

**SAFETY DATA SHEET**  
**FORMALDEHYDE 37-40% W/V LRG**

According to Regulation (EC) No 1907/2006, Annex II, as amended by Regulation (EU) No 453/2010

**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1. Product identifier****Product name** FORMALDEHYDE 37-40% W/V LRG**Product number** 1035**1.2. Relevant identified uses of the substance or mixture and uses advised against****Identified uses** Laboratory reagent.**Uses advised against** No specific uses advised against are identified.**1.3. Details of the supplier of the safety data sheet****Supplier**Reagent Chemical Services  
18 Aston Fields Road  
Whitehouse Industrial Estate  
Runcorn  
Cheshire WA7 3DL

T: 01928 716903 (08.30 - 17.00)

F: 01928 716425

E: [info@reagent.co.uk](mailto:info@reagent.co.uk)**1.4. Emergency telephone number****Emergency telephone** OHES Environmental Ltd 24-7  
Tel. 0333 333 9939 (24 hour)**SECTION 2: Hazards identification****2.1. Classification of the substance or mixture****Classification (EC 1272/2008)****Physical hazards** Not Classified**Health hazards** Acute Tox. 3 - H301 Acute Tox. 3 - H311 Acute Tox. 3 - H331 Skin Corr. 1B - H314 Eye Dam. 1 - H318 Skin Sens. 1 - H317 Muta. 2 - H341 Carc. 1B - H350 STOT SE 2 - H371 STOT SE 3 - H335**Environmental hazards** Not Classified**Classification (67/548/EEC or 1999/45/EC)** T;R23/24/25,R39/23/24/25. Carc. Cat. 3;R40. C;R34. Xi;R37. R43.**Human health** See Section 11 for additional information on health hazards.**2.2. Label elements**

## FORMALDEHYDE 37-40% W/V LRG

### Pictogram



### Signal word

Danger

### Hazard statements

H301+H311+H331 Toxic if swallowed, in contact with skin or if inhaled.  
 H314 Causes severe skin burns and eye damage.  
 H317 May cause an allergic skin reaction.  
 H335 May cause respiratory irritation.  
 H341 Suspected of causing genetic defects.  
 H350 May cause cancer.  
 H371 May cause damage to organs .

### Precautionary statements

P202 Do not handle until all safety precautions have been read and understood.  
 P260 Do not breathe vapour/ spray.  
 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.  
 P501 Dispose of contents/ container in accordance with local regulations.

### Contains

FORMALDEHYDE ...%, METHANOL

### Supplementary precautionary statements

P201 Obtain special instructions before use.  
 P261 Avoid breathing vapour/ spray.  
 P264 Wash contaminated skin thoroughly after handling.  
 P270 Do not eat, drink or smoke when using this product.  
 P271 Use only outdoors or in a well-ventilated area.  
 P272 Contaminated work clothing should not be allowed out of the workplace.  
 P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.  
 P302+P352 IF ON SKIN: Wash with plenty of water.  
 P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower.  
 P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.  
 P308+P311 IF exposed or concerned: Call a POISON CENTER or doctor.  
 P308+P313 IF exposed or concerned: Get medical advice/ attention.  
 P311 Call a POISON CENTER/ doctor.  
 P312 Call a POISON CENTER/ doctor if you feel unwell.  
 P321 Specific treatment (see medical advice on this label).  
 P333+P313 If skin irritation or rash occurs: Get medical advice/ attention.  
 P361+P364 Take off immediately all contaminated clothing and wash it before reuse.  
 P362+P364 Take off contaminated clothing and wash it before reuse.  
 P363 Wash contaminated clothing before reuse.  
 P403+P233 Store in a well-ventilated place. Keep container tightly closed.  
 P405 Store locked up.

### 2.3. Other hazards

This product does not contain any substances classified as PBT or vPvB.

## SECTION 3: Composition/information on ingredients

### 3.2. Mixtures

**FORMALDEHYDE 37-40% W/V LRG**

<b>FORMALDEHYDE ...%</b>		<b>30-60%</b>
CAS number: 50-00-0	EC number: 200-001-8	REACH registration number: 01-2119488953-20-0000
<b>Classification</b>		<b>Classification (67/548/EEC or 1999/45/EC)</b>
Acute Tox. 3 - H301		Carc. Cat. 3;R40 T;R23/24/25 C;R34 R43
Acute Tox. 3 - H311		
Acute Tox. 3 - H331		
Skin Corr. 1B - H314		
Eye Dam. 1 - H318		
Skin Sens. 1 - H317		
Muta. 2 - H341		
Carc. 1B - H350		
STOT SE 3 - H335		
<b>METHANOL</b>		<b>10-30%</b>
CAS number: 67-56-1	EC number: 200-659-6	REACH registration number: 01-2119433307-44-XXXX
<b>Classification</b>		<b>Classification (67/548/EEC or 1999/45/EC)</b>
Flam. Liq. 2 - H225		F;R11 T;R23/24/25,R39/23/24/25
Acute Tox. 3 - H301		
Acute Tox. 3 - H311		
STOT SE 1 - H370		

The Full Text for all R-Phrases and Hazard Statements are Displayed in Section 16.

