

# Safety Data Sheet

According to Regulation (EC) No. 1907/2006 as amended

## XO1410HO

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

#### 1.1 Product identifier

<b>Product name:</b>	XO1410HO
<b>Trade name(s):</b>	exocet Premium Heating Oil Additive (XO1410HO)
<b>Product description:</b>	Liquid fuel additive
<b>Contains:</b>	Hydrocarbons, C10 aromatics Reaction mass of 2,6-di-tert-butylphenol and 2,4,6-tri-tert-butyl phenol $\alpha,\alpha'$ -propylenedinitrildi-o-cresol Phenol, 4,4'-(1-methylethylidene)bis-, polymer with 2-(chloromethyl)oxirane, 2-methyloxirane and oxirane

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

<b>Identified use(s):</b>	Liquid fuel additive.
<b>Uses advised against:</b>	Follow supplier's recommendations on correct use of the product.

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

<b>Manufacturer/Supplier:</b>	Fuel Additive Science Technologies Limited Unit 29, Atcham Business Park, Upton Magna, Shrewsbury, Shropshire, SY4 4UG
<b>Telephone:</b>	+44 (0)1743 761415
<b>E-mail:</b>	info@fastexocet.co.uk

#### 1.4 Emergency telephone number

<b>In case of emergency, call:</b>	+44 (0) 333 333 9962 (UK number, 24 hours, 7 days)
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## SECTION 2: Hazard Identification

### 2.1 Classification of the substance or mixture

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

Eye Dam. 1	H318	Causes serious eye damage.
Skin Sens. 1	H317	May cause an allergic skin reaction.
Carc. 2	H351	Suspected of causing cancer.
Repr. 1B	H360	May damage fertility or the unborn child.
STOT SE3	H336	May cause drowsiness or dizziness.
Asp. Tox. 1	H304	May be fatal if swallowed and enters airways.
Aquatic Chronic 2	H411	Toxic to aquatic life with long lasting effects.

#### Additional Information

EUH066	Repeated exposure may cause skin dryness or cracking.
EUH208	Contains phenol, 4,4'-(1-methylethylidene)bis-, polymer with 2-(chloromethyl)oxirane, 2-methyloxirane and oxirane. May produce an allergic reaction.

See Section 16 for full description of H statements.

### 2.2 Label elements according to Regulation (EC) No. 1272/2008 (CLP)

#### Hazard pictogram(s):



#### Signal Word:

Danger

#### Hazard Statement(s):

H318	Causes serious eye damage.
H317	May cause an allergic skin reaction.
H351	Suspected of causing cancer.
H360	May damage fertility or the unborn child.
H336	May cause drowsiness or dizziness.

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	H304	May be fatal if swallowed and enters airways.
	H411	Toxic to aquatic life with long lasting effects.
<b>Precautionary Statement(s):</b>	P201	Obtain special instructions before use.
	P261	Avoid breathing fume/ mist/ vapours/ spray.
	P273	Avoid release to the environment.
	P280	Wear protective gloves/protective clothing/eye protection/face protection.
	P301 + P310	IF SWALLOWED: Immediately call a POISON CENTER/doctor.
	P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
	P302 + P352	IF ON SKIN: Wash with plenty of water.
	P405	Store locked up.
	P501	Dispose of contents/container in accordance with local /national / international regulations.
	<b>Supplemental Hazard information (EU):</b>	EUH066
<b>Hazard Determining Component(s)</b>	Hydrocarbons, C10 aromatics Reaction mass of 2,6-di-tert-butylphenol and 2,4,6-tri-tert-butyl phenol $\alpha,\alpha'$ -propylenedinitriledi-o-cresol Phenol, 4,4'-(1-methylethylidene)bis-, polymer with 2-(chloromethyl)oxirane, 2-methyloxirane and oxirane	

## 2.3 Other hazards

Contains reaction mass of 2,6-di-tert-butylphenol and 2,4,6-tri-tert-butyl phenol 2,4,6-tri-tert-butylphenol which is under assessment as a PBT substance. The remaining substances in this product are not PBT or vPvB.

Combustible liquid and vapour.

