



# SAFETY DATA SHEET

CARBO-DRILL™

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

### 1.1 Product identifier

**Product name** : CARBO-DRILL™  
**Product code** : 2751DF  
**Product description** : Drilling Fluid  
**Product type** : Liquid.  
**Other means of identification** : DIESEL OIL-BASED MUD

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

Not available.

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

Baker Hughes  
 Campus 1, Science & Technology Park,  
 Balgownie Road, Bridge of Don,  
 Aberdeen,  
 AB22 8GT, UK

Tel: +44 (0)1224-720800  
 Fax: +44 (0)1224-720801

**e-mail address of person responsible for this SDS** : bhdfsds@bakerhughes.com

### 1.4 Emergency telephone number

#### Supplier

**Telephone number** : CHEMTREC Emergency Telephone within UK: 0203 318 0470  
 CHEMTREC Emergency Telephone outside UK: +44 203 318 0470

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

**Product definition** : Mixture

#### Classification according to Directive 1999/45/EC [DPD]

The product is classified as dangerous according to Directive 1999/45/EC and its amendments.

**Classification** : Carc. Cat. 3; R40  
 R66  
 N; R51/53

**Human health hazards** : Limited evidence of a carcinogenic effect. Repeated exposure may cause skin dryness or cracking.

**Environmental hazards** : Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

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

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

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

**Signal word** : Warning

**Hazard statements** : Flammable liquid and vapor.  
 Causes serious eye irritation.  
 Suspected of causing cancer.  
 May cause damage to organs through prolonged or repeated exposure if inhaled.  
 Toxic to aquatic life with long lasting effects.

## SECTION 2: Hazards identification

### Precautionary statements

- Prevention** : Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required. Wear protective gloves. Wear eye or face protection. Keep away from heat, sparks, open flames and hot surfaces. - No smoking. Use explosion-proof electrical, ventilating, lighting and all material-handling equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Keep container tightly closed. Avoid release to the environment. Do not breathe vapor. Wash hands thoroughly after handling.
- Response** : Collect spillage. Get medical attention if you feel unwell.
- Storage** : Store locked up. Store in a well-ventilated place. Keep cool.
- Disposal** : Dispose of contents and container in accordance with all local, regional, national and international regulations.

### 2.2 Label elements

#### Regulation (EC) No. 1272/2008 [CLP]



- Indication of danger** : Harmful, Dangerous for the environment
- Risk phrases** : R40- Limited evidence of a carcinogenic effect.  
R66- Repeated exposure may cause skin dryness or cracking.  
R51/53- Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
- Safety phrases** : S36/37- Wear suitable protective clothing and gloves.  
S61- Avoid release to the environment. Refer to special instructions/safety data sheet.
- Hazardous ingredients** : Fuels, diesel
- Supplemental label elements** : Not applicable.

### 2.3 Other hazards

- Substance meets the criteria for PBT according to Regulation (EC) No. 1207/2006, Annex XIII** : Not applicable.  
P: Not available. B: Not available. T: Not available.
- Substance meets the criteria for vPvB according to Regulation (EC) No. 1207/2006, Annex XIII** : Not applicable.  
vP: Not available. vB: Not available.
- Other hazards which do not result in classification** : Not available.

## SECTION 3: Composition/information on ingredients

**Substance/mixture** : Mixture

Product/ingredient name	Identifiers	%	Classification		Type
			67/548/EEC	Regulation (EC) No. 1272/2008 [CLP]	

