

# SAFETY DATA SHEET

Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH)  
European Union / English

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Version 1

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

### 1.1 Product Identifier

product name: SKYDROL™ 500B-4

Product Code: 80002

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

Recommended Use Aviation; Hydraulic fluids

Uses advised against None known

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

Solutia Europe SPRL/BVBA  
A subsidiary of Eastman Chemical Company  
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Tel.: +32(0)2 746 50 00  
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E-mail address SDS.Europe@Solutia.com

### 1.4 Emergency Telephone Number

+44 (0) 1633 754280 (Europe)

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

#### Classification

The preparation is classified as dangerous in accordance with Directive 1999/45/EC.

#### Indication of danger

Carcinogenic category 3

#### R-phrases(s)

Limited evidence of a carcinogenic effect

For the full text of the R-phrases mentioned in this Section, see Section 16

### 2.2 Label Elements

**Hazard symbols**

Xn - Harmful

**R-phrase(s)**

R40 - Limited evidence of a carcinogenic effect

**S-phrase(s)**

S24/25 - Avoid contact with skin and eyes

S36/37/39 - Wear suitable protective clothing, gloves and eye/face protection

**Chemical name**

Contains: Tributyl phosphate

**2.3 Other Hazards**

Contact with the eyes may be very painful but does not cause damage

**Contains:** 2-ethylhexyl 7-oxabicyclo[4.1.0]heptane-3-carboxylate. May produce an allergic reaction.

## SECTION 3: Composition/information on ingredients

**3.1 Substances**

No information available

**3.2 Mixtures**

Chemical name	EC-No	CAS-No	Weight percent	Classification (67/548)	Classification (Reg. EU 1272/2008)	REACH registration number
Dibutyl phenyl phosphate	219-772-7	2528-36-1	40 - 70	Not classified	0.3 ppm TWA	Not applicable
Tributyl phosphate	204-800-2	126-73-8	19 - 20	Xn; R22 Xi; R38 Carc.Cat.3; R40	Acute Tox. 4 (H302) Skin Irrit. 2 (H315) Carc. 2 (H351)	Not applicable
Butyl diphenyl phosphate	220-398-1	2752-95-6	10 - 30	Not classified	Not classified	Not applicable
2-ethylhexyl 7-oxabicyclo[4.1.0]heptane-3-carboxylate	263-471-3	62256-00-2	< 10	R43	Skin Sens. 1 (H317)	Not applicable
2,6-Di-tert-butyl-p-cresol	204-881-4	128-37-0	0.1 - 1	N, R50/53	Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410)	Not applicable

**NOTE:**

For the full text of the R-phrases mentioned in this Section, see Section 16

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**

When symptoms persist or in all cases of doubt seek medical advice. If unconscious, place in recovery position and get medical attention immediately. Show this safety data sheet to the doctor in attendance.

##### **Eye Contact:**

Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Get medical attention immediately if symptoms occur.

##### **Skin contact:**

Wash off immediately with soap and plenty of water. Remove contaminated clothing and shoes. In the case of skin irritation or allergic reactions contact a doctor. Wash contaminated clothing before reuse. Discard contaminated shoes.

##### **Ingestion**

If accidentally swallowed rinse the mouth with plenty of water (only if the person is conscious) and obtain immediate medical attention. Keep victim warm and quiet. Loosen tight clothing such as a collar, tie, belt or waistband. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Never give anything by mouth to an unconscious person. Do NOT induce vomiting unless directed to do so by a physician. If vomiting occurs spontaneously, keep head below hips to prevent aspiration. Maintain an open airway. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician immediately.

##### **Inhalation:**

Remove to fresh air. If not breathing give artificial respiration. If breathing is difficult, give oxygen. Call a physician. Keep victim warm and quiet. Loosen tight clothing such as a collar, tie, belt or waistband. Maintain an open airway. If unconscious, place in recovery position and get medical attention immediately. Persons who have inhaled vapours or smoke fumes have to be put under medical observation for at least 48 hours, due to the delayed appearance of poisoning.

##### **Protection of first-aiders**

Wear personal protective equipment. Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves.

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

##### **Main symptoms**

Limited evidence of a carcinogenic effect. Contact with the eyes may be very painful but does not cause damage.