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## SECTION 3: Composition

### 3.2 Mixtures

Chemical name	CAS No.	EC No.	Index No.	% w/w	Classification	Notes
Hydrocarbons, C10 aromatics, <1% naphthalene REACH #: 01-2119463583-34	64742-94-5 (*)	[918-811-1]	-	80 - 90	Asp. Tox. 1 H304 STOT SE 3 H336 Aquatic Chronic 2 H411	EUH066
Reaction mass of 2,6-di-tert-butylphenol and 2,4,6-tri-tert-butyl phenol REACH #: 01-2119538013-51	-	[907-745-9]	-	5 - < 10	Eye Dam. 1 H318 Aquatic Acute 1 H400 Aquatic Chronic 1 H410	M = 1 M (chronic) = 1
Phenol, 4-dodecyl-, polymer with 1,2-ethanediamine and formaldehyde, compd. with (dibutylamino)methanol	67953-82-6	[614-183-5]	-	0 - < 3	Eye Irrit. 2 H319 Skin Irrit. 2 H315	
Hydrocarbons, C10 aromatics, >1% naphthalene REACH #: 01-2119463588-24	-	[919-284-0]	-	0 - < 2	Asp. Tox. 1 H304 Carc. 2 H351 STOT SE 3 H336 Aquatic Chronic 2 H411	EUH066
$\alpha,\alpha'$ -propylenedinitrilodi-o-cresol REACH #: 01-2119958970-25	94-91-7	202-374-2	-	0 - < 2	Acute Tox. 4 H302 Skin Sens. 1 H317 Repr. 1B H360 Aquatic Chronic 3 H412	
Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, <2% aromatics	-	[918-481-9]	-	0 - < 2	Asp. Tox. 1 H304	EUH066
Reaction mass of ethylbenzene and xylene REACH #: 01-2119488216-32	-	[905-588-0]	-	0 - < 2	Flam. Liq. 3 H226 Acute Tox. 4 H312 Acute Tox. 4 H332 Skin Irrit. 2 H315 Eye Irrit. 2 H319 STOT SE 3 H335 STOT RE 2 H373 Asp. Tox. 1 H304	WEL
Phenol, 4,4'-(1-methylethylidene)bis-, polymer with 2-(chloromethyl)oxirane, 2-methyloxirane and oxirane	68123-18-2	-	-	0 - < 1	Skin Irrit. 2 H315 Eye Irrit. 2 H319 Skin Sens. 1 H317 Aquatic Chronic 2 H411	

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Chemical name	CAS No.	EC No.	Index No.	% w/w	Classification	Notes
2-ethylhexan-1-ol REACH #: 01-2119487289-20	104-76-7	203-234-3	-	0 - < 1	Acute Tox. 4 H332 Skin Irrit. 2 H315 Eye Irrit. 2 H319 STOT SE3 H335 (Respiratory Tract, Inhalation)	WEL
1,2,4-trimethylbenzene REACH #: Compliant	95-63-6	202-436-9	601-043-00-3	0 - < 1	Flam. Liq. 3 H226 Acute Tox. 4 H332 Skin Irrit. 2 H315 Eye Irrit. 2 H319 STOT SE 3 H335 Aquatic Chronic 2 H411	WEL
naphthalene REACH #: Compliant	91-20-3	202-049-5	601-052-00-2	0 - < 0.1	Acute Tox. 4 H332 Carc. 2 H351 Aquatic Acute 1 H400 (M=1) Aquatic Chronic 1 H410 (M=1)	WEL

## NOTES

(\*) Identified as CAS 64742-94-5 outside the EU.

EC Number 918-811-1, 907-745-9, 614-183-5, 919-284-0, 918-481-9 and 905-588-0 are technical identifiers and are displayed for informational purposes only.

See Section 16 for full description of H statements.

## SECTION 4: First Aid Measures

### 4.1 Description of first aid measures

#### GENERAL NOTES

If medical advice is needed, have the safety data sheet or label to hand. If exposed and concerned, get medical advice.

#### INHALATION:

Remove person to fresh air and keep comfortable for breathing. Keep at rest. If symptoms persist, seek medical attention.

#### SKIN CONTACT:

Take off immediately all contaminated clothing. Wash with plenty of soap and water for at least 15 minutes. Wash contaminated clothing before reuse. If skin irritation or rash occurs, get medical advice/attention.

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<b>EYE CONTACT:</b>	Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing for at least 20 minutes. Obtain immediate medical attention.
<b>INGESTION:</b>	Obtain immediate medical attention. Never give anything by mouth to an unconscious person. Provided the patient is conscious, wash out mouth with water. Do NOT induce vomiting. If vomiting occurs naturally, the patient should lean forward to reduce the risk of aspiration.
<b>SELF-PROTECTION OF THE FIRST AIDER:</b>	When administering first aid, ensure that you are wearing the appropriate personal protective equipment according to the incident, injury and surroundings.

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

May be fatal if swallowed and enters airways. If swallowed, aspiration into lungs may result in chemical pneumonia.  
May cause drowsiness or dizziness.  
Causes serious eye damage. Repeated exposure may cause skin dryness or cracking.  
Symptoms: redness, pain, rash, watering of the eye.  
May cause an allergic skin reaction.  
Delayed effects:  
May damage fertility or the unborn child. Suspected of causing cancer.

## 4.3 Indication of any immediate medical attention and special treatments needed:

Treat symptomatically. Seek immediate medical attention. If swallowed, patient should be monitored for signs of breathing difficulty as effects of aspiration may be delayed for up to 48 hours. If breathing is laboured, oxygen should be administered by qualified personnel.

## SECTION 5: Fire-fighting Measures

### 5.1 Extinguishing Media

<b>Suitable extinguishing media:</b>	Foam, CO <sub>2</sub> or dry powder.
<b>Unsuitable extinguishing media:</b>	Do not use water jet.

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## 5.2 Special hazards arising from the substance or mixture

Combustible liquid and vapour.

Vapour may form explosive mixture with air. Vapour is heavier than air and may accumulate in confined spaces.

This material is harmful to aquatic life, fire water contaminated with the material must be contained. Do not empty into drains.

Combustion may liberate toxic fumes: Carbon monoxide, carbon dioxide, nitrogen oxides and various hydrocarbons.

