Council  
on the control of major-accident hazards  
involving dangerous substances.

#### **Other regulations**

Observe work restrictions regarding maternity protection in accordance to Dir 92/85/EEC or  
stricter national regulations where applicable.

Take note of Dir 94/33/EC on the protection of young people at work.

### **15.2 Chemical Safety Assessment**

For this product a chemical safety assessment was not carried out

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## **SECTION 16: Other information**

### **Full text of H-Statements**

H300	Fatal if swallowed.
H302	Harmful if swallowed.
H311	Toxic in contact with skin.
H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H330	Fatal if inhaled.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H350	May cause cancer.
H372	Causes damage to organs through prolonged or repeated exposure if swallowed.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.
EUH071	Corrosive to the respiratory tract.

## Full text of other abbreviations

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - Agreement concerning the International Carriage of Dangerous Goods by Road; AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

### Classification of the mixture

Skin Sens.1	H317
Carc.1B	H350
Aquatic Chronic3	H412

### Classification procedure:

Calculation method
Calculation method
Calculation method

## Further information

The information is believed to be correct but is not exhaustive and will be used solely as a guideline, which is based on current knowledge of the chemical substance or mixture and is applicable to appropriate safety precautions for the product. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Corporation and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product. See [www.sigma-aldrich.com](http://www.sigma-aldrich.com) and/or the reverse side of invoice or packing slip for additional terms and conditions of sale.

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