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

##### **Notes to physician**

Treat symptomatically. Persons who have inhaled vapours or smoke fumes have to be put under medical observation for at least 48 hours, due to the delayed appearance of poisoning.

## **SECTION 5: Firefighting measures**

#### **5.1 Extinguishing media**

##### **Suitable Extinguishing Media:**

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

##### **Extinguishing media which shall not be used for safety reasons**

Do not use a solid water stream as it may scatter and spread fire.

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

Fire will produce dense black smoke containing hazardous combustion products. Thermal decomposition can lead to release of toxic and corrosive gases/vapours. Decomposition products: Carbon dioxide, nitrogen oxides. Heating causes rise in pressure with risk of bursting. Container may explode in heat of fire. Harmful to aquatic life with long lasting effects. Runoff may pollute waterways.

### **5.3 Advice for firefighters**

#### **Special protective equipment for fire-fighters**

Positive pressure self-contained breathing apparatus (SCBA) and structural firefighters' protective clothing will provide adequate protection.

#### **Special protective actions for fire-fighters**

Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

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

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

#### **Advice for non-emergency personnel**

No action shall be taken involving any personal risk or without suitable training. Large Spill: Approach release from upwind. Do not touch or walk through spilled material. Avoid contact with skin, eyes and clothing. Avoid breathing vapours or mists. Wear personal protective equipment. See also section 8.

Evacuate personnel to safe areas. Ensure adequate ventilation. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Stop leak if you can do it without risk.

#### **Advice for emergency responders**

Contain and collect spillage with non-combustible absorbent material (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local/national regulations (see Section 13). Refer to protective measures listed in sections 7 and 8.

### **6.2 Environmental Precautions:**

Prevent further leakage or spillage if safe to do so. Clean up spill immediately. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

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

#### **Methods for Containment:**

Prevent further leakage or spillage if safe to do so. Dike to collect large liquid spills. Contain and collect spillage with non-combustible absorbent material (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local/national regulations (see Section 13).

#### **Methods for cleaning up**

Take up with sand or other noncombustible absorbent material and place into containers for later disposal. Clean contaminated surface thoroughly. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

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

Use personal protection recommended in Section 8. See Section 13: DISPOSAL CONSIDERATIONS.

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

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

**Advice on safe handling**

Do not handle until all safety precautions have been read and understood. Handle product only in closed system or provide appropriate exhaust ventilation at machinery. Do not breathe vapours or spray mist. Avoid contact with skin, eyes and clothing. Do not ingest. Wear personal protective equipment. In case of insufficient ventilation, wear suitable respiratory equipment. See also section 8. Keep container closed when not in use. Consider technical advances and process upgrades (including automation) for the elimination of releases. Minimise exposure using measures such as closed systems, dedicated facilities and suitable general/local exhaust ventilation. Drain down systems and clear transfer lines prior to breaking containment. Clean/flush equipment, where possible, prior to maintenance. Where there is potential for exposure: restrict access to authorised persons; provide specific activity training to operators to minimise exposures; wear suitable gloves and coveralls to prevent skin contamination; wear respiratory protection when its use is identified for certain contributing scenarios; clear up spills immediately and dispose of wastes safely. Ensure safe systems of work or equivalent arrangements are in place to manage risks. Regularly inspect, test and maintain all control measures. Consider the need for risk-based health surveillance.

**Advices on general occupational hygiene**

Handle in accordance with good industrial hygiene and safety practice. Ensure that eyewash stations and safety showers are close to the workstation location. Use personal protection recommended in Section 8. It is a good industrial hygiene practice to minimize skin contact. Do not eat, drink or smoke when using this product. Wash hands before breaks and at the end of workday. Remove and wash contaminated clothing before re-use. Keep away from food, drink and animal feeding stuffs.

**7.2 Conditions for safe storage, including any incompatibilities****Technical measures/Storage conditions**

Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from direct sunlight. Keep away from contact with oxidizing materials. Keep in properly labelled containers. Use appropriate containment to avoid environmental contamination. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Store in accordance with local regulations. Keep away from food, drink and animal feeding stuffs.

**Packaging material**

Recommended: Store in original container.