## 5.3 Advice for fire-fighters

A self-contained breathing apparatus and suitable protective clothing should be worn in fire conditions.

Move containers from the fire area if it is safe to do so. Cool containers exposed to flames with plenty of water until well after the fire is out.

Do not allow product or run-off to enter drains, sewers or watercourses.

Flash point: > 65 °C (closed cup).

## SECTION 6: Accidental Release Measures

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

#### 6.1.1 For non-emergency personnel

Evacuate surrounding areas. Eliminate sources of ignition. Ensure adequate ventilation. Do not touch or walk through spilt material. Avoid contact with skin, eyes or clothing. Do not breathe fumes/mist/vapours/spray. Wear suitable personal protective equipment. Wear appropriate respirator when ventilation is inadequate (see section 8). The vapour is heavier than air; it will concentrate in low lying areas, beware of pits and confined spaces.

#### 6.1.2 For emergency responders

Keep unnecessary personnel away. Wear suitable protective clothing appropriate respirator when ventilation is inadequate (See Section 8). Wash contaminated clothing before reuse. Eliminate sources of ignition. Use only non-sparking tools. Ensure adequate ventilation. Do not touch or walk through spilt material. Avoid contact with skin, eyes or clothing. Do not breathe fumes/mist/vapours/spray. The vapour is heavier than air; it will concentrate in low lying areas, beware of pits and confined spaces.



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## 6.2 Environmental precautions

Collect spillage. Do not allow to enter drains, sewers or watercourses. Spillages or uncontrolled discharges into watercourses must be alerted to the Environment Agency or other appropriate regulatory body.

## 6.3 Methods and materials for containment and cleaning up

### 6.3.1 For containment

Stop the leak if it is safe to do so. Contain the spillage with sand, earth or any suitable adsorbent material.

### 6.3.2 For cleaning up

Use sand, earth or any suitable non-combustible adsorbent material to adsorb spillages. Using non-sparking tools transfer the contaminated adsorbent material into a UN approved container for disposal. Containers should be sealed before being disposed of via an authorised waste disposal contractor.

### 6.3.3 Other advice

Collect spillage. Avoid release to the environment.

## 6.4 Reference to other sections

See Section 8 for personal protective equipment. See Section 13 for waste disposal.



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## SECTION 7: Handling and Storage

### 7.1 Precautions for safe handling

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood.

Do not breathe fume/mist/vapours/spray. Use only outdoors or in a well-ventilated area. Provide adequate ventilation, including local extraction, to ensure occupational exposure limits are not exceeded.

Avoid contact with skin, eyes or clothing. Do not breathe vapour/fume/mist or spray. Wear suitable personal protective equipment (See Section 8).

Eliminate all sources of ignition. Keep away from heat/sparks/open flames/ hot surfaces. Take precautionary measures against electrostatic discharges. Use explosion-proof electrical (ventilating, lighting and material handling) equipment.

Avoid release to the environment.

Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Take off immediately all contaminated clothing and wash it before reuse. Contaminated clothing should be thoroughly cleaned or disposed of as hazardous waste. Contaminated work clothing should not be allowed out of the workplace.

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

Keep away from heat and sources of ignition. Keep cool. Protect from direct sunlight. Store locked up. Store in a well-ventilated place. Keep container tightly closed. Store only in the original container. Empty containers retain product residue and can be hazardous.

Maximum handling temperature: 50°C.

Keep away from oxidising agents.

### 7.3 Specific end uses(s)

Liquid fuel additive.

Follow supplier's recommendations on correct use of the product.

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## SECTION 8: Exposure Controls/Personal Protection

### 8.1 Control parameters

#### Workplace exposure limits

Substance	8-hour TWA		STEL (15 min)		Source	Comments
	ppm	mg/m <sup>3</sup>	ppm	mg/m <sup>3</sup>		
Hydrocarbons C10, aromatics, < 1% naphthalene		500			EH40	Total hydrocarbon vapour (1)
Ethylbenzene	100	442	200 (2)	884 (2)	EU IOELV	Skin DIRECTIVE 2000/39/EC
Ethylbenzene	100	441	125	552	UK EH40	Sk
Xylene	50	221	100 (2)	442 (2)	EU IOELV	Skin DIRECTIVE 2000/39/EC
xylene, o-,m-,p- or mixed isomers	50	220	100	441	UK EH40	Sk, BMGV
2-Ethylhexan-1-ol	1	5.4			EH40	
Trimethylbenzenes, all isomers or mixtures	25	125			UK EH40	
1,2,4-trimethylbenzene	20	100			EU IOELV	DIRECTIVE 2000/39/EC
naphthalene	[10]	[53]	[15]	[80]	GESTIS ILV	UK*

#### Remarks

\* Short term is 15 minutes unless otherwise specified.

1 – Hydrocarbon solvents supplied as a complex mixture, HSE ACTS procedure, see EH40, paragraphs 84-87.

2 - EU 15 minutes average value

Skin: A skin notation assigned to the OEL identifies the possibility of significant uptake through the skin.

Sk: Can be absorbed through the skin. The assigned substances are those for which there are concerns that dermal absorption will lead to systemic toxicity.