**SECTION 3: Composition/information on ingredients**

Fuels, diesel	EC: 269-822-7 CAS: 68334-30-5 Index: 649-224-00-6	30 - 60	Carc. Cat. 3; R40 Xn; R65 R66 N; R51/53	Carc. 2, H351 Asp. Tox. 1, H304 Aquatic Chronic 2, H411	[1]
Barium sulfate	EC: 231-784-4 CAS: 7727-43-7	10 - 30	Not classified.	Not classified.	[2]
Calcium carbonate	EC: 215-279-6 CAS: 1317-65-3	10 - 30	Not classified.	Not classified.	[2]
Calcium chloride	EC: 233-140-8 CAS: 10043-52-4 Index: 017-013-00-2	5 - 10	Xi; R36	Eye Irrit. 2, H319	[1]
calcium dihydroxide	EC: 215-137-3 CAS: 1305-62-0	1 - 5	Xi; R41	Eye Dam. 1, H318	[1] [2]
Quaternary ammonium compounds, bis(hydrogenated tallow alkyl)dimethyl, chlorides, compds. with hectorite	EC: 275-128-5 CAS: 71011-27-3	1 - 5	Xn; R20 R52	Acute Tox. 4, H332	[1]
Quartz (SiO <sub>2</sub> )	EC: 238-878-4 CAS: 14808-60-7	1 - 5	Xn; R48/20	STOT RE 1, H372i	[1] [2]
2-heptadec-8-enyl-4,5-dihydro-1H-imidazole-1-ethylamine monocitrate	EC: 268-394-9 CAS: 68083-45-4	1 - 5	Xi; R36/38	Skin Irrit. 2, H315 Eye Irrit. 2, H319	[1]
			<b>See section 16 for the full text of the R-phrases declared above</b>	<b>See Section 16 for the full text of the H statements declared above.</b>	

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

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. 1207/2006, Annex XIII

[4] Substance meets the criteria for vPvB according to Regulation (EC) No. 1207/2006, Annex XIII

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

**SECTION 4: First aid measures****4.1 Description of first aid measures**

- Eye contact** : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 15 minutes. Get medical attention.
- Inhalation** : Move exposed person to fresh air. Keep person warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
- Skin contact** : Wash skin thoroughly with soap and water or use recognized skin cleanser. Remove contaminated clothing and shoes. Continue to rinse for at least 15 minutes. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.

**SECTION 4: First aid measures**

- Ingestion** : Wash out mouth with water. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

**4.2 Most important symptoms and effects, both acute and delayed****Potential acute health effects**

- Eye contact** : May cause eye irritation.
- Inhalation** : Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.
- Skin contact** : Defatting to the skin. May cause skin dryness and irritation.
- Ingestion** : No known significant effects or critical hazards.

**Over-exposure signs/symptoms**

- Eye contact** : No specific data.
- Inhalation** : No specific data.
- Skin contact** : Adverse symptoms may include the following:  
irritation  
dryness  
cracking
- Ingestion** : No specific data.

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

- Notes to medical doctor** : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
- Specific treatments** : Not available.

**SECTION 5: Firefighting measures****5.1 Extinguishing media**

- Suitable** : Use dry chemical, CO<sub>2</sub>, water spray (fog) or foam.
- Not suitable** : Do not use water jet.

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

- Special exposure hazards** : Combustible liquid. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion.  
Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool. This material is toxic to aquatic organisms. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.
- Hazardous thermal decomposition products** : Decomposition products may include the following materials:  
carbon dioxide  
carbon monoxide  
nitrogen oxides  
sulfur oxides  
halogenated compounds  
metal oxide/oxides

**5.3 Advice for firefighters**

- 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.

**SECTION 5: Firefighting measures**

**Additional information** : Not available.

**SECTION 6: Accidental release measures**

**6.1 Personal precautions, protective equipment and emergency procedures** : 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 Section 8 for additional information on hygiene measures.

**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). Water polluting material. May be harmful to the environment if released in large quantities.

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

**Small spill** : Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble or absorb with an inert dry material and place in an appropriate waste disposal container. Use spark-proof tools and explosion-proof equipment. Dispose of via a licensed waste disposal contractor.

**Large spill** : Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. 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. Use spark-proof tools and explosion-proof equipment. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product.

**6.4 Reference to other sections** : Note: see section 8 for personal protective equipment and section 13 for waste disposal.

**SECTION 7: Handling and storage**

**7.1 Precautions for safe handling** : Put on appropriate personal protective equipment (see Section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Do not get in eyes or on skin or clothing. Do not ingest. Avoid breathing vapor or mist. Avoid release to the environment. Refer to special instructions/safety data sheet. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use non-sparking tools. Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. Empty containers retain product residue and can be hazardous. Do not reuse container.