**German storage class** 10

**7.3 Specific end uses**

**Exposure scenario** Not available

**SECTION 8: Exposure controls/personal protection****8.1 Control parameters****Exposure limits**

Chemical name	European Union	Austria	Belgium	Bulgaria	Czech Republic
Dibutyl phenyl phosphate	Not available	Skin TWA: 0.3 ppm TWA: 3.5 mg/m <sup>3</sup>	Not available	Not available	Not available
Tributyl phosphate	Not available	Skin STEL 5 mg/m <sup>3</sup> TWA: 2.5 mg/m <sup>3</sup>	Not available	Not available	Not available
2,6-Di-tert-butyl-p-cresol	Not available	TWA: 10 mg/m <sup>3</sup>	Not available	STEL: 50.0 mg/m <sup>3</sup> TWA: 10.0 mg/m <sup>3</sup>	Not available

Chemical name	Denmark	Estonia	Finland	France	Germany
Dibutyl phenyl phosphate	TWA: 0.3 ppm TWA: 3.5 mg/m <sup>3</sup> Skin	Not available	Not available	Not available	Not available

Tributyl phosphate	TWA: 0.2 ppm TWA: 2.5 mg/m <sup>3</sup>	Not available	TWA: 2.5 mg/m <sup>3</sup> TWA: 0.2 ppm STEL: 5 mg/m <sup>3</sup> STEL: 0.4 ppm	TWA: 0.2 ppm TWA: 2.5 mg/m <sup>3</sup>	TWA: 1 ppm TWA: 11 mg/m <sup>3</sup> Ceiling / Peak: 2 ppm Ceiling / Peak: 22 mg/m <sup>3</sup> Skin
2,6-Di-tert-butyl-p-cresol	TWA: 10 mg/m <sup>3</sup>	Not available	TWA: 10 mg/m <sup>3</sup> STEL: 20 mg/m <sup>3</sup>	TWA: 10 mg/m <sup>3</sup>	TWA: 10 mg/m <sup>3</sup> Ceiling / Peak: 40 mg/m <sup>3</sup> Skin

Chemical name	Ireland	Hungary	Italy	Luxembourg	Norway
Dibutyl phenyl phosphate	TWA: 0.3 ppm TWA: 3.5 mg/m <sup>3</sup> Skin	Not available	Not available	Not available	Not available
Tributyl phosphate	TWA: 5 mg/m <sup>3</sup> STEL: 5 mg/m <sup>3</sup>	Not available	Not available	Not available	TWA: 0.2 ppm TWA: 2.5 mg/m <sup>3</sup> STEL: 0.6 ppm STEL: 5 mg/m <sup>3</sup>
2,6-Di-tert-butyl-p-cresol	TWA: 10 mg/m <sup>3</sup>	Not available	Not available	Not available	Not available

Chemical name	The Netherlands	Poland	Portugal	Rumania	Slovakia
Dibutyl phenyl phosphate	Not available	Not available	TWA: 0.3 ppm	Not available	Not available
Tributyl phosphate	Not available	Not available	TWA: 0.2 ppm	STEL: 5 mg/m <sup>3</sup>	Not available
2,6-Di-tert-butyl-p-cresol	Not available	Not available	TWA: 2 mg/m <sup>3</sup>	Not available	Not available

Chemical name	Slovenia	Spain	Switzerland	Sweden	The United Kingdom
Dibutyl phenyl phosphate	TWA: 3.5 mg/m <sup>3</sup> Skin	S* TWA: 0.3 ppm TWA: 3.6 mg/m <sup>3</sup>	Not available	Not available	Not available
Tributyl phosphate	TWA: 2.5 mg/m <sup>3</sup> Skin	TWA: 0.2 ppm TWA: 2.2 mg/m <sup>3</sup>	Skin STEL: 0.8 ppm STEL: 10 mg/m <sup>3</sup> TWA: 0.2 ppm TWA: 2.5 mg/m <sup>3</sup>	Not available	STEL: 5 mg/m <sup>3</sup> TWA: 5 mg/m <sup>3</sup>
2,6-Di-tert-butyl-p-cresol	TWA: 10 mg/m <sup>3</sup>	Not available	TWA: 10 mg/m <sup>3</sup>	Not available	STEL: 30 mg/m <sup>3</sup> TWA: 10 mg/m <sup>3</sup>

**Derived No Effect Level (DNEL)** No information available

**Predicted No Effect Concentration (PNEC)** No information available

## 8.2 Exposure controls

### Engineering measures

Good general ventilation should be sufficient to control worker exposure to airborne contaminants. Apply technical measures to comply with the occupational exposure limits. If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment.