BMGV: Biological monitoring guidance values

UK – EH40:2005 3<sup>rd</sup> edition August 2018

UK\* - The UK Advisory Committee on Toxic Substances has expressed concern that, for the OELs

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shown in parentheses, health may not be adequately protected because of doubts that the limit was not soundly based. These OELs were included in the published UK 2002 list and its 2003 supplement but are omitted from the published 2005 list.

## Biological monitoring guidance values

Substance	Biological monitoring guidance values	Sampling time
xylene, o-, m-, p- or mixed isomers	650 mmol methyl hippuric acid/mol creatinine in urine	Post shift

## Derived No-Effect Level (DNELs) - Workers

Substances	Route	Acute/short-term exposure		Long-term exposure	
		Systemic effects	Local effects	Systemic effects	Local effects
Hydrocarbons, C10 aromatics, <1% naphthalene	Inhalation	No data available		151 mg/m <sup>3</sup>	No data available
	Dermal	No data available		12.5 mg/kg bw/day	No data available
Reaction mass of 2,6-di-tert-butylphenol and 2,4,6-tri-tert-butyl phenol	Inhalation	No data available		3.5 mg/m <sup>3</sup>	No data available
	Dermal	No data available		0.5 mg/kg bw/day	No data available
	Eye	-	High hazard	-	High hazard
Hydrocarbons, C10 aromatics, >1% naphthalene	Inhalation	No data available		151 mg/m <sup>3</sup>	No data available
	Dermal	No data available		12.5 mg/kg bw/day	No data available
α,α'-propylenedinitrilodi-o-cresol	Inhalation	No hazard identified	No hazard identified	3.11 mg/m <sup>3</sup>	No hazard identified
	Dermal	No hazard identified	High hazard	880 µg/kg bw/day	No hazard identified
	Eye	-	No hazard identified	-	No hazard identified
reaction mass of ethylbenzene and xylene	Inhalation	442 mg/m <sup>3</sup>	442 mg/m <sup>3</sup>	221 mg/m <sup>3</sup>	221 mg/m <sup>3</sup>
	Dermal	Low hazard	Low hazard	212 mg/kg bw/day	No hazard identified
	Eye	-	Low hazard	-	Low hazard
2-ethylhexan-1-ol	Inhalation	Low hazard	53.2 mg/m <sup>3</sup>	12.8 mg/m <sup>3</sup>	53.2 mg/m <sup>3</sup>
	Dermal	No hazard identified	Medium hazard	23 mg/kg bw/day	Medium hazard
	Eye		Medium hazard		Medium hazard
1,2,4-trimethylbenzene	Inhalation	No data available		100 mg/m <sup>3</sup>	100 mg/m <sup>3</sup>
naphthalene	Inhalation	Low hazard	No hazard identified	25 mg/m <sup>3</sup>	25 mg/m <sup>3</sup>
	Dermal	Low hazard	No hazard identified	3.57 mg/kg bw/day	No hazard identified

## Predicted No Effect Concentration (PNECs)

Substance	Aqua (fresh water)	Aqua (marine water)	Aqua (intermittent releases)	Sewage Treatment Plants	Sediment (fresh water)	Sediment (marine water)	Soil	Oral
Reaction mass of 2,6-di-tert-butylphenol and 2,4,6-tri-tert-butyl phenol	0.3 µg/L	0.03 µg/L	-	2.4 mg/L	0.09 mg/kg sediment dw	0.009 mg/kg sediment dw	0.044 mg/kg soil dw	8.33 mg/kg food

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Substance	Aqua (fresh water)	Aqua (marine water)	Aqua (intermittent releases)	Sewage Treatment Plants	Sediment (fresh water)	Sediment (marine water)	Soil	Oral
$\alpha,\alpha'$ -propylenedinitrilo-di-o-cresol	1.117 $\mu\text{g/L}$	111.7 ng/L	11.17 $\mu\text{g/L}$	500 $\mu\text{g/L}$	59.4 mg/kg sediment dw	5.67 mg/kg sediment dw	11.8 mg/kg soil dw	No potential for bioaccumulation
reaction mass of ethylbenzene and xylene	0.327 mg/L	0.327 mg/L	0.327 mg/L	6.58 mg/L	12.46 mg/kg sediment dw		2.31 mg/kg soil dw	No potential for bioaccumulation
2-Ethylhexan-1-ol	17 $\mu\text{g/L}$	1.7 $\mu\text{g/L}$	170 $\mu\text{g/L}$	10 mg/L	284 $\mu\text{g/kg}$ sediment dw	28.4 $\mu\text{g/kg}$ sediment dw	47 $\mu\text{g/kg}$ soil dw	55 mg/kg food
1,2,4-trimethylbenzene	120 $\mu\text{g/L}$	120 $\mu\text{g/L}$	120 $\mu\text{g/L}$	2.41 mg/L	13.56 mg/kg sediment dw	13.56 mg/kg sediment dw	2.34 mg/kg soil dw	No data
naphthalene	2.4 $\mu\text{g/L}$	20 $\mu\text{g/L}$	2.4 $\mu\text{g/L}$	2.9 mg/L	67.2 $\mu\text{g/kg}$ sediment dw	67.2 $\mu\text{g/kg}$ sediment dw	53.3 $\mu\text{g/kg}$ soil dw	No potential for bioaccumulation

Hydrocarbons, C10, aromatics, < 1% naphthalene, Hydrocarbons, C10 aromatics, >1% naphthalene and Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, <2% aromatics: No data available: testing technically not feasible.

