

# SAFETY DATA SHEET

according to Regulation (EC) No. 453/2010

## WG-17 GELLING AGENT

Revision Date: 14-Sep-2015

Revision Number: 16

**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1. Product Identifier**

Product Name WG-17 GELLING AGENT  
Internal ID Code HM001420

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

Recommended Use Gelling Agent

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

Halliburton Energy Services  
Halliburton House, Howemoss Place  
Kirkhill Industrial Estate  
Dyce  
Aberdeen, AB21 0GN  
United Kingdom

[www.halliburton.com](http://www.halliburton.com)

For further information, please contact

E-Mail address: [fdunexchem@halliburton.com](mailto:fdunexchem@halliburton.com)

**1.4. Emergency telephone number**

+44 8 08 189 0979 / 1-760-476-3961

Emergency telephone - §45 - (EC)1272/2008	
Europe	112
Croatia	Centar za kontrolu otrovanja (CKO): (+385 1) 23-48-342 (Poison Control Center (PCC) - Institute for Medical Research and Occupational Health)
Cyprus	+210 7793777
Denmark	Poison Control Hotline (DK): +45 82 12 12 12
France	ORFILA (FR): + 01 45 42 59 59
Germany	Poison Center Berlin (DE): +49 030 30686 790
Italy	Poison Center, Milan (IT): +39 02 6610 1029
Netherlands	National Poisons Information Center (NL): +31 30 274 88 88 (NB: this service is only available to health professionals)
Norway	Poisons Information (NO): + 47 22 591300
Poland	Poison Control and Information Centre, Warsaw (PL): +48 22 619 66 54; +48 22 619 08 97
Romania	+40 21 318 36 06
Spain	Poison Information Service (ES): +34 91 562 04 20
United Kingdom	NHS Direct (UK): +44 0845 46 47

**SECTION 2: Hazards Identification****2.1. Classification of the substance or mixture**

REGULATION (EC) No 1272/2008

Not classified

**2.2. Label Elements**

Not classified

Hazard Pictograms

**Signal Word** None

**Hazard Statements**

Not Classified

EUH208 - May produce an allergic reaction

**Precautionary Statements - EU (§28, 1272/2008)**

None

**Contains**

**Substances**

Glyoxal

**CAS Number**

107-22-2

**2.3. Other Hazards**

This mixture contains no substance considered to be persistent, bioaccumulating nor toxic (PBT).

This mixture contains no substance considered to be very persistent nor very bioaccumulating (vPvB).

### SECTION 3: Composition/information on Ingredients

**3.1. Substances**

Substance

Substances	EINECS	CAS Number	PERCENT (w/w)	EU - CLP Substance Classification	REACH No.
Glyoxal	203-474-9	107-22-2	0.1 - 1%	Acute Tox. 4 (H332) Skin Irrit. 2 (H315) Skin Sens. 1 (H317) Muta. 2 (H341) STOT SE 3 (H335)	No data available

For the full text of the H-phrases mentioned in this Section, see Section 16

### SECTION 4: First aid measures

**4.1. Description of first aid measures**

**Inhalation**

If inhaled, remove from area to fresh air. Get medical attention if respiratory irritation develops or if breathing becomes difficult.

**Eyes**

In case of contact, immediately flush eyes with plenty of water for at least 15 minutes and get medical attention if irritation persists.

**Skin**

Wash with soap and water. Get medical attention if irritation persists.

**Ingestion**

Do NOT induce vomiting. Give nothing by mouth. Obtain immediate medical attention.

**4.2. Most Important symptoms and effects, both acute and delayed**

May cause allergic skin reaction.

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

**Notes to Physician**

Treat symptomatically

### SECTION 5: Firefighting Measures

**5.1. Extinguishing media**

**Suitable Extinguishing Media**

Water fog, carbon dioxide, foam, dry chemical.

**Extinguishing media which must not be used for safety reasons**

None known.

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

**Special Exposure Hazards**

Decomposition in fire may produce harmful gases.

**5.3. Advice for firefighters****Special Protective Equipment for Fire-Fighters**

Full protective clothing and approved self-contained breathing apparatus required for fire fighting personnel.

**SECTION 6: Accidental release measures****6.1. Personal precautions, protective equipment and emergency procedures**

Use appropriate protective equipment. Avoid creating and breathing dust. Ensure adequate ventilation. Avoid contact with skin, eyes and clothing.

See Section 8 for additional information

**6.2. Environmental precautions**

Prevent from entering sewers, waterways, or low areas.

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

Scoop up and remove.

**6.4. Reference to other sections**

See Section 8 and 13 for additional information.

**SECTION 7: Handling and Storage****7.1. Precautions for Safe Handling**

Avoid creating or inhaling dust. Ensure adequate ventilation. Avoid contact with eyes, skin, or clothing. Wash hands after use. Launder contaminated clothing before reuse. Use appropriate protective equipment.

**Hygiene Measures**

Handle in accordance with good industrial hygiene and safety practice.

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

Store away from oxidizers. Store in a cool, dry location. Product has a shelf life of 24 months.