### Personal protective equipment

#### Eye Protection:

Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. Recommended: Wear safety glasses with side shields (or goggles). If splashes are likely to occur, wear: Face-shield.

**Hand Protection:**

Wear chemically resistant gloves (tested to EN374) in combination with specific activity training: Neoprene gloves, Nitrile rubber: The breakthrough time of the glove material, with regard to the amount and duration of dermal exposure : > 8 hours. Rubber gloves: The breakthrough time of the glove material, with regard to the amount and duration of dermal exposure : 1 to 4 hours. After contamination with product change the gloves immediately and dispose of them according to relevant national and local regulations.

**Skin and body protection**

Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. Recommended: Lightweight protective clothing: Apron, Impervious gloves. Work clothing that becomes wet or significantly contaminated should be removed and replaced. Wear rubber boots if needed to prevent skin contact with liquid material.

**Respiratory Protection:**

Use a properly fitted, particulate filter respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

**Recommended Filter type:** Type A/P2 or better.

**Environmental exposure controls**

Do not allow material to contaminate ground water system. Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

## SECTION 9: Physical and chemical properties

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

<b>Physical State:</b>	Liquid	
<b>Appearance</b>	Clear	
	Oily liquid.	
<b>Odor</b>	Odourless	
<b>Color</b>	Purple	
<b>odor threshold:</b>	No information available	
<b>Property</b>	<b>Values</b>	<b>Remarks • Methods</b>
<b>pH</b>	No information available	
<b>Melting point/freezing point</b>	< -62 °C	pour point
<b>Boiling point/boiling range</b>	No information available	
<b>Flash point</b>		> 177 °C
Cleveland Open Cup		
<b>Evaporation Rate:</b>	No information available	
<b>Specific gravity</b>	1.052 - 1.060	@ 25°C
<b>flammability (solid, gas)</b>		Not Applicable
<b>Flammability Limits in Air</b>		
<b>Upper Flammability Limit:</b>	No information available	
<b>Lower Flammability Limit:</b>	No information available	
<b>vapor pressure</b>	0.2 Torr	@ 25°C
<b>Vapor density</b>	No information available	
<b>Water solubility</b>	No information available	
<b>Solubility in other solvents</b>	No information available	
<b>Partition coefficient: n-octanol/water</b>	No information available	
<b>autoignition temperature</b>	398 °C	ASTM D-2155

<b>decomposition temperature</b>	No information available	
<b>Viscosity, kinematic</b>	< 2900 cSt	-54 °C
	11.40 - 12.40 cSt	38 °C
	3.68 - 4.00 cSt	99 °C
<b>Viscosity, dynamic</b>	No information available	
<b>Explosive properties</b>	Not explosive.	
<b>Oxidizing properties</b>	Not oxidizing	

**9.2 Other Information:**

<b>Density</b>	1052 - 1060 kg/m <sup>3</sup>	25 °C
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## SECTION 10: Stability and reactivity

**10.1 reactivity**

Stable under normal conditions.

**10.2 Chemical stability**

Stable under normal conditions.

**10.3 Possibility of Hazardous Reactions****hazardous polymerization:**

Hazardous polymerisation does not occur.

**Hazardous reactions**

Under normal conditions of storage and use, hazardous reactions will not occur.

**10.4 Conditions to Avoid:**

None known.

**10.5 Incompatible Materials:**

Strong oxidising agents.

**10.6 Hazardous Decomposition Products:**

None under normal use conditions.