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

<b>General information</b>	Get medical attention immediately. Show this Safety Data Sheet to the medical personnel. Chemical burns must be treated by a physician.
<b>Inhalation</b>	Remove affected person from source of contamination. Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Maintain an open airway. Loosen tight clothing such as collar, tie or belt. When breathing is difficult, properly trained personnel may assist affected person by administering oxygen. Place unconscious person on their side in the recovery position and ensure breathing can take place.
<b>Ingestion</b>	Rinse mouth thoroughly with water. Remove any dentures. Do not induce vomiting unless under the direction of medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Never give anything by mouth to an unconscious person. Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Place unconscious person on their side in the recovery position and ensure breathing can take place. Maintain an open airway. Loosen tight clothing such as collar, tie or belt.
<b>Skin contact</b>	It is important to remove the substance from the skin immediately. Take off immediately all contaminated clothing. Rinse immediately with plenty of water. Continue to rinse for at least 15 minutes and get medical attention. Chemical burns must be treated by a physician.
<b>Eye contact</b>	Rinse immediately with plenty of water. Remove contact lenses, if present and easy to do. Continue rinsing. Continue to rinse for at least 10 minutes.

## FORMALDEHYDE 37-40% W/V LRG

**Protection of first aiders** First aid personnel should wear appropriate protective equipment during any rescue. If it is suspected that volatile contaminants are still present around the affected person, first aid personnel should wear an appropriate respirator or self-contained breathing apparatus. Wash contaminated clothing thoroughly with water before removing it from the affected person, or wear gloves. It may be dangerous for first aid personnel to carry out mouth-to-mouth resuscitation.

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

**General information** See Section 11 for additional information on health hazards. The severity of the symptoms described will vary dependent on the concentration and the length of exposure.

**Inhalation** A single exposure may cause the following adverse effects: Corrosive to the respiratory tract. Symptoms following overexposure may include the following: Severe irritation of nose and throat. Prolonged or repeated exposure may cause the following adverse effects: Suspected of causing cancer.

**Ingestion** May cause sensitisation or allergic reactions in sensitive individuals. May cause chemical burns in mouth, oesophagus and stomach. Symptoms following overexposure may include the following: Severe stomach pain. Nausea, vomiting. Prolonged or repeated exposure may cause the following adverse effects: Suspected of causing cancer.

**Skin contact** May cause skin sensitisation or allergic reactions in sensitive individuals. Causes severe burns. Symptoms following overexposure may include the following: Pain or irritation. Redness. Blistering may occur. Prolonged or repeated exposure may cause the following adverse effects: Suspected of causing cancer.

**Eye contact** Causes serious eye damage. Symptoms following overexposure may include the following: Pain. Profuse watering of the eyes. Redness.

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

**Notes for the doctor** Treat symptomatically. Keep affected person under observation. May cause sensitisation or allergic reactions in sensitive individuals.

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

**Suitable extinguishing media** The product is not flammable. Extinguish with alcohol-resistant foam, carbon dioxide, dry powder or water fog. Use fire-extinguishing media suitable for the surrounding fire.

**Unsuitable extinguishing media** Do not use water jet as an extinguisher, as this will spread the fire.

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

**Specific hazards** Containers can burst violently or explode when heated, due to excessive pressure build-up. This product is toxic. Severe corrosive hazard. Water used for fire extinguishing, which has been in contact with the product, may be corrosive.

**Hazardous combustion products** Thermal decomposition or combustion products may include the following substances: Very toxic or corrosive gases or vapours.

### 5.3. Advice for firefighters

## FORMALDEHYDE 37-40% W/V LRG

<b>Protective actions during firefighting</b>	Avoid breathing fire gases or vapours. Evacuate area. Keep upwind to avoid inhalation of gases, vapours, fumes and smoke. Ventilate closed spaces before entering them. Cool containers exposed to heat with water spray and remove them from the fire area if it can be done without risk. Cool containers exposed to flames with water until well after the fire is out. If a leak or spill has not ignited, use water spray to disperse vapours and protect men stopping the leak. Avoid discharge to the aquatic environment. Control run-off water by containing and keeping it out of sewers and watercourses. If risk of water pollution occurs, notify appropriate authorities.
<b>Special protective equipment for firefighters</b>	Regular protection may not be safe. Wear chemical protective suit. Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing. Firefighter's clothing conforming to European standard EN469 (including helmets, protective boots and gloves) will provide a basic level of protection for chemical incidents.

