



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

### 1.1 Product identifier

<b>Product name</b>	Optitemp HT 2
<b>Product code</b>	451142-DE03
<b>SDS no.</b>	451142
<b>Product type</b>	Grease

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

<b>Use of the substance/ mixture</b>	Grease For specific application advice see appropriate Technical Data Sheet or consult our company representative.
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### 1.3 Details of the supplier of the safety data sheet

<b>Supplier</b>	Castrol (U.K.) Limited Wakefield House Pipers Way Swindon Wiltshire, SN3 1RE United Kingdom Tel.: +44 (0)1793 512712 Fax.: +44 (0)1793 486083
<b>E-mail address</b>	MSDSadvice@bp.com

### 1.4 Emergency telephone number

<b>EMERGENCY TELEPHONE NUMBER</b>	Carechem: +44 (0) 1235 239 670 (24 hours)
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## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

<b>Product definition</b>	Mixture
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#### Classification according to Directive 1999/45/EC [DPD]

The product is not classified as dangerous according to Directive 1999/45/EC and its amendments.  
See sections 11 and 12 for more detailed information on health effects and symptoms and environmental hazards.

### 2.2 Label elements

<b>Risk phrases</b>	This product is not classified according to EU legislation.
<b>Safety phrases</b>	Not applicable.
<b>Supplemental label elements</b>	Safety data sheet available for professional user on request.
<b><u>Special packaging requirements</u></b>	
<b>Containers to be fitted with child-resistant fastenings</b>	Not applicable.
<b>Tactile warning of danger</b>	Not applicable.

### 2.3 Other hazards

<b>Other hazards which do not result in classification</b>	Defatting to the skin. Note: High Pressure Applications Injections through the skin resulting from contact with the product at high pressure constitute a major medical emergency. See 'Notes to physician' under First-Aid Measures, Section 4 of this Safety Data Sheet.
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## SECTION 3: Composition/information on ingredients

**Substance/mixture** Mixture

Highly refined mineral oil and additives.

### Classification

Product/ingredient name	Identifiers	%	67/548/EEC	Regulation (EC) No. 1272/2008 [CLP]	Type
2,6-di-tert-butyl-4-nonylphenol	EC: 224-320-7 CAS: 4306-88-1	>=2.5 - <5	Xi; R38 R52/53	Skin Irrit. 2, H315 Aquatic Chronic 3, H412	[1]

See Section 16 for the full text of the R-phrases declared above.

See Section 16 for the full text of the H statements declared above.

### Type

[1] Substance classified with a health or environmental hazard

[2] Substance with a workplace exposure limit

[3] Substance meets the criteria for PBT according to Regulation (EC) No. 1907/2006, Annex XIII

[4] Substance meets the criteria for vPvB according to Regulation (EC) No. 1907/2006, Annex XIII

[5] Substance of equivalent concern

Occupational exposure limits, if available, are listed in Section 8.

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

#### Eye contact

In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Eyelids should be held away from the eyeball to ensure thorough rinsing. Check for and remove any contact lenses. Get medical attention.

#### Skin contact

Wash skin thoroughly with soap and water or use recognised skin cleanser. Remove contaminated clothing and shoes. Wash clothing before reuse. Clean shoes thoroughly before reuse. Get medical attention if irritation develops.

#### Inhalation

If inhaled, remove to fresh air. Get medical attention if symptoms appear.

#### Ingestion

Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.

#### Protection of first-aiders

No action shall be taken involving any personal risk or without suitable training.

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

See Section 11 for more detailed information on health effects and symptoms.

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

#### Notes to physician

Treatment should in general be symptomatic and directed to relieving any effects.

Note: High Pressure Applications

Injections through the skin resulting from contact with the product at high pressure constitute a major medical emergency. Injuries may not appear serious at first but within a few hours tissue becomes swollen, discoloured and extremely painful with extensive subcutaneous necrosis. Surgical exploration should be undertaken without delay. Thorough and extensive debridement of the wound and underlying tissue is necessary to minimise tissue loss and prevent or limit permanent damage. Note that high pressure may force the product considerable distances along tissue planes.

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

#### Suitable extinguishing media

In case of fire, use water fog, alcohol resistant foam, dry chemical or carbon dioxide extinguisher or spray.