## SECTION 11: Toxicological information

**11.1 Information on toxicological effects****Acute toxicity***Product Information*

<b>LD50 oral:</b>	2200 mg/kg (rat)
<b>LD50 dermal:</b>	> 7940 mg/kg (rabbit)
<b>LC50 Inhalation:</b>	LC50/inhalation: 4.5 mg/l (rat)

*Component Information*

Chemical name	LD50 Oral	LD50 Dermal	LC50 Inhalation
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Dibutyl phenyl phosphate	2140 mg/kg ( Rat )	5 g/kg ( Rabbit )	No data available
Tributyl phosphate	1553 mg/kg ( Rat )	> 3100 mg/kg ( Rabbit )	4.242 mg/L ( Rat ) 4 h
Butyl diphenyl phosphate	No data available	No data available	No data available
2-ethylhexyl 7-oxabicyclo[4.1.0]heptane-3-carbo xylate	4470 mg/kg b.w.	> 7940 mg/kg	No data available
2,6-Di-tert-butyl-p-cresol	890 mg/kg ( Rat )	> 2,000 mg/kg ( Rat )	No data available

*Conclusion*

**Ingestion** Not sufficient for classification.  
**Skin contact:** Not sufficient for classification.  
**Inhalation:** Not sufficient for classification.

**Irritation/Corrosion****Skin corrosion/irritation**

*Product Information* slightly irritant.

*Component Information*

Chemical name	Method	Species	Irritation score	Exposure time	Conclusion
Dibutyl phenyl phosphate	No information available	Rabbit	0.0	24 h	Non-irritating to the skin.
Tributyl phosphate	OECD Test No. 404: Acute Dermal Irritation/Corrosion	Rabbit	0.7 (erythema) 1.8 (edema)	4 h	slightly irritant.
Butyl diphenyl phosphate	No information available	No information available	No information available	No information available	Not available.
2-ethylhexyl 7-oxabicyclo[4.1.0]heptane-3-carbo xylate	No information available	Rabbit	No information available	24 h	slightly irritant but not relevant for classification.
2,6-Di-tert-butyl-p-cresol	No information available	No information available	No information available	No information available	Not available.

*Conclusion* Not sufficient for classification.

**Serious eye damage/eye irritation**

*Product Information* slightly irritant.

*Component Information*

Chemical name	Method	Species	Irritation score	Exposure time	Conclusion
Dibutyl phenyl phosphate	No information available	Rabbit	< 1	24 h	Non-irritating to the eyes
Tributyl phosphate	OECD Test No. 405: Acute Eye Irritation/Corrosion	Rabbit	0.4 (cornea opacity) 0.2 (iris lesion) 1.5 (redness) 1 (edema)	24 h	Non-irritating to the eyes
Butyl diphenyl phosphate	No information available	No information available	No data available	No data available	Not available
2-ethylhexyl 7-oxabicyclo[4.1.0]heptane-3-carbo xylate	No information available	Rabbit	No data available	24 h	slightly irritant but not relevant for classification
2,6-Di-tert-butyl-p-cresol	No information available	No information available	No data available	No data available	Not available

*Conclusion* Not sufficient for classification.

**Sensitization:****Skin sensitisation**

Patch test on human volunteers did not demonstrate sensitisation properties.

**Respiratory sensitisation** No information available

*Component Information*

Chemical name	Method	Species	Result
Dibutyl phenyl phosphate	No information available	No information available	Not available
Tributyl phosphate	Other	Guinea pig	Not sensitizing
Butyl diphenyl phosphate	No information available	No information available	Not available
2-ethylhexyl 7-oxabicyclo[4.1.0]heptane-3-carbo xylate	No information available	Guinea pig	Sensitising
2,6-Di-tert-butyl-p-cresol	No information available	No information available	Not available

*Conclusion* **Not sufficient for classification**

**Repeated dose toxicity**

**species** Rat  
**Method** Sub-chronic, Inhalation:  
**Result** Irritating to eyes. Irritating to respiratory system. Produced effects on body weight, serum enzymes and/or organ weights in repeat dose studies.

*Component Information*

Chemical name	Method	Test type	Exposure route	Species	Effect dose	Dose value
Dibutyl phenyl phosphate	Similar OECD Test No. 410: Repeated Dose Dermal Toxicity: 21/28-day Study	Sub-acute	dermal	Rabbit	NOAEL	1000 mg/kg b.w.
Tributyl phosphate	No information available	Sub-chronic	oral	Mouse	NOEL	75 mg/kg b.w. /d
Butyl diphenyl phosphate	No information available	No information available	No information available	No information available	No information available	No data available
2-ethylhexyl 7-oxabicyclo[4.1.0]heptane-3-carbo xylate	No information available	No information available	No information available	No information available	No information available	No data available
2,6-Di-tert-butyl-p-cresol	No information available	No information available	No information available	No information available	No information available	No data available

