

# SAFETY DATA SHEET

(in accordance with Regulation (EU) 2015/830)

## 120330-Tributyl phosphate



Version: 1  
Revision date: 24/01/2017

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### SECTION 1: IDENTIFICATION OF THE SUBSTANCE AND OF THE COMPANY/UNDERTAKING.

#### 1.1 Product identifier.

Product Name: Tributyl phosphate  
Product Code: 120330  
Chemical Name: Tributyl phosphate  
Index No: 015-014-00-2  
CAS No: 126-73-8  
EC No: 204-800-2  
Registration No: 01-2119492859-14-XXXX

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

For manufacturing, processing, laboratory or repacking use only

#### Uses advised against:

Uses other than those recommended.

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

Company: **DC FINE CHEMICALS Ltd.**  
Address: Hill Top, 88  
City: NW11 6DY London (United Kingdom)  
Telephone: +44 (20) 7586 6800  
Fax: +44 (20) 7504 1701  
E-mail: info@dcfinechemicals.com  
Web: www.dcfinechemicals.com

#### 1.4 Emergency telephone number: (Only available during office hours)

### SECTION 2: HAZARDS IDENTIFICATION.

#### 2.1 Classification of the substance.

In accordance with Regulation (EU) No 1272/2008:

Acute Tox. 4 : Harmful if swallowed.  
Aquatic Chronic 2 : Toxic to aquatic life with long lasting effects.  
Carc. 2 : Suspected of causing cancer.  
Skin Irrit. 2 : Causes skin irritation.

#### 2.2 Label elements.

#### Labelling in accordance with Regulation (EU) No 1272/2008:

##### Pictograms:



Signal Word:

**Warning**

H statements:

H302 Harmful if swallowed.  
H315 Causes skin irritation.  
H351 Suspected of causing cancer.  
H411 Toxic to aquatic life with long lasting effects.

P statements:

P201 Obtain special instructions before use.  
P273 Avoid release to the environment.

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P280	Wear protective gloves/protective clothing/eye protection/face protection.
P321	Specific treatment (show this label).
P362+P364	Take off contaminated clothing and wash it before reuse.
P391	Collect spillage.
P501	Dispose of contents / container according the regulation.

Contains:  
Tributyl phosphate

### 2.3 Other hazards.

In normal use conditions and in its original form, the product itself does not involve any other risk for health and the environment.

## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS.

### 3.1 Substances.

Chemical Name: [1] Tributyl phosphate  
Index No: 015-014-00-2  
CAS No: 126-73-8  
CE No: 204-800-2  
Registration No: 01-2119492859-14-XXXX  
*[1] Substance with a Community workplace exposure limit (see section 8.1).*

### 3.2 Mixtures.

Not Applicable.

## SECTION 4: FIRST AID MEASURES.

**IRRITANT PREPARATION.** Its repeated or prolonged contact with the skin or mucous membranes can cause irritant symptoms such as reddening of the skin, blisters, or dermatitis. Some of the symptoms may not be immediate. They can cause allergic reactions on the skin.

### 4.1 Description of first aid measures.

In case of doubt or when symptoms of feeling unwell persist, get medical attention. Never administer anything orally to persons who are unconscious.

#### Inhalation.

Take the victim into open air; keep them warm and calm. If breathing is irregular or stops, perform artificial respiration. Do not administer anything orally. If unconscious, place them in a suitable position and seek medical assistance.

#### Eye contact.

If wearing contact lenses, remove them. Wash eyes with plenty of clean and cool water for at least 10 minutes while pulling eyelids up, and seek medical assistance.

#### Skin contact.

Remove contaminated clothing. Wash skin vigorously with water and soap or a suitable skin cleaner. **NEVER** use solvents or thinners.

#### Ingestion.

If accidentally ingested, seek immediate medical attention. Keep calm. **NEVER** induce vomiting.

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

Irritant Product, repeated or prolonged contact with skin or mucous membranes can cause redness, blisters or dermatitis, inhalation of spray mist or particles in suspension may cause irritation of the respiratory tract, some symptoms may not be immediate. Can cause allergic reactions.

Harmful Product, prolonged exposure due to inhalation may cause anaesthetic effects and the need for immediate medical assistance.

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

In case of doubt or when symptoms of feeling unwell persist, get medical attention. Never administer anything orally to persons who are unconscious.