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

**Storage** : Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see section 10) and food and drink. Eliminate all ignition sources. Separate from oxidizing materials. 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 unlabeled containers. Use appropriate containment to avoid environmental contamination.

**Recommended Packaging materials** : Use original container.

**7.3 Specific end use(s)** : Drilling Fluid  
Not available.

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

#### Occupational exposure limits

Product/ingredient name	Exposure limit values
barium sulfate	<b>EH40/2005 WELs (United Kingdom (UK), 8/2007).</b> TWA: 10 mg/m <sup>3</sup> 8 hour(s). Form: inhalable dust TWA: 4 mg/m <sup>3</sup> 8 hour(s). Form: respirable dust
Calcium carbonate.	<b>EH40/2005 WELs (United Kingdom (UK), 8/2007).</b> TWA: 10 mg/m <sup>3</sup> 8 hour(s). Form: inhalable dust TWA: 4 mg/m <sup>3</sup> 8 hour(s). Form: respirable dust
calcium dihydroxide	<b>EH40/2005 WELs (United Kingdom (UK), 8/2007).</b> TWA: 5 mg/m <sup>3</sup> 8 hour(s).
Quartz (SiO <sub>2</sub> )	<b>EH40/2005 WELs (United Kingdom (UK), 8/2007).</b> TWA: 0.1 mg/m <sup>3</sup> 8 hour(s). Form: respirable dust

**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 European Standard EN 689 for methods for the assessment of exposure by inhalation to chemical agents and national guidance documents for methods for the determination of hazardous substances.

### 8.2 Exposure controls

- Occupational exposure controls** : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.
- 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. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
- Respiratory protection** : Use a properly fitted, air-purifying or air-fed 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.
- Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.
- 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 or dusts.
- Skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- 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

- Physical state** : Liquid.
- Color** : Brown.
- Odor** : Hydrocarbon.
- Odor threshold** : Not available.
- pH** : Not available.



**SECTION 9: Physical and chemical properties**

<b>Boiling point</b>	: Not available.
<b>Melting point/freezing point</b>	: Not available.
<b>Flammability (solid, gas)</b>	: May be combustible at high temperature.
<b>Flash point</b>	: Closed cup: 55 to 60°C (131 to 140°F) [PMCC]
<b>Explosive properties</b>	: Not available.
<b>Explosion limits</b>	: Lower: 1% Upper: 6%
<b>Oxidizing properties</b>	: Not available.
<b>Vapor pressure</b>	: Not available.
<b>Density</b>	: 0.8 to 1.1 g/cm <sup>3</sup>
<b>Relative density</b>	: Not available.
<b>Solubility</b>	: Insoluble in the following materials: cold water.
<b>Partition coefficient: n-octanol/water</b>	: Not available.
<b>Viscosity</b>	: Not available.
<b>Vapor density</b>	: Not available.
<b>Evaporation rate (butyl acetate = 1)</b>	: Not available.
<b>Decomposition temperature</b>	: Not available.
<b>Auto-ignition temperature</b>	: 220°C (428°F)

**9.2 Other information**

**Pour point** : Not available.

**SECTION 10: Stability and reactivity**

<b>10.1 Reactivity</b>	: No specific test data related to reactivity available for this product or its ingredients.
<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 reactions will not occur.
<b>10.4 Conditions to avoid</b>	: Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition. Avoid release to the environment. Refer to special instructions/safety data sheet.
<b>10.5 Incompatible materials</b>	: Reactive or incompatible with the following materials: oxidizing 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****Potential acute health effects**

<b>Inhalation</b>	: Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.
<b>Ingestion</b>	: No known significant effects or critical hazards.
<b>Skin contact</b>	: Defatting to the skin. May cause skin dryness and irritation.
<b>Eye contact</b>	: May cause eye irritation.