Chemical name	Method	Test type	Exposure route	species	Effect dose	Dose value
Dibutyl phenyl phosphate	No information available	Sub-chronic	Oral - feed	Rat	NOAEL	5 mg/kg b.w.
Tributyl phosphate	No information available	No information available	No information available	No information available	No information available	No data available
Butyl diphenyl phosphate	No information available	No information available	No information available	No information available	No information available	No data available
2-ethylhexyl 7-oxabicyclo[4.1.0]heptane-3-carbo xylate	No information available	No information available	No information available	No information available	No information available	No data available
2,6-Di-tert-butyl-p-cresol	No information available	No information available	No information available	No information available	No information available	No data available

*Conclusion* **Not sufficient for classification**

**Carcinogenicity**

*Component Information*

Chemical name	Method	Exposure route	Species	Effect dose	Dose value	Result
Dibutyl phenyl phosphate	No information available	No information available	No information available	No information available	No data available	Not available

Tributyl phosphate	Other	Oral - feed	Rat	NOEL	8.9 - 11.6 mg/kg b.w. /d	This material produced tumours in laboratory animals at dose levels that exceed the maximum tolerated dose.
Butyl diphenyl phosphate	No information available	No information available	No information available	No information available	No data available	Not available
2-ethylhexyl 7-oxabicyclo[4.1.0]heptane-3-carboxylate	No information available	No information available	No information available	No information available	No data available	Not available
2,6-Di-tert-butyl-p-cresol	No information available	No information available	No information available	No information available	No data available	Not available

*Conclusion***Limited evidence of a carcinogenic effect****Germ cell mutagenicity***Component Information*

Chemical name	Test Method	Test type	species	Result
Dibutyl phenyl phosphate	No information available	No information available	Mammalian-Animal Mammalian-Animal	No genetic effects were observed in standard tests using bacterial and animal cells
Tributyl phosphate	OECD Test No. 471: Bacterial Reverse Mutation Test	in vitro:	Ames test	Negative
Butyl diphenyl phosphate	No information available	No information available	No information available	Not available
2-ethylhexyl 7-oxabicyclo[4.1.0]heptane-3-carboxylate	No information available	No information available	No information available	No genetic effects were observed in standard tests using bacterial and animal cells
2,6-Di-tert-butyl-p-cresol	No information available	No information available	Mammalian-Animal Mammalian-Animal	Not available

Chemical name	Method	Test type	species	Conclusion
Tributyl phosphate	Similar: OECD Test No. 475: Mammalian Bone Marrow Chromosome Aberration Test	in vivo:	Rat	Negative
2-ethylhexyl 7-oxabicyclo[4.1.0]heptane-3-carboxylate				Negative

Chemical name	Method	Test type	species	Conclusion
Tributyl phosphate	OECD Test No. 473: In vitro Mammalian Chromosome Aberration Test	in vitro:	Mammalian-Animal	Negative

*Conclusion***Not sufficient for classification.****Toxicity to reproduction****Effects on fertility***Component Information*

Chemical name	Method	Species	Exposure route	Dose value	Effects on fertility
Dibutyl phenyl phosphate	No information available	Rat	oral	No data available	No known effect

Tributyl phosphate	Similar: OECD Test No. 416: Two-Generation Reproduction Toxicity	Rat	oral	>= 3000 ppm	Weight of evidence: Negative
Butyl diphenyl phosphate	No information available	No information available	No information available	No data available	No information available
2-ethylhexyl 7-oxabicyclo[4.1.0]heptane-3-carbo xylate	No information available	No information available	No information available	No data available	No information available
2,6-Di-tert-butyl-p-cresol	No information available	No information available	No information available	No data available	No information available

**developmental toxicity:***Component Information*

Chemical name	Test Method	Species	Exposure route	Dose value	Conclusion
Dibutyl phenyl phosphate	No information available	Rat	oral	3 - 300 mg/kg b.w.	Negative
Tributyl phosphate	No information available	Rat	oral	No data available	Negative
Butyl diphenyl phosphate	No information available	No information available	No information available	No data available	Not available
2-ethylhexyl 7-oxabicyclo[4.1.0]heptane-3-carbo xylate	No information available	No information available	No information available	No data available	Not available
2,6-Di-tert-butyl-p-cresol	No information available	No information available	No information available	No data available	Not available