## SECTION 5: FIREFIGHTING MEASURES.

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The product is NOT classified as flammable, in case of fire the following measures should be taken:

### 5.1 Extinguishing media.

#### **Recommended extinguishing methods.**

Extinguisher powder or CO<sub>2</sub>. In case of more serious fires, also alcohol-resistant foam and water spray. Do not use a direct stream of water to extinguish.

### 5.2 Special hazards arising from the substance.

#### **Special risks.**

Fire can cause thick, black smoke. As a result of thermal decomposition, dangerous products can form: carbon monoxide, carbon dioxide. Exposure to combustion or decomposition products can be harmful to your health.

### 5.3 Advice for firefighters.

Use water to cool tanks, cisterns, or containers close to the heat source or fire. Take wind direction into account. Prevent the products used to fight the fire from going into drains, sewers, or waterways.

#### **Fire protection equipment.**

According to the size of the fire, it may be necessary to use protective suits against the heat, individual breathing equipment, gloves, protective goggles or facemasks, and gloves.

## SECTION 6: ACCIDENTAL RELEASE MEASURES.

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

For exposure control and individual protection measures, see section 8.

### 6.2 Environmental precautions.

Product dangerous for the environment, in case of large spills or if the product contaminates lakes, rivers, or sewers, inform the responsible authorities according to local legislation. Prevent the contamination of drains, surface or subterranean waters, and the ground.

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

Pick up the spill with non-combustible absorbent materials (soil, sand, vermiculite, diatomite, etc.). Pour the product and the absorbent in an appropriate container. The contaminated area should be immediately cleaned with an appropriate decontaminator. Pour the decontaminator on the remains in an opened container and let it act various days until no further reaction is produced.

### 6.4 Reference to other sections.

For exposure control and individual protection measures, see section 8.

For later elimination of waste, follow the recommendations under section 13.

## SECTION 7: HANDLING AND STORAGE.

### 7.1 Precautions for safe handling.

For personal protection, see section 8. Never use pressure to empty the containers. They are not pressure-resistant containers.

In the application area, smoking, eating, and drinking must be prohibited.

Follow legislation on occupational health and safety.

Keep the product in containers made of a material identical to the original.

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

Store according to local legislation. Observe indications on the label. Keep far away from ignition points. Keep away from oxidising agents and from highly acidic or alkaline materials. Do not smoke. Prevent the entry of non-authorized persons. Once the containers are open, they must be carefully closed and placed vertically to prevent spills.

Classification and threshold amount of storage in accordance with Annex I to Directive 2012/18/EU (SEVESO III)::

Code	Description	Qualifying quantity (tonnes) for the application of	
		Lower-tier requirements	Upper-tier requirements
E2	ENVIRONMENTAL HAZARDS - Hazardous to the Aquatic Environment in Category Chronic 2	200	500

### 7.3 Specific end use(s).

Not available.

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### SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION.

#### 8.1 Control parameters.

Work exposure limit for:

Name	CAS No.	Country	Limit value	ppm	mg/m <sup>3</sup>
Tributyl phosphate	126-73-8	United Kingdom [1]	Eight hours		5
			Short term		5

[1] According Limit Value (IOELV) list in 2nd Indicative Occupational Exposure adopted by Health and Safety Executive.

The product does NOT contain substances with Biological Limit Values.

Concentration levels DNEL/DMEL:

Name	DNEL/DMEL	Type	Value
Tributyl phosphate N. CAS: 126-73-8 N. CE: 204-800-2	DNEL (Workers)	Inhalation, Long-term, Systemic effects	3,08 (mg/m3)
	DNEL (General population)	Inhalation, Long-term, Systemic effects	0,77 (mg/m3)
	DNEL (Workers)	Dermal, Long-term, Systemic effects	0,44 (mg/kg)
	DNEL (General population)	Dermal, Long-term, Systemic effects	0,22 (mg/kg)
	DNEL (Workers)	Inhalation, Long-term, Local effects	3,08 (mg/m3)
	DNEL (General population)	Inhalation, Long-term, Local effects	0,77 (mg/m3)
	DNEL (Workers)	Dermal, Long-term, Local effects	0,44 (mg/cm2)
	DNEL (General population)	Dermal, Long-term, Local effects	0,22 (mg/cm2)
	DNEL (Workers)	Inhalation, Acute, Systemic effects	12,52 (mg/m3)
	DNEL (General population)	Inhalation, Acute, Systemic effects	3,08 (mg/m3)
	DNEL (Workers)	Dermal, Acute, Systemic effects	1,78 (mg/kg)
	DNEL (General population)	Dermal, Acute, Systemic effects	0,88 (mg/kg)
	DNEL (Workers)	Inhalation, Acute, Local effects	12,52 (mg/m3)
	DNEL (General population)	Inhalation, Acute, Local effects	3,08 (mg/m3)
	DNEL (Workers)	Dermal, Acute, Local effects	1,78 (mg/cm2)
	DNEL (General population)	Dermal, Acute, Local effects	0,88 (mg/cm2)
DNEL (General population)	Oral, Long-term, Systemic effects	0,22 (mg/kg)	