### SECTION 6: Accidental release measures

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

<b>Personal precautions</b>	No action shall be taken without appropriate training or involving any personal risk. Keep unnecessary and unprotected personnel away from the spillage. Wear protective clothing as described in Section 8 of this safety data sheet. Follow precautions for safe handling described in this safety data sheet. Wash thoroughly after dealing with a spillage. Ensure procedures and training for emergency decontamination and disposal are in place. Do not touch or walk into spilled material. Use suitable respiratory protection if ventilation is inadequate. Avoid contact with skin and eyes. Avoid contact with contaminated tools and objects.
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#### 6.2. Environmental precautions

<b>Environmental precautions</b>	Avoid discharge into drains or watercourses or onto the ground. Avoid discharge to the aquatic environment. Large Spillages: Inform the relevant authorities if environmental pollution occurs (sewers, waterways, soil or air).
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#### 6.3. Methods and material for containment and cleaning up

<b>Methods for cleaning up</b>	Wear protective clothing as described in Section 8 of this safety data sheet. Clear up spills immediately and dispose of waste safely. This product is corrosive. Provide adequate ventilation. Approach the spillage from upwind. Small Spillages: If the product is soluble in water, dilute the spillage with water and mop it up. Alternatively, or if it is not water-soluble, absorb the spillage with an inert, dry material and place it in a suitable waste disposal container. Large Spillages: If leakage cannot be stopped, evacuate area. Flush spilled material into an effluent treatment plant, or proceed as follows. Contain and absorb spillage with sand, earth or other non-combustible material. Place waste in labelled, sealed containers. Clean contaminated objects and areas thoroughly, observing environmental regulations. The contaminated absorbent may pose the same hazard as the spilled material. Flush contaminated area with plenty of water. Wash thoroughly after dealing with a spillage. The requirements of the local water authority must be complied with if contaminated water is flushed directly to the sewer. Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.
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#### 6.4. Reference to other sections

<b>Reference to other sections</b>	For personal protection, see Section 8. See Section 11 for additional information on health hazards. See Section 12 for additional information on ecological hazards. For waste disposal, see Section 13.
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### SECTION 7: Handling and storage

#### 7.1. Precautions for safe handling

## FORMALDEHYDE 37-40% W/V LRG

<b>Usage precautions</b>	Read and follow manufacturer's recommendations. Wear protective clothing as described in Section 8 of this safety data sheet. Keep away from food, drink and animal feeding stuffs. Handle all packages and containers carefully to minimise spills. Keep container tightly sealed when not in use. Avoid the formation of mists. This product is toxic. This product is corrosive. Immediate first aid is imperative. Suspected of causing cancer. Do not handle until all safety precautions have been read and understood. Do not handle broken packages without protective equipment. Do not reuse empty containers.
<b>Advice on general occupational hygiene</b>	Wash promptly if skin becomes contaminated. Take off contaminated clothing. Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Wash at the end of each work shift and before eating, smoking and using the toilet. Change work clothing daily before leaving workplace.

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

<b>Storage precautions</b>	Store in accordance with local regulations. Keep only in the original container. Keep container tightly closed, in a cool, well ventilated place. Keep containers upright. Protect containers from damage. Bund storage facilities to prevent soil and water pollution in the event of spillage. The storage area floor should be leak-tight, jointless and not absorbent. Store away from the following materials: Acids. Alkalis. Oxidising materials.
<b>Storage class</b>	Toxic storage.

### 7.3. Specific end use(s)

<b>Specific end use(s)</b>	The identified uses for this product are detailed in Section 1.2.
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## SECTION 8: Exposure Controls/personal protection

### 8.1. Control parameters

#### Occupational exposure limits

##### **FORMALDEHYDE ...%**

Long-term exposure limit (8-hour TWA): WEL 2 ppm 2.5 mg/m<sup>3</sup>

Short-term exposure limit (15-minute): WEL 2 ppm 2.5 mg/m<sup>3</sup>

##### **METHANOL**

Long-term exposure limit (8-hour TWA): WEL 200 ppm(Sk) 266 mg/m<sup>3</sup>(Sk)

Short-term exposure limit (15-minute): WEL 250 ppm(Sk) 333 mg/m<sup>3</sup>(Sk)

WEL = Workplace Exposure Limit

#### FORMALDEHYDE ...% (CAS: 50-00-0)

<b>DNEL</b>	Workers - Inhalation; Long term systemic effects: 9 mg/m <sup>3</sup>
	Workers - Inhalation; Long term local effects: 0.375 mg/m <sup>3</sup>
	Workers - Inhalation; Short term local effects: 0.5 mg/m <sup>3</sup>
	Workers - Dermal; Long term systemic effects: 240 mg/kg/day
	Workers - Dermal; Long term local effects: 37µg/cm <sup>2</sup>
	General population - Inhalation; Long term systemic effects: 3.2 mg/m <sup>3</sup>
	General population - Inhalation; Long term local effects: 0.1 mg/m <sup>3</sup>
	General population - Dermal; Long term systemic effects: 102 mg/kg/day
	General population - Dermal; Long term systemic effects: 12µg/cm <sup>2</sup>
	General population - Oral; Long term systemic effects: 4.1 mg/kg/day