*Conclusion***Not sufficient for classification****Specific target organ toxicity (single exposure)**

Not relevant for the product itself

**Specific target organ toxicity - repeated exposure**

Not relevant for the product itself

**Other adverse effects****Neurological effects:** None known.**SECTION 12: Ecological information****12.1 Toxicity****Acute aquatic toxicity***Product Information*

<u>Property</u>	<u>Result</u>	<u>species</u>
<b>96-hour LC50 - Fish</b>	2.6 mg/l 3.0 mg/l	Oncorhynchus mykiss (rainbow trout) Pimephales promelas (fathead minnow)
<b>48-hour EC50 - Aquatic invertebrates</b>	6.5 mg/l	Daphnia magna (Water flea)
<b>72-hour EC50 - Algae/aquatic plants</b>	8.4 mg/l	Selenastrum capricornutum

Chemical name	Toxicity to fish	Toxicity to daphnia and other aquatic invertebrates	Toxicity to algae
Dibutyl phenyl phosphate	2.0 mg/l (96 h EC50, Oncorhynchus mykiss - rainbow trout)	0.26 mg/l	5.4 mg/l (96 h EC50)

Tributyl phosphate	4.2 - 11.8 mg/l (96 h EC50, Salmo gairdneri)	1.8 mg/l (48 h EC50)	1.1 - 1.3 mg/l (72 h IC50, biomass, Scenedesmus subspicatus)
Butyl diphenyl phosphate	Not available	Not available	Not available
2-ethylhexyl 7-oxabicyclo[4.1.0]heptane-3-carboxylate	Not available	Not available	Not available
2,6-Di-tert-butyl-p-cresol	5 mg/L (48 h LC50, Oryzias latipes)	1.44 mg/l	6 mg/L (72 h EC50, Pseudokirchneriella subcapitata) 0.42 mg/L (72 h EC50, Desmodesmus subspicatus)

### Chronic aquatic toxicity

#### Component Information

Chemical name	Method	species	Exposure time	Effect dose	Chronic aquatic toxicity
Dibutyl phenyl phosphate	No information available	Daphnia magna (Water flea)	48 h	NOEC	0.22 mg/l
Tributyl phosphate	No information available	Daphnia magna (Water flea)	21 d	NOEC	1.3 mg/l

Chemical name	Method	species	Endpoint type	Exposure time	Long term toxicity
Dibutyl phenyl phosphate	No information available	Oncorhynchus mykiss (rainbow trout)	EC50	14 d	2.4 mg/l
Tributyl phosphate	No information available	Oncorhynchus mykiss (rainbow trout)	NOEC	95 d	0.82 mg/l

#### Conclusion

**Not sufficient for classification**

### 12.2 Persistence and degradability

Product is biodegradable.

#### Component Information

Chemical name	Method	Biodegradability
Dibutyl phenyl phosphate	Not available	READILY BIODEGRADABLE.
Tributyl phosphate	OECD Test No. 301C: Ready Biodegradability: Modified MITI Test (I) (TG 301 C) OECD Test No. 301D: Ready Biodegradability: Closed Bottle Test (TG 301 D)	READILY BIODEGRADABLE.
Butyl diphenyl phosphate	Not available	No information available.
2-ethylhexyl 7-oxabicyclo[4.1.0]heptane-3-carboxylate	OECD Test No. 301C: Ready Biodegradability: Modified MITI Test (I) (TG 301 C)	READILY BIODEGRADABLE.
2,6-Di-tert-butyl-p-cresol	Not available	No information available.

Chemical name	Aquatic half-life	temperature
Dibutyl phenyl phosphate	No information available	No information available
Tributyl phosphate	No information available	No information available
Butyl diphenyl phosphate	No information available	No information available
2-ethylhexyl 7-oxabicyclo[4.1.0]heptane-3-carboxylate	No information available	No information available
2,6-Di-tert-butyl-p-cresol	No information available	No information available

#### Conclusion

**Not sufficient for classification.**

### 12.3 Bioaccumulative potential

#### Component Information

Chemical name	Bioconcentration factor (BCF)	log Pow
Dibutyl phenyl phosphate	No data available	4.27
Tributyl phosphate	6 - 35	4.0
Butyl diphenyl phosphate	No data available	
2-ethylhexyl 7-oxabicyclo[4.1.0]heptane-3-carboxylate	No data available	
2,6-Di-tert-butyl-p-cresol	2500	4.17

Chemical name	Bioaccumulative potential
Dibutyl phenyl phosphate	No information available.
Tributyl phosphate	This product shows a low bioaccumulation potential.
Butyl diphenyl phosphate	No information available.
2-ethylhexyl 7-oxabicyclo[4.1.0]heptane-3-carboxylate	No information available.
2,6-Di-tert-butyl-p-cresol	No information available.