DNEL: Derived No Effect Level, level of exposure to the substance below which adverse effects are not anticipated.

DMEL: Derived Minimal Effect Level, exposure level corresponding to a low risk, that risk should be considered a tolerable minimum.

Concentration levels PNEC:

Name	Details	Value
Tributyl phosphate N. CAS: 126-73-8 N. CE: 204-800-2	Fresh water	0,082 (mg/l)
	Fresh water sediment	18,4 (mg/kg)
	Marine water	0,0082 (mg/l)
	Marine sediment	1,84 (mg/kg)
	Sewage treatment plant	1 (mg/l)
	Soil	3,63 (mg/kg)

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PNEC: Predicted No Effect Concentration, concentration of the substance below which adverse effects are not expected in the environmental compartment.

### 8.2 Exposure controls.

#### Measures of a technical nature:

Provide adequate ventilation, which can be achieved by using good local exhaust-ventilation and a good general exhaust system.

<b>Concentration:</b>	<b>100 %</b>		
<b>Uses:</b>	<b>For manufacturing, processing, laboratory or repacking use only</b>		
<b>Breathing protection:</b>			
PPE:	Filter mask for protection against gases and particles.		
Characteristics:	«CE» marking, category III. The mask must have a wide field of vision and an anatomically designed form in order to be sealed and watertight.		
CEN standards:	EN 136, EN 140, EN 405		
Maintenance:	Should not be stored in places exposed to high temperatures and damp environments before use. Special attention should be paid to the state of the inhalation and exhalation valves in the face adaptor. Read carefully the manufacturer's instructions regarding the equipment's use and maintenance. Attach the necessary filters to the equipment according to the specific nature of the risk (Particles and aerosols: P1-P2-P3, Gases and vapours: A-B-E-K-AX), changing them as advised by the manufacturer.		
Observations:	Filter Type needed: A2		
<b>Hand protection:</b>			
PPE:	Protective gloves against chemicals.		
Characteristics:	«CE» marking, category III.		
CEN standards:	EN 374-1, En 374-2, EN 374-3, EN 420		
Maintenance:	Keep in a dry place, away from any sources of heat, and avoid exposure to sunlight as much as possible. Do not make any changes to the gloves that may alter their resistance, or apply paints, solvents or adhesives.		
Observations:	Gloves should be of the appropriate size and fit the user's hand well, not being too loose or too tight. Always use with clean, dry hands.		
Material:	PVC (polyvinyl chloride)	Breakthrough time (min.):	> 480
		Material thickness (mm):	0,35
<b>Eye protection:</b>			
If the product is handled correctly, no individual protection equipment is necessary.			
<b>Skin protection:</b>			
PPE:	Protective clothing.		
Characteristics:	«CE» marking, category II. Protective clothing should not be too tight or loose in order not to obstruct the user's movements.		
CEN standards:	EN 340		
Maintenance:	In order to guarantee uniform protection, follow the washing and maintenance instructions provided by the manufacturer.		
Observations:	The protective clothing should offer a level of comfort in line with the level of protection provided in terms of the hazard against which it protects, bearing in mind environmental conditions, the user's level of activity and the expected time of use.		
PPE:	Work footwear.		
Characteristics:	«CE» marking, category II.		
CEN standards:	EN ISO 13287, EN 20347		
Maintenance:	This product adapts to the first user's foot shape. That is why, as well as for hygienic reasons, it should not be used by other people.		
Observations:	Work footwear for professional use includes protection elements aimed at protecting users against any injury resulting from an accident		

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES.