#### Unsuitable extinguishing media

Do not use water jet.

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

#### Hazards from the substance or mixture

In a fire or if heated, a pressure increase will occur and the container may burst.

#### Hazardous combustion products

Combustion products may include the following:  
carbon oxides (CO, CO<sub>2</sub>) (carbon monoxide, carbon dioxide)  
halogenated compounds  
metal oxide/oxides

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## SECTION 5: Firefighting measures

### 5.3 Advice for firefighters

#### Special precautions for fire-fighters

No action shall be taken involving any personal risk or without suitable training. Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire.

#### Special protective equipment for fire-fighters

Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

## SECTION 6: Accidental release measures

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

#### For non-emergency personnel

No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Floors may be slippery; use care to avoid falling. Put on appropriate personal protective equipment.

#### For emergency responders

If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

### 6.2 Environmental precautions

Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

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

#### Small spill

Stop leak if without risk. Move containers from spill area. Dispose of via a licensed waste disposal contractor. Use a tool to scoop up solid or absorbed material and place into appropriate labelled waste container.

#### Large spill

Immediately contact emergency personnel. Stop leak if without risk. Move containers from spill area. Prevent entry into sewers, water courses, basements or confined areas. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations. If emergency personnel are unavailable, contain spilled material. Suction or scoop the spill into appropriate disposal or recycling vessels, then cover spill area with oil absorbent. Dispose of via a licensed waste disposal contractor.

### 6.4 Reference to other sections

See Section 1 for emergency contact information.  
See Section 5 for firefighting measures.  
See Section 8 for information on appropriate personal protective equipment.  
See Section 12 for environmental precautions.  
See Section 13 for additional waste treatment information.

## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

#### Protective measures

Put on appropriate personal protective equipment.

#### Advice on general occupational hygiene

Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Wash thoroughly after handling. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

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

Store and use only in equipment/containers designed for use with this product. Keep away from heat and direct sunlight. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Store in accordance with local regulations. Store in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10).

### 7.3 Specific end use(s)

#### Recommendations

See section 1.2 and Exposure scenarios in annex, if applicable.

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## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

#### Occupational exposure limits

No exposure limit value known.

Whilst specific OELs for certain components may be shown in this section, other components may be present in any mist, vapour or dust produced. Therefore, the specific OELs may not be applicable to the product as a whole and are provided for guidance only.

#### Recommended monitoring procedures

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. Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

#### Derived No Effect Level

No DNELs/DMELs available.

#### Predicted No Effect Concentration

No PNECs available

### 8.2 Exposure controls

#### Appropriate engineering controls

Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapours below their respective occupational exposure limits.

All activities involving chemicals should be assessed for their risks to health, to ensure exposures are adequately controlled. Personal protective equipment should only be considered after other forms of control measures (e.g. engineering controls) have been suitably evaluated. Personal protective equipment should conform to appropriate standards, be suitable for use, be kept in good condition and properly maintained.

Your supplier of personal protective equipment should be consulted for advice on selection and appropriate standards. For further information contact your national organisation for standards. The final choice of protective equipment will depend upon a risk assessment. It is important to ensure that all items of personal protective equipment are compatible.

#### Individual protection measures

##### Hygiene measures

Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Ensure that eyewash stations and safety showers are close to the workstation location.

##### Respiratory protection

Respiratory protective equipment is not normally required where there is adequate natural or local exhaust ventilation to control exposure.

In case of insufficient ventilation, wear suitable respiratory equipment.

The correct choice of respiratory protection depends upon the chemicals being handled, the conditions of work and use, and the condition of the respiratory equipment. Safety procedures should be developed for each intended application. Respiratory protection equipment should therefore be chosen in consultation with the supplier/manufacturer and with a full assessment of the working conditions.

##### Eye/face protection

Safety glasses with side shields.

##### Skin protection

##### Hand protection

#### **General Information:**

Because specific work environments and material handling practices vary, safety procedures should be developed for each intended application. The correct choice of protective gloves depends upon the chemicals being handled, and the conditions of work and use. Most gloves provide protection for only a limited time before they must be discarded and replaced (even the best chemically resistant gloves will break down after repeated chemical exposures).