## 8.2 Exposure controls

### 8.2.1 Appropriate engineering controls

Provide adequate ventilation, including appropriate local extraction, to minimise exposure to vapours.

### 8.2.2 Personal protection

<b>Eye protection:</b>	Goggles or safety glasses with side shields giving complete protection to eyes. (EN 166) or face shield.
<b>Skin protection:</b>	
<b>Hand protection</b>	Chemical resistant gloves. (EN 374). Contact glove supplier to confirm suitable glove material, thickness and breakthrough times. If contact with forearms is likely, wear gauntlet-style gloves.
<b>Other:</b>	Long sleeve chemical resistant protective clothing. Plastic apron. Nitrile rubber boots.
<b>Respiratory protection:</b>	In the case of insufficient ventilation, wear respiratory equipment. Suitable respiratory protection for lower concentrations or short-term effect: Filter type ABEK-P3 (EN 14387).
<b>Thermal hazards:</b>	Wear suitable temperature resistant gloves and protective clothing if the product is heated.

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<b>8.2.3</b>	<b>Environmental exposure controls</b>	Inform environmental manager of all incidents involving this product.
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## SECTION 9: Physical and Chemical Properties

### 9.1 Information on basic physical and chemical properties

<b>Appearance:</b>	Product: amber liquid.
<b>Odour:</b>	Aromatic
<b>Odour threshold:</b>	Not available
<b>pH:</b>	Not applicable
<b>Melting/freezing point:</b>	Hydrocarbons, C10, aromatics, <1% naphthalene: -51 °C @ 101.325 kPa. Pour point: <-10 °C (ASTM D 5950)
<b>Initial boiling point and boiling range:</b>	Hydrocarbons, C10, aromatics, <1% naphthalene: 160 - 220 °C (ASTM D 86)
<b>Flash point:</b>	66.5 °C (closed cup)
<b>Evaporation rate:</b>	Not available
<b>Flammability (solid; gas):</b>	Not available
<b>Upper/lower flammability or explosive limits:</b>	Hydrocarbons, C10, aromatics, <1% naphthalene: 0.6 - 7.0 % v/v (calculated)
<b>Vapour pressure:</b>	Hydrocarbons, C10, aromatics, <1% naphthalene: 0.09 kPa @ 20°C
<b>Vapour density:</b>	> 1
<b>Relative density:</b>	Product: 0.895 @ 15 °C (Water = 1) Hydrocarbons, C10, aromatics, <1% naphthalene: 0.8 - 0.95 @ 15°C
<b>Solubility:</b>	Immiscible in water. Miscible in aromatic solvents.
<b>Partition coefficient: n-octanol/water:</b>	Not available
<b>Auto-ignition temperature:</b>	Hydrocarbons, C10, aromatics, <1% naphthalene: > 400 °C
<b>Decomposition temperature:</b>	Not available
<b>Viscosity:</b>	Hydrocarbons, C10, aromatics, <1% naphthalene: 1.26 mm <sup>2</sup> /s @ 20 °C

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**Explosive properties:** Not explosive. Vapour may form explosive mixture in air.  
**Oxidising properties:** Not oxidising.

## 9.2 Other information

None.

## SECTION 10: Stability and Reactivity

**10.1 Reactivity** Reacts with oxidising agents.  
**10.2 Chemical stability** Stable under normal conditions.  
**10.3 Possibility of hazardous reactions** No hazardous reactions expected during normal use.  
**10.4 Conditions to avoid** Keep away from sources of ignition, hot surfaces, direct sunlight and contact with incompatible materials.  
**10.5 Incompatible materials** Oxidising agents.  
**10.6 Hazardous decomposition products** Combustion may liberate toxic fumes: Carbon monoxide, carbon dioxide, nitrogen oxides and various hydrocarbons.

## SECTION 11: Toxicological Information

### 11.1 Information on toxicological effects

**Acute toxicity – oral** Not classified. Based on the available data the classification criteria are not met.  
ATE mix > 2000 mg/kg

**Acute toxicity – dermal** Not classified. Based on the available data the classification criteria are not met.  
ATE mix > 2000 mg/kg

**Acute toxicity - inhalation** Not classified. Based on the available data the classification criteria are not met.  
ATE mix > 5.0 mg/L (mists)

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<b>Skin corrosion/irritation</b>	Not classified. Based on the available data the classification criteria are not met.
<b>Serious eye damage/irritation</b>	Repeated exposure may cause skin dryness or cracking. Causes serious eye damage.
<b>Skin sensitisation</b>	May cause an allergic skin reaction. Contains $\alpha,\alpha'$ -propylenedinitrilo-di-o-cresol and phenol, 4,4'-(1-methylethylidene)bis-, polymer with 2-(chloromethyl)oxirane, 2-methyloxirane and oxirane.
<b>Respiratory sensitisation</b>	Not classified. Based on the available data the classification criteria are not met.
<b>Germ cell mutagenicity</b>	Not classified. Based on the available data the classification criteria are not met.
<b>Carcinogenicity</b>	Suspected of causing cancer.
<b>Reproductive toxicity</b>	May damage fertility or the unborn child.
<b>Specific Target Organ Toxicity – single exposure</b>	May cause drowsiness or dizziness.
<b>Specific Target Organ Toxicity – repeated exposure</b>	Not classified. Based on the available data the classification criteria are not met.
<b>Aspiration hazard</b>	May be fatal if swallowed and enters airways.