## FORMALDEHYDE 37-40% W/V LRG

<b>PNEC</b>	- Fresh water; 0.44 mg/l
	- Marine water; 0.44 mg/l
	- STP; 0.19 mg/l
	- Sediment (Freshwater); 2.3 mg/kg
	- Sediment (Marinewater); 2.3 mg/kg
	- Soil; 0.2 mg/kg

### METHANOL (CAS: 67-56-1)

<b>Biological limit values</b>	No information available from the supplier., No information available from the supplier., No information available from the supplier.
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<b>DNEL</b>	Workers - Inhalation; Long term systemic effects: 260 mg/m <sup>3</sup>
	Workers - Inhalation; Short term systemic effects: 260 mg/m <sup>3</sup>
	Workers - Inhalation; Long term local effects: 260 mg/m <sup>3</sup>
	Workers - Inhalation; Short term local effects: 260 mg/m <sup>3</sup>
	Workers - Dermal; Long term systemic effects: 40 mg/kg/day
	Workers - Dermal; Short term systemic effects: 40 mg/kg/day
	General population - Inhalation; Long term systemic effects: 50 mg/m <sup>3</sup>
	General population - Inhalation; Short term systemic effects: 50 mg/m <sup>3</sup>
	General population - Inhalation; Long term local effects: 50 mg/m <sup>3</sup>
	General population - Inhalation; Short term local effects: 50 mg/m <sup>3</sup>
	General population - Dermal; Long term systemic effects: 8 mg/kg/day
	General population - Dermal; Short term systemic effects: 8 mg/kg/day

<b>PNEC</b>	- Fresh water; 20.8 mg/l
	- Marine water; 2.08 mg/l
	- STP; 100 mg/l
	- Sediment (Freshwater); 77 mg/kg
	- Sediment (Marinewater); 7.7 mg/kg
	- Soil; 100 mg/kg

## 8.2. Exposure controls

### Protective equipment



### Appropriate engineering controls

Provide adequate ventilation. Personal, workplace environment 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. Use process enclosures, local exhaust ventilation or other engineering controls as the primary means to minimise worker exposure. Personal protective equipment should only be used if worker exposure cannot be controlled adequately by the engineering control measures. Ensure control measures are regularly inspected and maintained. Ensure operatives are trained to minimise exposure.

### Eye/face protection

Eyewear complying with an approved standard should be worn if a risk assessment indicates eye contact is possible. Personal protective equipment for eye and face protection should comply with European Standard EN166. Wear tight-fitting, chemical splash goggles or face shield. If inhalation hazards exist, a full-face respirator may be required instead.

## FORMALDEHYDE 37-40% W/V LRG

<b>Hand protection</b>	Chemical-resistant, impervious gloves complying with an approved standard should be worn if a risk assessment indicates skin contact is possible. The most suitable glove should be chosen in consultation with the glove supplier/manufacturer, who can provide information about the breakthrough time of the glove material. To protect hands from chemicals, gloves should comply with European Standard EN374. Considering the data specified by the glove manufacturer, check during use that the gloves are retaining their protective properties and change them as soon as any deterioration is detected. Frequent changes are recommended.
<b>Other skin and body protection</b>	Appropriate footwear and additional protective clothing complying with an approved standard should be worn if a risk assessment indicates skin contamination is possible.
<b>Hygiene measures</b>	Provide eyewash station and safety shower. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse. Clean equipment and the work area every day. Good personal hygiene procedures should be implemented. Wash at the end of each work shift and before eating, smoking and using the toilet. When using do not eat, drink or smoke. Preventive industrial medical examinations should be carried out. Warn cleaning personnel of any hazardous properties of the product.
<b>Respiratory protection</b>	Respiratory protection complying with an approved standard should be worn if a risk assessment indicates inhalation of contaminants is possible. Ensure all respiratory protective equipment is suitable for its intended use and is 'CE'-marked. Check that the respirator fits tightly and the filter is changed regularly. Gas and combination filter cartridges should comply with European Standard EN14387. Full face mask respirators with replaceable filter cartridges should comply with European Standard EN136. Half mask and quarter mask respirators with replaceable filter cartridges should comply with European Standard EN140.
<b>Environmental exposure controls</b>	Keep container tightly sealed when not in use. 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. Store in a demarcated bunded area to prevent release to drains and/or watercourses.