Gloves should be chosen in consultation with the supplier / manufacturer and taking account of a full assessment of the working conditions.

Recommended: Nitrile gloves.

#### **Breakthrough time:**

Breakthrough time data are generated by glove manufacturers under laboratory test conditions and represent how long a glove can be expected to provide effective permeation resistance. It is important when following breakthrough time recommendations that actual workplace

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## SECTION 8: Exposure controls/personal protection

conditions are taken into account. Always consult with your glove supplier for up-to-date technical information on breakthrough times for the recommended glove type. Our recommendations on the selection of gloves are as follows:

Continuous contact:

Gloves with a minimum breakthrough time of 240 minutes, or >480 minutes if suitable gloves can be obtained.

If suitable gloves are not available to offer that level of protection, gloves with shorter breakthrough times may be acceptable as long as appropriate glove maintenance and replacement regimes are determined and adhered to.

Short-term / splash protection:

Recommended breakthrough times as above.

It is recognised that for short-term, transient exposures, gloves with shorter breakthrough times may commonly be used. Therefore, appropriate maintenance and replacement regimes must be determined and rigorously followed.

### Glove Thickness:

For general applications, we recommend gloves with a thickness typically greater than 0.35 mm.

It should be emphasised that glove thickness is not necessarily a good predictor of glove resistance to a specific chemical, as the permeation efficiency of the glove will be dependent on the exact composition of the glove material. Therefore, glove selection should also be based on consideration of the task requirements and knowledge of breakthrough times.

Glove thickness may also vary depending on the glove manufacturer, the glove type and the glove model. Therefore, the manufacturers' technical data should always be taken into account to ensure selection of the most appropriate glove for the task.

Note: Depending on the activity being conducted, gloves of varying thickness may be required for specific tasks. For example:

- Thinner gloves (down to 0.1 mm or less) may be required where a high degree of manual dexterity is needed. However, these gloves are only likely to give short duration protection and would normally be just for single use applications, then disposed of.
- Thicker gloves (up to 3 mm or more) may be required where there is a mechanical (as well as a chemical) risk i.e. where there is abrasion or puncture potential.

### Skin and body

Use of protective clothing is good industrial practice.

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.

Cotton or polyester/cotton overalls will only provide protection against light superficial contamination that will not soak through to the skin. Overalls should be laundered on a regular basis. When the risk of skin exposure is high (e.g. when cleaning up spillages or if there is a risk of splashing) then chemical resistant aprons and/or impervious chemical suits and boots will be required.

### Environmental exposure controls

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

#### Appearance

Physical state	Grease
Colour	Yellow. [Dark]
Odour	Slight
Odour threshold	Not available.
pH	Not available.
Melting point/freezing point	Not available.

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## SECTION 9: Physical and chemical properties

<b>Initial boiling point and boiling range</b>	Not available.
<b>Flash point</b>	Open cup: >120°C (>248°F) [Cleveland.]
<b>Evaporation rate</b>	Not available.
<b>Flammability (solid, gas)</b>	Not available.
<b>Upper/lower flammability or explosive limits</b>	Not available.
<b>Vapour pressure</b>	Not available.
<b>Vapour density</b>	Not available.
<b>Relative density</b>	Not available.
<b>Density</b>	<1000 kg/m <sup>3</sup> (<1 g/cm <sup>3</sup> ) at 20°C
<b>Solubility(ies)</b>	insoluble in water.
<b>Partition coefficient: n-octanol/ water</b>	Not available.
<b>Auto-ignition temperature</b>	Not available.
<b>Decomposition temperature</b>	Not available.
<b>Viscosity</b>	Not available.
<b>Explosive properties</b>	Not available.
<b>Oxidising properties</b>	Not available.

### 9.2 Other information

No additional information.