*Conclusion* **Bioaccumulation is unlikely**

#### **12.4 Mobility in soil**

**Mobility** No information available.

#### **12.5 Results of PBT and vPvB assessment**

This preparation contains no substance considered to be persistent, bioaccumulating nor toxic (PBT)  
This preparation contains no substance considered to be very persistent nor very bioaccumulating (vPvB)

#### **12.6 Other adverse effects.**

No information available

## **SECTION 13: Disposal considerations**

### **13.1 Waste treatment methods**

#### **General advice**

The generation of waste should be avoided or minimized wherever possible.

#### **Waste from residues / unused products**

Dispose of as hazardous waste in compliance with local and national regulations. Dispose of contents/container to industrial incineration plant.

#### **Contaminated packaging**

Empty remaining contents. Empty containers should be taken to an approved waste handling site for recycling or disposal. Do not re-use empty containers.

#### **European Waste Catalogue**

According to the European Waste Catalogue, Waste Codes are not product specific, but application specific. Waste codes should be assigned by the user based on the application for which the product was used. The following Waste Codes are only suggestions: 13 01 13.

**Disposal considerations**

No information available.

**Other Information:**

No information available.

**SECTION 14: Transport information****ADR/RID**

<b>14.1 UN/ID no</b>	Not regulated
<b>14.2 Proper Shipping Name</b>	Not applicable
<b>14.3 Hazard Class</b>	Not applicable
<b>14.4 Packing Group</b>	Not applicable
<b>14.5 Environmental hazard</b>	Not applicable
<b>14.6 Special Provisions</b>	Not applicable
<b>Additional information</b>	

**IMDG:**

<b>14.1 UN/ID no</b>	Not regulated
<b>14.2 Proper Shipping Name</b>	Not applicable
<b>14.3 Hazard Class</b>	Not applicable
<b>14.4 Packing Group</b>	Not applicable
<b>14.5 Environmental hazard</b>	Not applicable
<b>14.6 Special Provisions</b>	Not applicable
<b>14.7 Transport in bulk according to MARPOL 73/78 and the IBC Code</b>	Not applicable

**IATA:**

<b>14.1 UN/ID no</b>	Not regulated
<b>14.2 Proper Shipping Name</b>	Not applicable
<b>14.3 Hazard Class</b>	Not applicable
<b>14.4 Packing Group</b>	Not applicable
<b>14.5 Environmental hazard</b>	Not applicable
<b>14.6 Special Provisions</b>	Not applicable

**SECTION 15: Regulatory information****15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture****European Union**

EINECS/ELINCS Complies

Candidate List of Substances of Very High Concern for Authorisation Not Listed

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work .

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

Take note of Dir 92/85/EC on the protection of pregnant and breastfeeding women at work.

**National regulatory information**

**WGK Classification** Water endangering class = 1 (self classification)

## **15.2 Chemical Safety Report**

No information available

### **SECTION 16: Other information**

#### **Full text of R-phrases referred to under sections 2 and 3**

R22 - Harmful if swallowed

R38 - Irritating to skin

R40 - Limited evidence of a carcinogenic effect

R43 - May cause sensitization by skin contact

R50/53 - Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment

#### **Full text of H-Statements referred to under sections 2 and 3**

H302 - Harmful if swallowed

H315 - Causes skin irritation

H317 - May cause an allergic skin reaction

H351 - Suspected of causing cancer

H400 - Very toxic to aquatic life

H410 - Very toxic to aquatic life with long lasting effects

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**Revision date** 08-Feb-2013

**Revision Note** New SDS format

#### **Disclaimer**

**The information provided on this SDS is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.**

**End of Safety Data Sheet**