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

Appearance: Liquid  
 Colour: N.A./N.A.  
 Odour: N.A./N.A.  
 Odour threshold: N.A./N.A.  
 pH: N.A./N.A.  
 Melting point: -79 °C

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Boiling Point: 289 °C  
Flash point: 146 °C  
Evaporation rate: N.A./N.A.  
Inflammability (solid, gas): N.A./N.A.  
Lower Explosive Limit: N.A./N.A.  
Upper Explosive Limit: N.A./N.A.  
Vapour pressure: N.A./N.A.  
Vapour density: 9,2  
Relative density: 0,97 g/cm<sup>3</sup>  
Solubility: 6 g/l (20°C)  
Liposolubility: N.A./N.A.  
Hydrosolubility: N.A./N.A.  
Partition coefficient (n-octanol/water): 4,0 (log Pow)  
Auto-ignition temperature: 400°C  
Decomposition temperature: 178°C  
Viscosity: N.A./N.A.  
Explosive properties: N.A./N.A.  
Oxidizing properties: N.A./N.A.  
N.A./N.A. = Not Available/Not Applicable due to the nature of the product

### 9.2 Other information.

Pour point: N.A./N.A.  
Blink: N.A./N.A.  
Kinematic viscosity: N.A./N.A.  
N.A./N.A. = Not Available/Not Applicable due to the nature of the product

## SECTION 10: STABILITY AND REACTIVITY.

### 10.1 Reactivity.

The product does not present hazards by their reactivity.

### 10.2 Chemical stability.

Stable under the recommended handling and storage conditions (see section 7).

### 10.3 Possibility of hazardous reactions.

The product does not present possibility of hazardous reactions.

### 10.4 Conditions to avoid.

Avoid any improper handling.

### 10.5 Incompatible materials.

Keep away from oxidising agents and from highly alkaline or acidic materials in order to prevent exothermic reactions.

### 10.6 Hazardous decomposition products.

No decomposition if used for the intended uses.

## SECTION 11: TOXICOLOGICAL INFORMATION.

IRRITANT PREPARATION. Its repeated or prolonged contact with the skin or mucous membranes can cause irritant symptoms such as reddening of the skin, blisters, or dermatitis. Some of the symptoms may not be immediate. They can cause allergic reactions on the skin.

### 11.1 Information on toxicological effects.

Repeated or prolonged contact with the product can cause the elimination of oil from the skin, giving rise to non-allergic contact dermatitis and absorption of the product through the skin.

Splatters in the eyes can cause irritation and reversible damage.

### Toxicological information.

Name	Acute toxicity			
	Type	Test	Kind	Value
Tributyl phosphate	Oral	DL50	rat	1.552 g/kg
	Dermal	DL50	rab	>3.1 g/kg

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CAS No: 126-73-8	EC No: 204-800-2	Inhalation	LC50	rat	4.24 mg/l (4 h)
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a) acute toxicity;  
Product classified:  
Acute toxicity (Oral), Category 4: Harmful if swallowed.

b) skin corrosion/irritation;  
Product classified:  
Skin irritant, Category 2: Causes skin irritation.

c) serious eye damage/irritation;  
Not conclusive data for classification.

d) respiratory or skin sensitisation;  
Not conclusive data for classification.

e) germ cell mutagenicity;  
Not conclusive data for classification.

f) carcinogenicity;  
Product classified:  
Carcinogen, Category 2: Suspected of causing cancer.

g) reproductive toxicity;  
Not conclusive data for classification.

h) STOT-single exposure;  
Not conclusive data for classification.

i) STOT-repeated exposure;  
Not conclusive data for classification.

j) aspiration hazard;  
Not conclusive data for classification.

**SECTION 12: ECOLOGICAL INFORMATION.**

**12.1 Toxicity.**

Name	Ecotoxicity			
	Type	Test	Kind	Value
Tributyl phosphate  CAS No: 126-73-8      EC No: 204-800-2	Fish	LC50	Oryzias latipes	4.5 mg/l (96 h)
	Aquatic invertebrates	EC50	Daphnia magna	1.8 mg/l (48 h)
	Aquatic plants	IC50	Desmodesmus subspicatus	1.1 mg/l (72 h)

**12.2 Persistence and degradability.**  
No information is available about persistence and degradability of the product.