## Information on likely routes of exposure

<b>Inhalation</b>	Narcotic effects. Inhalation of vapour may cause severe drowsiness and dizziness.
<b>Skin contact</b>	May cause an allergic skin reaction. Repeated exposure may cause skin dryness or cracking.
<b>Eye contact</b>	Causes serious eye damage.
<b>Ingestion</b>	May be fatal if swallowed and enters airways. Pneumonia may result if vomited material containing solvents reaches the lungs. See above.

## Symptoms related to the physical, chemical and toxicological characteristics



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## SECTION 12: Ecological Information

### 12.1 Toxicity

The product is toxic to aquatic life with long lasting effects.

Data for major components, if available:

Hydrocarbons, C10 aromatics, <1% naphthalene	LC50/96 h ( <i>Oncorhynchus mykiss</i> ): 2-5 mg/l (WAF) NOELR/28 d (Freshwater fish) 0.441 mg/L (growth, estimated) EC50/48 h ( <i>Daphnia magna</i> ): 3-10 mg/l NOELR/21 d (freshwater invertebrate): 0.771 mg/L (reproduction, estimated) EL50/72 h ( <i>Selenastrum capricornutum</i> ): 1-3 mg/l (WAF, growth rate and biomass) NOELR/48 h ( <i>Tetrahymena pyriformis</i> ): 1.718 (estimated, growth inhibition)
Reaction mass of 2,6-di-tert-butylphenol and 2,4,6-tri-tert-butyl phenol	LC50/96h ( <i>Oncorhynchus mykiss</i> ) 0.3 mg/L EC50/48h ( <i>Daphnia magna</i> ) 0.4 mg/L EC50/72h (Freshwater algae) 3 mg/L
Hydrocarbons, C10 aromatics, >1% naphthalene	LC50/96 h ( <i>Oncorhynchus mykiss</i> ): 2-5 mg/l NOELR/28 d (Freshwater fish) 0.487 mg/L (growth, estimated) EC50/48 h ( <i>Daphnia magna</i> ): 3-10 mg/l NOELR/21 d (freshwater invertebrate): 0.851 mg/L (reproduction, estimated) EL50/72 h ( <i>Selenastrum capricornutum</i> ): 1-3 mg/l (WAF, growth rate and biomass) NOELR/48 h ( <i>Tetrahymena pyriformis</i> ): 1.892 (estimated, growth inhibition)
$\alpha,\alpha'$ -propylenedinitrilodi-o-cresol	LC50/48h ( <i>Leuciscus idus</i> ) 46 mg/L EC50/48h ( <i>Daphnia magna</i> ) 3.162 – 5.034 mg/L EC50/72h ( <i>Pseudokirchnerella subcapitata</i> ) 1.117 mg/L
Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, <2% aromatics	LC50/96 h ( <i>Oncorhynchus mykiss</i> ): > 1000 mg/l (WAF) NOELR/28 d (Freshwater fish) 0.101 mg/L (growth, estimated) EC50/48 h ( <i>Daphnia magna</i> ): > 1000 mg/l (WAF) NOELR/21 d (freshwater invertebrate): 0.176 mg/L (reproduction, estimated) EL50/72 h (algae): > 1000 mg/l (WAF, growth rate and biomass) EL50/48 h ( <i>Tetrahymena pyriformis</i> ): >1000 mg/L (estimated, growth inhibition)

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Reaction mass of ethylbenzene and xylene	LC50/96h (freshwater fish) 2.6 mg/L NOEC/56d (freshwater fish) 1.3 mg/L EC50/24h ( <i>Daphnia magna</i> ) 1 mg/L NOEC/7 day (aquatic invertebrates) 0.96 mg/L EC50/72h (freshwater algae) 1.3 mg/L NOEC/72h (freshwater algae) 0.44 mg/L
Phenol, 4,4'-(1-methylethylidene)bis-, polymer with 2-(chloromethyl)oxirane, 2-methyloxirane and oxirane	LC50/96h ( <i>Danio rerio</i> ) 10 – 100 mg/L
2-ethylhexan-1-ol	LC50/96 h ( <i>Leuciscus idus melanotus</i> ): 17.1 mg/L EC50/48 h ( <i>Daphnia magna</i> ): 39 mg/L EC50/72 h ( <i>Scenedesmus subspicatus</i> ): 16.6 mg/L (growth rate)
1,2,4-trimethylbenzene	LC50/96h ( <i>Pimephales promelas</i> ): 7.72 mg/L EC50/48 h ( <i>Daphnia magna</i> ): 3.6 mg/L
naphthalene	EC50/96h (Algae): 2.356 mg/L (estimated) LC50/96h ( <i>Oncorhynchus mykiss</i> ) 1.6 mg/L LC50/48h ( <i>Daphnia magna</i> ) 2.96 mg/L EC50/4h ( <i>Pseudokirchneriella subcapitata</i> ) 2.96 mg/L