### SECTION 9: Physical and Chemical Properties

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

<b>Appearance</b>	Liquid.
<b>Colour</b>	Colourless.
<b>Odour</b>	Pungent.
<b>pH</b>	pH (concentrated solution): 2.5 - 5.5
<b>Melting point</b>	Approx. -15°C
<b>Initial boiling point and range</b>	96 - 101°C @ 760 mm Hg
<b>Flash point</b>	63 - 75°C
<b>Upper/lower flammability or explosive limits</b>	Upper flammable/explosive limit: 73% Lower flammable/explosive limit: 7% (formaldehyde) Upper flammable/explosive limit: 37% Lower flammable/explosive limit: 6% (methanol)
<b>Vapour pressure</b>	4.2 mm Hg @ 35 (formaldehyde partial pressure)°C
<b>Relative density</b>	1.08 @ °C
<b>Solubility(ies)</b>	Miscible with water.
<b>Auto-ignition temperature</b>	About 300°C
<b>Decomposition Temperature</b>	Approx. 400°C
<b>Viscosity</b>	1.0 mPa s @ 20°C

## FORMALDEHYDE 37-40% W/V LRG

**Oxidising properties** Does not meet the criteria for classification as oxidising.

### 9.2. Other information

**Other information** The data contained in section 9.1. are typical values.

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

**Reactivity** May react exothermically or vigorously.

### 10.2. Chemical stability

**Stability** Stable at normal ambient temperatures and when used as recommended. Can form paraformaldehyde on exposure to the atmosphere.

### 10.3. Possibility of hazardous reactions

**Possibility of hazardous reactions** Reactions in a sealed container may cause pressure build up and rupture. Violent reaction with perchloric acid, explosive reaction with nitrogen dioxide at 1800°C. Reaction with hydrochloric acid may form bis-chloromethyl ether.

### 10.4. Conditions to avoid

**Conditions to avoid** Avoid exposure to high temperatures or direct sunlight. Avoid contact with moisture. Avoid freezing. Avoid storage with incompatible materials.

### 10.5. Incompatible materials

**Materials to avoid** Alkalis. Oxidising agents. Acids.

### 10.6. Hazardous decomposition products

**Hazardous decomposition products** Thermal decomposition or combustion products may include the following substances: Carbon monoxide (CO). Carbon dioxide (CO<sub>2</sub>).

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

**Other health effects** IARC Int. Agency for Cancer Research. Formaldehyde classified as carcinogenic in humans.

#### Acute toxicity - oral

**Notes (oral LD<sub>50</sub>)** Acute Tox. 3 - H301 Toxic if swallowed.

**ATE oral (mg/kg)** 222.22

#### Acute toxicity - dermal

**Notes (dermal LD<sub>50</sub>)** Acute Tox. 3 - H311 Toxic in contact with skin.

**ATE dermal (mg/kg)** 666.67

#### Acute toxicity - inhalation

**Notes (inhalation LC<sub>50</sub>)** Acute Tox. 3 - H331 Toxic if inhaled.

**ATE inhalation (gases ppm)** 2,000.0

**ATE inhalation (vapours mg/l)** 8.57

**ATE inhalation (dusts/mists mg/l)** 1.43

#### Skin corrosion/irritation

## FORMALDEHYDE 37-40% W/V LRG

<b>Animal data</b>	Skin Corr. 1B - H314 Causes severe burns. Erythema/eschar score: Moderate to severe erythema (3). Oedema score: Moderate oedema - raised approximately 1 mm (3). Dose: 1ml of 40% formaldehyde, 20 hours, Rabbit
<b><u>Serious eye damage/irritation</u></b>	
<b>Serious eye damage/irritation</b>	Eye Dam. 1 - H318 Corrosive to skin. Corrosivity to eyes is assumed.
<b><u>Respiratory sensitisation</u></b>	
<b>Respiratory sensitisation</b>	Based on available data the classification criteria are not met. Mouse: Not sensitising.
<b><u>Skin sensitisation</u></b>	
<b>Skin sensitisation</b>	May cause skin sensitisation or allergic reactions in sensitive individuals.
<b><u>Germ cell mutagenicity</u></b>	
<b>Genotoxicity - in vitro</b>	Based on available data the classification criteria are not met. Although not classified some test results have produced positive effects in animals.
<b>Genotoxicity - in vivo</b>	Although not classified some test results have produced positive effects in animals.
<b><u>Carcinogenicity</u></b>	
<b>Carcinogenicity</b>	Suspected of causing cancer.
<b><u>Reproductive toxicity</u></b>	
<b>Reproductive toxicity - fertility</b>	Based on available data the classification criteria are not met.
<b>Reproductive toxicity - development</b>	Based on available data the classification criteria are not met.
<b><u>Specific target organ toxicity - single exposure</u></b>	
<b>STOT - single exposure</b>	STOT SE 3 - H335 May cause respiratory irritation. STOT SE 1 - H370 Causes damage to organs .
<b>Target organs</b>	Respiratory system, lungs
<b><u>Specific target organ toxicity - repeated exposure</u></b>	
<b>STOT - repeated exposure</b>	Not classified as a specific target organ toxicant after repeated exposure.
<b><u>Aspiration hazard</u></b>	
<b>Aspiration hazard</b>	Based on available data the classification criteria are not met.
<b><u>General information</u></b>	
<b>General information</b>	May cause cancer after repeated exposure. Risk of cancer depends on duration and level of exposure. The severity of the symptoms described will vary dependent on the concentration and the length of exposure. Some tests for mutagenicity have showed positive results.
<b>Inhalation</b>	Corrosive to the respiratory tract. Symptoms following overexposure may include the following: Severe irritation of nose and throat.
<b>Ingestion</b>	May cause sensitisation or allergic reactions in sensitive individuals. May cause chemical burns in mouth, oesophagus and stomach. Symptoms following overexposure may include the following: Severe stomach pain. Nausea, vomiting.
<b>Skin contact</b>	May cause skin sensitisation or allergic reactions in sensitive individuals. Causes severe burns. Symptoms following overexposure may include the following: Pain or irritation. Redness. Blistering may occur.
<b>Eye contact</b>	Causes serious eye damage. Symptoms following overexposure may include the following: Pain. Profuse watering of the eyes. Redness.