## SECTION 10: Stability and reactivity

<b>10.1 Reactivity</b>	No specific test data available for this product. Refer to Conditions to avoid and Incompatible materials for additional information.
<b>10.2 Chemical stability</b>	The product is stable.
<b>10.3 Possibility of hazardous reactions</b>	Under normal conditions of storage and use, hazardous polymerisation will not occur. Under normal conditions of storage and use, hazardous reactions will not occur.
<b>10.4 Conditions to avoid</b>	High temperatures
<b>10.5 Incompatible materials</b>	Reactive or incompatible with the following materials: oxidising materials.
<b>10.6 Hazardous decomposition products</b>	Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

**Information on the likely routes of exposure** Routes of entry anticipated: Dermal, Inhalation.

#### Potential acute health effects

**Inhalation** Vapour inhalation under ambient conditions is not normally a problem due to low vapour pressure.

**Ingestion** No known significant effects or critical hazards.

**Skin contact** May cause skin dryness and irritation.

**Eye contact** No known significant effects or critical hazards.

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

**Inhalation** No specific data.

**Ingestion** No specific data.

**Skin contact** Adverse symptoms may include the following:  
irritation  
dryness  
cracking

**Eye contact** No specific data.

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## SECTION 11: Toxicological information

### Delayed and immediate effects and also chronic effects from short and long term exposure

<b>Inhalation</b>	Inhalation of oil mist or vapours at elevated temperatures may cause respiratory irritation.
<b>Ingestion</b>	Ingestion of large quantities may cause nausea and diarrhoea.
<b>Skin contact</b>	Prolonged or repeated contact can defat the skin and lead to irritation and/or dermatitis.
<b>Eye contact</b>	Potential risk of transient stinging or redness if accidental eye contact occurs.

### Potential chronic health effects

<b>General</b>	Prolonged or repeated contact can defat the skin and lead to irritation, cracking and/or dermatitis.
<b>Carcinogenicity</b>	No known significant effects or critical hazards.
<b>Mutagenicity</b>	No known significant effects or critical hazards.
<b>Developmental effects</b>	No known significant effects or critical hazards.
<b>Fertility effects</b>	No known significant effects or critical hazards.

## SECTION 12: Ecological information

### 12.1 Toxicity

<b>Environmental hazards</b>	Not classified as dangerous
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### 12.2 Persistence and degradability

Expected to be biodegradable.

### 12.3 Bioaccumulative potential

Not available.

### 12.4 Mobility in soil

<b>Soil/water partition coefficient (K<sub>oc</sub>)</b>	Not available.
<b>Mobility</b>	Non-volatile. Grease insoluble in water.

### 12.5 Results of PBT and vPvB assessment

<b>PBT</b>	Not applicable.
<b>vPvB</b>	Not applicable.

### 12.6 Other adverse effects

No known significant effects or critical hazards.

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

#### Product

<b>Methods of disposal</b>	The generation of waste should be avoided or minimised wherever possible. Significant quantities of waste product residues should not be disposed of via the foul sewer but processed in a suitable effluent treatment plant. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements.
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**Hazardous waste** Yes.

#### European waste catalogue (EWC)

Waste code	Waste designation
12 01 12*	spent waxes and fats

However, deviation from the intended use and/or the presence of any potential contaminants may require an alternative waste disposal code to be assigned by the end user.

#### Packaging

<b>Methods of disposal</b>	Dispose of via an authorised person/ licensed waste disposal contractor in accordance with local regulations. Recycle, if possible.
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Waste code	European waste catalogue (EWC)
15 01 10*	packaging containing residues of or contaminated by dangerous substances

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## SECTION 13: Disposal considerations

### Special precautions

This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Empty containers represent a fire hazard as they may contain flammable product residues and vapour. Never weld, solder or braze empty containers. Avoid dispersal of spill material and runoff and contact with soil, waterways, drains and sewers.

## SECTION 14: Transport information

	ADR/RID	ADN	IMDG	IATA
14.1 UN number	Not regulated.	Not regulated.	Not regulated.	Not regulated.
14.2 UN proper shipping name	-	-	-	-
14.3 Transport hazard class(es)	-	-	-	-
14.4 Packing group	-	-	-	-
14.5 Environmental hazards	No.	No.	No.	No.
Additional information	-	-	-	-

14.6 Special precautions for user Not available.

## SECTION 15: Regulatory information

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

#### EU Regulation (EC) No. 1907/2006 (REACH)

##### Annex XIV - List of substances subject to authorisation

##### Substances of very high concern

None of the components are listed.

**Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles** Not applicable.

##### Other regulations

##### **REACH Status**

The company, as identified in Section 1, sells this product in the EU in compliance with the current requirements of REACH.

##### **United States inventory (TSCA 8b)**

All components are listed or exempted.

##### **Australia inventory (AICS)**

All components are listed or exempted.

##### **Canada inventory**

At least one component is not listed.

##### **China inventory (IECSC)**

All components are listed or exempted.

##### **Japan inventory (ENCS)**

At least one component is not listed.

##### **Korea inventory (KECI)**

All components are listed or exempted.

##### **Philippines inventory (PICCS)**

All components are listed or exempted.

### 15.2 Chemical Safety Assessment

This product contains substances for which Chemical Safety Assessments are still required.

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## SECTION 16: Other information

<b>Abbreviations and acronyms</b>	ADN = European Provisions concerning the International Carriage of Dangerous Goods by Inland Waterway ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road ATE = Acute Toxicity Estimate BCF = Bioconcentration Factor CAS = Chemical Abstracts Service CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008] CSA = Chemical Safety Assessment CSR = Chemical Safety Report DMEL = Derived Minimal Effect Level DNEL = Derived No Effect Level DPD = Dangerous Preparations Directive [1999/45/EC] DSD = Dangerous Substances Directive [67/548/EEC] EINECS = European Inventory of Existing Commercial chemical Substances ES = Exposure Scenario EUH statement = CLP-specific Hazard statement EWC = European Waste Catalogue GHS = Globally Harmonized System of Classification and Labelling of Chemicals IATA = International Air Transport Association IBC = Intermediate Bulk Container IMDG = International Maritime Dangerous Goods LogPow = logarithm of the octanol/water partition coefficient MARPOL 73/78 = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution) OECD = Organisation for Economic Co-operation and Development PBT = Persistent, Bioaccumulative and Toxic PNEC = Predicted No Effect Concentration RID = The Regulations concerning the International Carriage of Dangerous Goods by Rail RRN = REACH Registration Number SADT = Self-Accelerating Decomposition Temperature SVHC = Substances of Very High Concern STOT-RE = Specific Target Organ Toxicity - Repeated Exposure STOT-SE = Specific Target Organ Toxicity - Single Exposure TWA = Time weighted average UN = United Nations UVCB = Complex hydrocarbon substance VOC = Volatile Organic Compound vPvB = Very Persistent and Very Bioaccumulative
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**Full text of abbreviated H statements**

H315 Causes skin irritation.  
H412 Harmful to aquatic life with long lasting effects.

**Full text of classifications [CLP/GHS]**

Aquatic Chronic 3, H412 LONG-TERM AQUATIC HAZARD - Category 3  
Skin Irrit. 2, H315 SKIN CORROSION/IRRITATION - Category 2

**Full text of abbreviated R phrases**

R38- Irritating to skin.  
R52/53- Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

**Full text of classifications [DSD/DPD]**

Xi - Irritant

**History**

**Date of issue/ Date of revision** 13/11/2013.

**Date of previous issue** 11/09/2013.

**Prepared by** Product Stewardship

 **Indicates information that has changed from previously issued version.**

**Notice to reader**

All reasonably practicable steps have been taken to ensure this data sheet and the health, safety and environmental information contained in it is accurate as of the date specified below. No warranty or representation, express or implied is made as to the accuracy or completeness of the data and information in this data sheet.

The data and advice given apply when the product is sold for the stated application or applications. You should not use the product other than for the stated application or applications without seeking advice from BP Group.

It is the user's obligation to evaluate and use this product safely and to comply with all applicable laws and regulations. The BP Group shall not be responsible for any damage or injury resulting from use, other than the stated product use of the material, from any failure to adhere to recommendations, or from any hazards inherent in the nature of the material. Purchasers of the product for supply to a third party for use at work, have a duty to take all necessary steps to ensure that any person handling or

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**SECTION 16: Other information**

using the product is provided with the information in this sheet. Employers have a duty to tell employees and others who may be affected of any hazards described in this sheet and of any precautions that should be taken. You can contact the BP Group to ensure that this document is the most current available. Alteration of this document is strictly prohibited.

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