## 12.2 Persistence and degradability

No data available on the mixture. The following data are for the products components, where available:

Hydrocarbons, C10 aromatics, <1% naphthalene	Inherently biodegradable.
Reaction mass of 2,6-di-tert-butylphenol and 2,4,6-tri-tert-butyl phenol	Not readily biodegradable.
Hydrocarbons, C10 aromatics, >1% naphthalene	Inherently biodegradable.
Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, <2% aromatics	Readily biodegradable
Reaction mass of ethylbenzene and xylene	Readily biodegradable
2-ethylhexan-1-ol	Readily biodegradable
1,2,4-trimethylbenzene	Readily biodegradable, but failing 10-day window. Not expected to persist in the environment.
naphthalene	Readily biodegradable

## 12.3 Bioaccumulative potential

No data available on the mixture.

The following data are for the products components:

	Partition coefficient	BCF
2,6-di-tert-butylphenol	-	434.9
2,4,6-tri-tert-butylphenol	-	3282
		Expected to bioaccumulate

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Xylene (mixed isomers)	3.2	25.9
Ethylbenzene	3.1	110
2-ethylhexan-1-ol	2.9	38.06
1,2,4-trimethylbenzene	3.63	243
naphthalene	3.43	36.5 – 168

- 12.4 Mobility in soil** The product is insoluble in water. Volatile components of the product will distribute to air. Potential for adsorption to soil and sediment.
- 12.5 Results of PBT and vPvB assessment** Contains 5 - < 10% reaction mass of 2,6-di-tert-butylphenol and 2,4,6-tri-tert-butyl phenol which is possibly Persistent, Bioaccumulative and Toxic.
- 12.6 Other adverse effects** No known significant effects or critical hazards.

## SECTION 13: Disposal Considerations

### 13.1 Waste treatment methods

Product and packaging to be disposed of as hazardous waste. Disposal should be in accordance with local, state or national legislation. Do not landfill.

Empty containers retain product residue and can be hazardous. Dispose of uncleaned empty containers as hazardous waste in accordance with local, state or national legislation.

Contaminated adsorbent must be removed in sealed, plastic lined drums and disposed of via an authorised waste disposal contractor. Do not empty into drains; dispose of this material and its container in a safe way.

## SECTION 14: Transport Information

### ADR

- 14.1 UN Number** UN3082
- 14.2 UN Proper shipping name** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (contains Hydrocarbons, C10 aromatics, <1% naphthalene)
- 14.3 Transport hazard class(es)** 9
- 14.4 Packing group** III
- 14.5 Environmental hazards** Yes

### ADN

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<b>14.1</b>	<b>UN Number</b>	UN3082
<b>14.2</b>	<b>UN Proper shipping name</b>	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (contains Hydrocarbons, C10 aromatics, <1% naphthalene)
<b>14.3</b>	<b>Transport hazard class(es)</b>	9
<b>14.4</b>	<b>Packing group</b>	III
<b>14.5</b>	<b>Environmental hazards</b>	Yes
<b>RID</b>		
<b>14.1</b>	<b>UN Number</b>	UN3082
<b>14.2</b>	<b>UN Proper shipping name</b>	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (contains Hydrocarbons, C10 aromatics, <1% naphthalene)
<b>14.3</b>	<b>Transport hazard class(es)</b>	9
<b>14.4</b>	<b>Packing group</b>	III
<b>14.5</b>	<b>Environmental hazards</b>	Yes
<b>IATA/ICAO</b>		
<b>14.1</b>	<b>UN Number</b>	UN3082
<b>14.2</b>	<b>UN Proper shipping name</b>	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (contains Hydrocarbons, C10 aromatics, <1% naphthalene)
<b>14.3</b>	<b>Transport hazard class(es)</b>	9
<b>14.4</b>	<b>Packing group</b>	III
<b>14.5</b>	<b>Environmental hazards</b>	Yes
<b>IMDG</b>		
<b>14.1</b>	<b>UN Number</b>	UN3082
<b>14.2</b>	<b>UN Proper shipping name</b>	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (contains Hydrocarbons, C10 aromatics, <1% naphthalene)
<b>14.3</b>	<b>Transport hazard class(es)</b>	9
<b>14.4</b>	<b>Packing group</b>	III
<b>14.5</b>	<b>Environmental hazards</b>	Marine pollutant.
<b>14.6</b>	<b>Special precautions for the user</b>	Transport Category: 3 Tunnel Restriction Code: (-) Read SDS and supplier instructions on correct use of

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the product.

- 14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC code** The product is not intended to be transported in bulk.

## SECTION 15: Regulatory Information

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

This Safety Data Sheet was prepared in accordance with EC Regulation (EC) No. 1907/2006 as amended.

The product has been classified in accordance with Regulation (EC) No. 1272/2008 (CLP).

Authorisations and/or restrictions on use:

No substances in this product are listed on REACH Annex XIV or REACH Annex XVII

Included in the CoRAP: Reaction mass of 2,6-di-tert-butylphenol and 2,4,6-tri-tert-butyl phenol, reaction mass of ethylbenzene and xylene, and naphthalene.