## FORMALDEHYDE 37-40% W/V LRG

<b>Acute and chronic health hazards</b>	Absorption of large quantities may cause irreversible damage to the optic nerve (due to methanol),nausea,headache,vomiting,inebriation and blindness.
<b>Route of entry</b>	Ingestion Inhalation Skin and/or eye contact
<b>Target organs</b>	Respiratory system, lungs
<b>Medical considerations</b>	Skin disorders and allergies.

### METHANOL

#### Acute toxicity - oral

**Acute toxicity oral (LD<sub>50</sub> mg/kg)** 6,000.0

**Species** Monkey

#### Acute toxicity - dermal

**Notes (dermal LD<sub>50</sub>)** No information available.

#### Acute toxicity - inhalation

**Acute toxicity inhalation (LC<sub>50</sub> vapours mg/l)** 115.9

**Species** Rat

**ATE inhalation (vapours mg/l)** 115.9

#### Skin corrosion/irritation

**Human skin model test** No information available.

#### Serious eye damage/irritation

**Serious eye damage/irritation** Not irritating.

#### Respiratory sensitisation

**Respiratory sensitisation** No registered information.

#### Skin sensitisation

**Skin sensitisation** Guinea pig maximization test (GPMT) - Guinea pig: Not sensitising.

#### Germ cell mutagenicity

**Genotoxicity - in vitro** No information available.

**Genotoxicity - in vivo** Chromosome aberration: Negative.

#### Reproductive toxicity

**Reproductive toxicity - fertility** Fertility:, One-generation study - NOAEL <1000 mg/kg, Oral, Mouse P

**Reproductive toxicity - development** Maternal toxicity: - NOAEL: 5000 mg/kg/day, Oral, Mouse

#### Specific target organ toxicity - single exposure

**STOT - single exposure** No information available. Possible damage to organs after single exposure.

**Target organs** Brain Liver Eyes

## FORMALDEHYDE 37-40% W/V LRG

### Specific target organ toxicity - repeated exposure

**STOT - repeated exposure** NOAEL 2.65 mg/l, Inhalation, Rat

**Target organs** Respiratory system, lungs

**Inhalation** Toxic by inhalation. Immediate: Low concentration: No specific health hazards known. High concentration: Central nervous system depression. Delayed: Headache, nausea. Possible damage to eyes and vision.

**Ingestion** Immediate: Central nervous system depression. Toxic if swallowed. Delayed: Nausea, vomiting and headache. Visual effects and possible blindness. Ingestion of large amounts may cause coma and death.

**Skin contact** Toxic in contact with skin. May be absorbed through the skin. May cause skin irritation. Absorption can result in systemic toxicity. Effects are similar to inhalation and ingestion. Can cause dry skin and redness.

**Eye contact** Irritating to eyes.

**Acute and chronic health hazards** Key phases of methanol toxicity are central nervous system depression (onset 30 mins to 2 hours), a latent period (8 to 48 hours) followed by severe metabolic acidosis. Ocular toxicity occurs from 12 - 48 hours after exposure. Coma and death may follow. Assume similar effects from inhalation, ingestion and skin adsorption. Methanol toxicity limits in humans are considered to be in the range of >300 ppm (inhalation) and 300 - 1000 mg/kg (ingestion). Latent periods and delayed onset of ocular toxicity and acidosis is also variable. Eye damage may be permanent.

**Route of entry** Inhalation Skin absorption Ingestion.

**Target organs** Liver Kidneys Central nervous system Eyes

### SECTION 12: Ecological Information

**Ecotoxicity** Not regarded as dangerous for the environment. However, large or frequent spills may have hazardous effects on the environment.

#### METHANOL

**Ecotoxicity** Although not classified as environmentally hazardous, harmful effects cannot be excluded in the event of improper handling or disposal. Do not allow to enter drinking water, waste water or soil.