**Acute toxicity**

Product/ingredient name	Result	Species	Dose	Exposure
Fuels, diesel	LD50 Oral	Rat	7500 mg/kg	-
calcium chloride	LD50 Oral	Rat	1 g/kg	-
calcium dihydroxide	LD50 Oral	Rat	7340 mg/kg	-

CARBO-DRILL™

## SECTION 11: Toxicological information

Product name	Carcinogenic effects	Mutagenic effects	Developmental effects	Fertility effects
Fuels, diesel	Carc. Cat. 3; R40			

- General** : Prolonged or repeated contact can defat the skin and lead to irritation, cracking and/or dermatitis.
- Carcinogenicity** : May cause cancer, based on animal data. Limited evidence of a carcinogenic effect. Risk of cancer depends on duration and level of exposure.
- Mutagenicity** : No known significant effects or critical hazards.
- Teratogenicity** : No known significant effects or critical hazards.
- Developmental effects** : No known significant effects or critical hazards.
- Fertility effects** : No known significant effects or critical hazards.
- Inhalation** : No specific data.
- Ingestion** : No specific data.
- Skin contact** : Adverse symptoms may include the following:  
irritation  
dryness  
cracking
- Eye contact** : No specific data.

## SECTION 12: Ecological information

- 12.1 Toxicity** : Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. Water polluting material. May be harmful to the environment if released in large quantities.

### Aquatic ecotoxicity

Product/ingredient name	Result	Species	Exposure
Barium sulfate	Acute EC50 32000 ug/L Fresh water	Daphnia - Daphnia magna	48 hours
Calcium chloride	Acute EC50 52000 ug/L Fresh water	Daphnia - Daphnia magna - 12 hours	48 hours
	Acute LC50 270 mg/L Marine water	Crustaceans - Americamysis bahia - 4 to 5 days	48 hours
	Acute LC50 2110 mg/L Fresh water	Fish - Pimephales promelas	96 hours
	Chronic NOEC 260.12 mg/L Marine water	Crustaceans - Americamysis bahia - 4 to 5 days	48 hours
	Chronic NOEC 0.75 g/L Fresh water	Daphnia - Daphnia magna - 5 days	48 hours
calcium dihydroxide	Acute LC50 33884.4 ug/L Fresh water	Fish - Clarias gariepinus - Fingerling	96 hours
	Chronic NOEC 56 mg/L Marine water	Fish - Poecilia reticulata - Young - 3 weeks	96 hours

- Conclusion/Summary** : Not available.

### 12.2 Persistence and degradability

- Conclusion/Summary** : Not available.

### 12.3 Bioaccumulative potential

Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
Not available.			

- 12.4 Mobility in soil** : Not available.

### 12.5 Results of PBT and vPvB assessment

- PBT** : Not applicable.  
P: Not available. B: Not available. T: Not available.

- vPvB** : Not applicable.  
vP: Not available. vB: Not available.

- 12.6 Other adverse effects** : No known significant effects or critical hazards.



CARBO-DRILL™

## SECTION 12: Ecological information

## SECTION 13: Disposal considerations

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

### 13.1 Waste treatment methods

#### Product

**Methods of disposal** : The generation of waste should be avoided or minimized wherever possible. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe way. 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. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

**Hazardous waste** : The classification of the product may meet the criteria for a hazardous waste.

#### Packaging

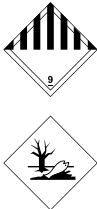
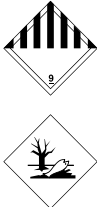
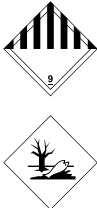
**Methods of disposal** : The generation of waste should be avoided or minimized wherever possible. Empty containers or liners may retain some product residues. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

### 13.2 Additional information

**Special precautions** : This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.



## SECTION 14: Transport information

### International transport regulations

Regulatory information	14.1 UN number	14.2 Proper shipping name	14.3 Transport hazard class(es)	14.4 PG*	Label
<b>ADR/RID Class</b>	UN1993	FLAMMABLE LIQUID, N.O.S. (contains diesel)	9	III	
<b>ADN/ADNR Class</b>	UN1993	FLAMMABLE LIQUID, N.O.S. (contains diesel)	9	III	
<b>IMDG Class</b>	UN1993	FLAMMABLE LIQUID, N.O.S. (contains diesel)	9	III	

CARBO-DRILL™

## SECTION 14: Transport information

<b>IATA Class</b>	UN1993	FLAMMABLE LIQUID, N.O.S. (contains diesel)	9	III	 
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PG\* : Packing group