- 15.2 Chemical Safety Assessment** Not applicable.

## SECTION 16: Other Information

**i) Indication of changes:**

<b>Version:</b>	3.0
<b>Issue date:</b>	18/12/2019
<b>Previous Version:</b>	2.0
<b>Issue date of previous version:</b>	27/09/2012
<b>Sections changed from previous version:</b>	ALL

**ii) Abbreviations and acronyms:**

<b>ATE</b>	Acute Toxicity Estimate
<b>BCF</b>	Bioconcentration Factor
<b>bw</b>	Body weight
<b>CAS</b>	Chemical Abstracts Service
<b>CNS</b>	Central Nervous System

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<b>dw</b>	Dry Weight
<b>EINECS</b>	European Inventory of Existing Commercial Chemical Substances
<b>EC50</b>	Effective Concentration 50 %
<b>EL50</b>	Effective Loading rate 50%
<b>LC50</b>	Lethal Concentration 50%
<b>LD50</b>	Lethal Dose 50%
<b>LL50</b>	Lethal Loading rate 50 %
<b>LOEL</b>	Lowest Observed Effect Level
<b>NOEL</b>	No Observed Effect Level
<b>NOELR</b>	No Observed Effect Loading Rate
<b>PBT</b>	Persistent, Bioaccumulative and Toxic
<b>vPvB</b>	Very Persistent and Very Bioaccumulative
<b>WAF</b>	Water accommodated Fraction

### iii) References:

Supplier's Safety Data Sheets.  
 ECHA REACH dossiers  
 Regulation (EC) No. 1272/2008.  
 Regulation (EC) No. 1907/2006  
 Regulation (EU) No. 2015/830  
 HSE EH40, 3<sup>rd</sup> edition, 2018  
 GESTIS ILV

### iv) Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 (CLP)

Classification according to Regulation (EC) No. 1272/2008	Classification procedure
Eye Dam. 1 H318	Calculation
Skin Sens. 1 H317	Calculation
Carc. 2	Calculation
Repr. 1B	Calculation
Asp. Tox. 1 H304	Calculation
STOT SE 3 H336	Expert judgement
Aquatic Chronic 2; H411	Calculation

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**v) Full text of relevant Hazard Category Codes and H-Statements:**

Flam. Liq. 3 H226	Flammable liquids, category 3: Flammable liquid and vapour.
Acute Tox. 4 H302	Acute Toxicity, oral, category 4: Harmful if swallowed.
Asp. Tox. 1: H304	Aspiration hazard, category 1: May be fatal if swallowed and enters airways.
Acute Tox. 4: H312	Acute Toxicity, dermal, category 4: Harmful in contact with skin.
Acute Tox. 4: H332	Acute Toxicity, inhalation, category 4: Harmful if inhaled.
Skin Irrit. 2 H315	Skin corrosion/irritation, Category 2: Causes skin irritation.
Eye Dam. 1 H318	Serious eye damage/eye irritation, Category 1: Causes serious eye damage.
Eye Irrit. 2 H319	Serious eye damage/eye irritation, Category 2: Causes serious eye irritation.
Skin Sens. 1 H317	Sensitisation — Skin, Category 1: May cause an allergic skin reaction.
Carc. 2 H351	Carcinogenicity, Hazard Category 2: Suspected of causing cancer.
Repr. 1B H360	Reproductive toxicity, Hazard Category 1B: May damage fertility or the unborn child.
STOT SE 3: H335	Specific target organ toxicity — Single exposure, Category 3 Respiratory tract irritation: May cause respiratory irritation.
STOT SE 3: H336	Specific target organ toxicity — single exposure, Category 3 Narcosis: May cause drowsiness or dizziness.
STOT RE 2: H373	Specific target organ toxicity — repeated exposure, Category 2: May cause damage to organs through prolonged or repeated exposure.
Aquatic Acute 1: H400	Hazardous to the Aquatic Environment, Category Acute 1: Very toxic to aquatic life.
Aquatic Chronic 1: H410	Hazardous to the Aquatic Environment, Category Chronic 1: Very toxic to aquatic life with long lasting effects.
Aquatic Chronic 2: H411	Hazardous to the Aquatic Environment, Category Chronic 2: Toxic to aquatic life with long lasting effects.
Aquatic Chronic 3: H412	Hazardous to the Aquatic Environment, Category Chronic 3: Harmful to aquatic life with long lasting effects.
EUH066	Repeated exposure may cause skin dryness or cracking.



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## vi) Training Advice

Obtain special instructions before use. Always read the label, safety data sheet and product information before use. Do not handle until all safety precautions have been read and understood.

## DISCLAIMER:

THE INFORMATION PRESENTED HEREIN IS BELIEVED TO BE ACCURATE, BUT IS NOT WARRANTED TO BE, WHETHER ORIGINATING WITH THE COMPANY OR NOT. RECIPIENTS ARE ADVISED TO CONFIRM, IN ADVANCE OF NEED, THAT THE INFORMATION IS CURRENT, APPLICABLE, AND SUITABLE TO THEIR CIRCUMSTANCES.