**12.3 Bioaccumulative potential.**  
**Information about the bioaccumulation.**

Name	Bioaccumulation			
	Log Pow	BCF	NOECs	Level
Tributyl phosphate	4	-	-	Moderate

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### 12.4 Mobility in soil.

No information is available about the mobility in soil.  
The product must not be allowed to go into sewers or waterways.  
Prevent penetration into the ground.

### 12.5 Results of PBT and vPvB assessment.

No information is available about the results of PBT and vPvB assessment of the product.

### 12.6 Other adverse effects.

No information is available about other adverse effects for the environment.

## SECTION 13 DISPOSAL CONSIDERATIONS.

### 13.1 Waste treatment methods.

Do not dump into sewers or waterways. Waste and empty containers must be handled and eliminated according to current, local/national legislation.  
Follow the provisions of Directive 2008/98/EC regarding waste management.

## SECTION 14: TRANSPORT INFORMATION.

Transportation is not dangerous. In case of road accident causing the product's spillage, proceed in accordance with point 6.

### 14.1 UN number.

Transportation is not dangerous.

### 14.2 UN proper shipping name.

Description:

ADR: Transportation is not dangerous.

IMDG: Transportation is not dangerous.

ICAO: Transportation is not dangerous.

### 14.3 Transport hazard class(es).

Transportation is not dangerous.

### 14.4 Packing group.

Transportation is not dangerous.

### 14.5 Environmental hazards.

Transportation is not dangerous.

### 14.6 Special precautions for user.

Transportation is not dangerous.

### 14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code.

Transportation is not dangerous.

## SECTION 15: REGULATORY INFORMATION.

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

The product is not affected by the Regulation (EC) No 1005/2009 of the European Parliament and of the Council of 16 September 2009 on substances that deplete the ozone layer.

Product classification according to Annex I of Directive 2012/18/EU (SEVESO III): E2

The product is not affected by Regulation (EU) No 528/2012 concerning the making available on the market and use of biocidal products.

The product is not affected by the procedure established Regulation (EU) No 649/2012, concerning the export and import of dangerous chemicals.

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### 15.2 Chemical safety assessment.

There has been no evaluation a chemical safety assessment of the product.

## SECTION 16: OTHER INFORMATION.

Classification codes:

Acute Tox. 4 [Oral] : Acute toxicity (Oral), Category 4  
Aquatic Chronic 2 : Chronic effect to the aquatic environment, Category 2  
Carc. 2 : Carcinogen, Category 2  
Skin Irrit. 2 : Skin irritant, Category 2

It is advisable to carry out basic training with regard to health and safety at work in order to handle this product correctly.

Abbreviations and acronyms used:

BCF: Bioconcentration factor.  
CEN: European Committee for Standardization.  
DMEL: Derived Minimal Effect Level, exposure level corresponding to a low risk, that risk should be considered a tolerable minimum.  
DNEL: Derived No Effect Level, level of exposure to the substance below which adverse effects are not anticipated.  
EC50: Half maximal effective concentration.  
PPE: Personal protection equipment.  
LC50: Lethal concentration, 50%.  
LD50: Lethal dose, 50%.  
Log Pow: Logarithm of the partition octanol-water.  
NOEC: No observed effect concentration.  
PNEC: Predicted No Effect Concentration, concentration of the substance below which adverse effects are not expected in the environmental compartment.

Key literature references and sources for data:

<http://eur-lex.europa.eu/homepage.html>

<http://echa.europa.eu/>

Regulation (EU) 2015/830.

Regulation (EC) No 1907/2006.

Regulation (EU) No 1272/2008.

The information given in this Safety Data Sheet has been drafted in accordance with COMMISSION REGULATION (EU) 2015/830 of 28 May 2015 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC.

The information in this Safety Data Sheet on the Preparation is based on current knowledge and on current EC and national laws, as far as the working conditions of the users is beyond our knowledge and control. The product must not be used for purposes other than those that are specified without first having written instructions on how to handle. It is always the responsibility of the user to take the appropriate measures in order to comply with the requirements established by current legislation. The information contained in this Safety Sheet only states a description of the safety requirements for the preparation, and it must not be considered as a guarantee of its properties.