#### 12.1. Toxicity

**Toxicity** Based on available data the classification criteria are not met.

#### FORMALDEHYDE ...%

**Acute toxicity - fish** LC<sub>50</sub>, 96 hours: 6.7 mg/l, Morone Saxatilis

**Acute toxicity - aquatic invertebrates** EC<sub>50</sub>, 48 hours: 16.8 mg/l, Daphnia Pulex

**Acute toxicity - aquatic plants** EC<sub>50</sub>, 72 hours: 3.48 mg/l, Scenedesmus subspicatus

**Acute toxicity - microorganisms** EC<sub>50</sub>, 3 hours: 19 mg/l, Activated sludge

## FORMALDEHYDE 37-40% W/V LRG

**Chronic toxicity - fish early life stage** LOEC, 28 days:  $\geq 48$  mg/l, *Oryzias latipes* (Red killifish)

### METHANOL

**Acute toxicity - fish** NOEC, : 64,000 mg/l, *Brachydanio rerio* (Zebra Fish)

**Acute toxicity - aquatic invertebrates** EC<sub>50</sub>, 24 hours: 20,803 mg/l, *Daphnia magna*

**Acute toxicity - aquatic plants** , 8 days: 8000 (Toxicity Threshold) mg/l, *Scenedesmus Quadricauda*

**Acute toxicity - terrestrial** LC<sub>50</sub>, 48 hours:  $> 1$  mg/cm<sup>2</sup>, *Eisenia Fetida* (Earthworm)  
Filter paper test; units = mg/cm<sup>2</sup>

### 12.2. Persistence and degradability

**Persistence and degradability** The product is readily biodegradable.

### FORMALDEHYDE ...%

**Phototransformation** Water - DT<sub>50</sub> : 1.7 days

**Stability (hydrolysis)** Scientifically unjustified.

**Biodegradation** Water - Degradation 91: 2 weeks  
The substance is readily biodegradable.

### METHANOL

**Phototransformation** Air - Degradation (%) 50: 17.2 days

**Stability (hydrolysis)** Scientifically unjustified.  
Alcohols are generally not susceptible to hydrolysis.

**Biodegradation** Water - Degradation 83 - 91: Industry - Dermal; Long term systemic effects 22 mg/kg/day 3 days  
The substance is readily biodegradable.

**Biological oxygen demand** 1.236 g O<sub>2</sub>/g substance

### 12.3. Bioaccumulative potential

**Bioaccumulative potential** The product is not bioaccumulating.

### FORMALDEHYDE ...%

**Bioaccumulative potential** BCF:  $< 1$ , Marinewater fish

**Partition coefficient** log Pow: 0.35 @ 25°C

### METHANOL

**Bioaccumulative potential** Scientifically unjustified.

**Partition coefficient** log Pow: -0.74 Suggests high mobility in soil.

### 12.4. Mobility in soil

**Mobility** The product is water-soluble and may spread in water systems.

**FORMALDEHYDE 37-40% W/V LRG****FORMALDEHYDE ...%**

<b>Mobility</b>	The product is miscible with water and may spread in water systems. Calculations suggest that the substance will remain predominantly in the aqueous phase.
<b>Adsorption/desorption coefficient</b>	Water - : $k_{oc} = 4.964 @ ^\circ C$
<b>Henry's law constant</b>	0.034 Pa m <sup>3</sup> /mol @ 25°C
<b>Surface tension</b>	69.6 mN/m @ °C

**METHANOL**

<b>Mobility</b>	Methanol has a low potential for absorption into soil. Evaporation will take place from the soil surface. Due to the miscibility with water and the low partition coefficient, methanol is expected to travel through the soil if it enters the surface. The concentration and the amount of substance entering the soil will determine the extent of travel. Large or continuous discharges may result in the substance travelling into groundwater.
<b>Adsorption/desorption coefficient</b>	Expected to have a low potential for adsorption. Water - $K_{oc} = 1 @ ^\circ C$ The value is a calculated estimate.
<b>Henry's law constant</b>	0.461 Pa m <sup>3</sup> /mol @ 25°C
<b>Surface tension</b>	Not available.

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

**Results of PBT and vPvB assessment** This product does not contain any substances classified as PBT or vPvB.

**FORMALDEHYDE ...%**

**Results of PBT and vPvB assessment** This substance is not classified as PBT or vPvB according to current EU criteria.

**METHANOL**

**Results of PBT and vPvB assessment** This substance is not classified as PBT or vPvB according to current EU criteria.

**12.6. Other adverse effects**

**Other adverse effects** Will affect drinking water supplies.

**FORMALDEHYDE ...%**

**Other adverse effects** Will affect drinking water supplies.

**METHANOL**

**Other adverse effects** Damaging effects from fire. May effect germination and growth rates of plants if soil contamination occurs. Will affect drinking water supplies.