Regulatory information	14.5 Environmental hazards	14.6 Special precautions for user	Additional information
<b>ADR/RID Class</b>	Yes.	<b>Special provisions</b> 640 (E) <b>Tunnel code</b> (D/E)	UK Hazchem: 3Y
<b>ADN/ADNR Class</b>	Yes.	-	-
<b>IMDG Class</b>	Yes.	Marine pollutant	Marine pollutant
<b>IATA Class</b>	Yes.	-	-

### 14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

**Proper shipping name** : Not available.  
**Ship type** : Not available.  
**Pollution category** : 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 authorization

##### 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 EU regulations

**Europe inventory** : Not determined.  
**Black List Chemicals** : Not listed  
**Priority List Chemicals** : Not listed

**15.2 Chemical Safety Assessment** : This product contains substances for which Chemical Safety Assessments are still required.

## SECTION 16: Other information

**16.1 Revision comments** : Not available.

☑ Indicates information that has changed from previously issued version.

**16.2 Abbreviations and acronyms** : ATE = Acute Toxicity Estimate  
 CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]  
 DNEL = Derived No Effect Level  
 EUH statement = CLP-specific Hazard statement  
 PNEC = Predicted No Effect Concentration  
 RRN = REACH Registration Number

**16.3 Key literature references and sources for data** : Not available.

### 16.4 Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Flam. Liq. 3, H226  
 Eye Irrit. 2, H319  
 Carc. 2, H351  
 STOT RE 2, H373i  
 Aquatic Chronic 2, H411

### Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Classification	Justification
Flam. Liq. 3, H226 Eye Irrit. 2, H319 Carc. 2, H351 STOT RE 2, H373i Aquatic Chronic 2, H411	On basis of test data Calculation method Calculation method Calculation method Calculation method

**16.5 Full text of abbreviated H statements** : H226 Flammable liquid and vapor.  
 H304 May be fatal if swallowed and enters airways.  
 H315 Causes skin irritation.  
 H318 Causes serious eye damage.  
 H319 Causes serious eye irritation.  
 H332 Harmful if inhaled.  
 H351 Suspected of causing cancer.  
 H372i Causes damage to organs through prolonged or repeated exposure if inhaled.  
 H373i May cause damage to organs through prolonged or repeated exposure if inhaled.  
 H411 Toxic to aquatic life with long lasting effects.

**Full text of classifications [CLP/GHS]** : Acute Tox. 4, H332 ACUTE TOXICITY: INHALATION - Category 4  
 Aquatic Chronic 2, H411 AQUATIC TOXICITY (CHRONIC) - Category 2  
 Asp. Tox. 1, H304 ASPIRATION HAZARD - Category 1  
 Carc. 2, H351 CARCINOGENICITY - Category 2  
 Eye Dam. 1, H318 SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1  
 Eye Irrit. 2, H319 SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2  
 Flam. Liq. 3, H226 FLAMMABLE LIQUIDS - Category 3  
 Skin Irrit. 2, H315 SKIN CORROSION/IRRITATION - Category 2  
 STOT RE 1, H372i SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE): INHALATION - Category 1  
 STOT RE 2, H373i SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE): INHALATION - Category 2

**16.5 Full text of abbreviated R phrases** : R40- Limited evidence of a carcinogenic effect.  
 R20- Harmful by inhalation.  
 R48/20- Harmful: danger of serious damage to health by prolonged exposure through inhalation.  
 R65- Harmful: may cause lung damage if swallowed.  
 R41- Risk of serious damage to eyes.  
 R36- Irritating to eyes.  
 R36/38- Irritating to eyes and skin.  
 R66- Repeated exposure may cause skin dryness or cracking.  
 R51/53- Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

**SECTION 16: Other information**

**Full text of classifications [DSD/DPD]** : R52- Harmful to aquatic organisms.  
: Carc. Cat. 3 - Carcinogen category 3  
Xn - Harmful  
Xi - Irritant  
N - Dangerous for the environment

**16.6 Training advice** : Not available.

**16.7 Further information**

**Date of issue/ Date of revision** : 29 September 2011

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