**SECTION 13: Disposal considerations****13.1. Waste treatment methods**

## FORMALDEHYDE 37-40% W/V LRG

### General information

The generation of waste should be minimised or avoided wherever possible. Reuse or recycle products wherever possible. This material and its container must be disposed of in a safe way. Disposal of this product, process solutions, residues and by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any local authority requirements. When handling waste, the safety precautions applying to handling of the product should be considered. Care should be taken when handling emptied containers that have not been thoroughly cleaned or rinsed out. Empty containers or liners may retain some product residues and hence be potentially hazardous.

### Disposal methods

Dispose of surplus products and those that cannot be recycled via a licensed waste disposal contractor. Waste, residues, empty containers, discarded work clothes and contaminated cleaning materials should be collected in designated containers, labelled with their contents. Incineration or landfill should only be considered when recycling is not feasible.

## SECTION 14: Transport information

### General

For limited quantity packaging/limited load information, consult the relevant modal documentation using the data shown in this section.

#### 14.1. UN number

UN No. (ADR/RID)	2209
UN No. (IMDG)	2209
UN No. (ICAO)	2209

#### 14.2. UN proper shipping name

Proper shipping name (ADR/RID)	FORMALDEHYDE SOLUTION
Proper shipping name (IMDG)	FORMALDEHYDE SOLUTION
Proper shipping name (ICAO)	FORMALDEHYDE SOLUTION
Proper shipping name (ADN)	FORMALDEHYDE SOLUTION

#### 14.3. Transport hazard class(es)

ADR/RID class	8
ADR/RID label	8
IMDG class	8
ICAO class/division	8

#### Transport labels



#### 14.4. Packing group

ADR/RID packing group	III
IMDG packing group	III
ICAO packing group	III

#### 14.5. Environmental hazards

Environmentally hazardous substance/marine pollutant  
No.

## FORMALDEHYDE 37-40% W/V LRG

### 14.6. Special precautions for user

Always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

**EmS** F-A, S-B

**Emergency Action Code** 2Z

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

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code** Not applicable.

## SECTION 15: Regulatory information

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

<b>National regulations</b>	Health and Safety at Work etc. Act 1974 (as amended). The Chemicals (Hazard Information and Packaging for Supply) Regulations 2009 (SI 2009 No. 716). The Carriage of Dangerous Goods and Use of Transportable Pressure Equipment Regulations 2009 (SI 2009 No. 1348) (as amended) ["CDG 2009"]. EH40/2005 Workplace exposure limits.
<b>EU legislation</b>	Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) (as amended). Commission Regulation (EU) No 453/2010 of 20 May 2010. Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures (as amended).
<b>Guidance</b>	Workplace Exposure Limits EH40. ECHA Guidance on the compilation of safety data sheets 2014.

### 15.2. Chemical safety assessment

No chemical safety assessment has been carried out.

#### Inventories

##### EU - EINECS/ELINCS

None of the ingredients are listed or exempt.

##### US - TSCA

None of the ingredients are listed or exempt.

##### US - TSCA 12(b) Export Notification

None of the ingredients are listed or exempt.

## SECTION 16: Other information

<b>General information</b>	This datasheet is not intended to be a replacement for a full risk assessment, these should always be carried out by competent persons.
<b>Key literature references and sources for data</b>	Source: European Chemicals Agency, <a href="http://echa.europa.eu/">http://echa.europa.eu/</a>
<b>Classification procedures according to Regulation (EC) 1272/2008</b>	Acute Tox. 3 - H311: Acute Tox. 3 - H331: Acute Tox. 3 - H301: Eye Dam. 1 - H318: Skin Corr. 1B - H314: STOT SE 1 - H370: STOT SE 3 - H335: Skin Sens. 1 - H317: Carc. 2 - H351: : Calculation method.

**FORMALDEHYDE 37-40% W/V LRG**

<b>Training advice</b>	Read and follow manufacturer's recommendations. Only trained personnel should use this material.
<b>Revision comments</b>	Revised classification.
<b>Revision date</b>	03/08/2017
<b>Revision</b>	7
<b>Supersedes date</b>	29/04/2016
<b>SDS number</b>	10117
<b>SDS status</b>	Approved.
<b>Risk phrases in full</b>	R11 Highly flammable. R23/24/25 Toxic by inhalation, in contact with skin and if swallowed. R34 Causes burns. R37 Irritating to respiratory system. R39/23/24/25 Toxic: danger of very serious irreversible effects through inhalation, in contact with skin and if swallowed. R40 Limited evidence of a carcinogenic effect. R43 May cause sensitisation by skin contact.
<b>Hazard statements in full</b>	H225 Highly flammable liquid and vapour. H301 Toxic if swallowed. H311 Toxic in contact with skin. H314 Causes severe skin burns and eye damage. H317 May cause an allergic skin reaction. H318 Causes serious eye damage. H331 Toxic if inhaled. H335 May cause respiratory irritation. H341 Suspected of causing genetic defects. H350 May cause cancer. H370 Causes damage to organs . H371 May cause damage to organs .

This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty, guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.