**7.3. Specific End Use(s)****Exposure Scenario**

No information available

**Other Guidelines**

No information available

**SECTION 8: Exposure Controls/Personal Protection****8.1. Control parameters****Exposure Limits**

Substances	CAS Number	EU	UK	Netherlands	France
Glyoxal	107-22-2	Not applicable	Not applicable	Not applicable	Not applicable

Substances	CAS Number	Germany	Spain	Portugal	Finland
Glyoxal	107-22-2	Not applicable	TWA: 0.1 mg/m <sup>3</sup>	TWA: 0.1 mg/m <sup>3</sup>	TWA: 0.02 mg/m <sup>3</sup>

Substances	CAS Number	Austria	Ireland	Switzerland	Norway
Glyoxal	107-22-2	Not applicable	Not applicable	Not applicable	Not applicable

Substances	CAS Number	Italy	Poland	Hungary	Czech Republic
Glyoxal	107-22-2	Not applicable	Not applicable	Not applicable	Not applicable

Substances	CAS Number	Denmark	Romania	Croatia	Cyprus
Glyoxal	107-22-2	Not applicable	Not applicable	Not applicable	Not applicable

**Derived No Effect Level (DNEL)**

No information available.

**Worker****General Population****Predicted No Effect Concentration (PNEC)**

No information available.

**8.2. Exposure controls****Engineering Controls**

Use in a well ventilated area. Localized ventilation should be used to control dust levels.

**Personal protective equipment**

If engineering controls and work practices cannot prevent excessive exposures, the selection and proper use of personal

protective equipment should be determined by an industrial hygienist or other qualified professional based on the specific application of this product.

<b>Respiratory Protection</b>	Not normally needed. But if significant exposures are possible then the following respirator is recommended: Dust/mist respirator. (N95, P2/P3)
<b>Hand Protection</b>	Normal work gloves.
<b>Skin Protection</b>	Normal work coveralls.
<b>Eye Protection</b>	Wear safety glasses or goggles to protect against exposure. Dust proof goggles.
<b>Other Precautions</b>	None known.

**Environmental Exposure Controls** Do not allow material to contaminate ground water system

## SECTION 9: Physical and Chemical Properties

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

<b>Physical State:</b>	Solid	<b>Color:</b>	White
<b>Odor:</b>	Characteristic	<b>Odor Threshold:</b>	No information available

<u>Property</u>	<u>Values</u>
<u>Remarks/ - Method</u>	
<b>pH:</b>	7
<b>Freezing Point/Range</b>	No data available
<b>Melting Point/Range</b>	No data available
<b>Boiling Point/Range</b>	No data available
<b>Flash Point</b>	No data available
<b>Flammability (solid, gas)</b>	No data available
upper flammability limit	No data available
lower flammability limit	No data available
<b>Evaporation rate</b>	No data available
<b>Vapor Pressure</b>	No data available
<b>Vapor Density</b>	No data available
<b>Specific Gravity</b>	1.36
<b>Water Solubility</b>	Soluble in water
<b>Solubility in other solvents</b>	No data available
<b>Partition coefficient: n-octanol/water</b>	No data available
<b>Autoignition Temperature</b>	400 °C / 752 °F
<b>Decomposition Temperature</b>	No data available
<b>Viscosity</b>	No data available
<b>Explosive Properties</b>	No information available
<b>Oxidizing Properties</b>	No information available

### 9.2. Other information

<b>Molecular Weight</b>	1000000 g/mol
<b>VOC Content (%)</b>	No data available

## SECTION 10: Stability and Reactivity

### 10.1. Reactivity

Not expected to be reactive.

### 10.2. Chemical Stability

Stable

### 10.3. Possibility of Hazardous Reactions

Will Not Occur

### 10.4. Conditions to Avoid

None anticipated

### 10.5. Incompatible Materials

Strong oxidizers.

### 10.6. Hazardous Decomposition Products

Carbon monoxide and carbon dioxide.

## SECTION 11: Toxicological Information

### 11.1. Information on Toxicological Effects

#### Acute Toxicity

<b>Inhalation</b>	May cause mild respiratory irritation.
<b>Eye Contact</b>	May cause mild eye irritation.

**Skin Contact  
Ingestion**

May cause mild skin irritation. May cause an allergic skin reaction.  
None known.

**Chronic Effects/Carcinogenicity**

No data available to indicate product or components present at greater than 0.1% are chronic health hazards.

**Toxicology data for the components**

Substances	CAS Number	LD50 Oral	LD50 Dermal	LC50 Inhalation
Glyoxal	107-22-2	3300 mg/kg (Rat)	> 2000 mg/kg (Rat)	2.44 mg/L (Rat) 4h

Substances	CAS Number	Skin corrosion/irritation
Glyoxal	107-22-2	Causes mild skin irritation

Substances	CAS Number	Eye damage/irritation
Glyoxal	107-22-2	Causes moderate eye irritation.

Substances	CAS Number	Skin Sensitization
Glyoxal	107-22-2	Skin sensitization was seen in the guinea pig closed epicutaneous test.

Substances	CAS Number	Respiratory Sensitization
Glyoxal	107-22-2	No information available

Substances	CAS Number	Mutagenic Effects
Glyoxal	107-22-2	Some in vitro tests have shown mutagenic effects.

Substances	CAS Number	Carcinogenic Effects
Glyoxal	107-22-2	Did not show carcinogenic effects in animal experiments

Substances	CAS Number	Reproductive toxicity
Glyoxal	107-22-2	No significant toxicity observed in animal studies at concentration requiring classification.

Substances	CAS Number	STOT - single exposure
Glyoxal	107-22-2	May cause respiratory irritation.

Substances	CAS Number	STOT - repeated exposure
Glyoxal	107-22-2	No significant toxicity observed in animal studies at concentration requiring classification.

Substances	CAS Number	Aspiration hazard
Glyoxal	107-22-2	Not applicable

## SECTION 12: Ecological Information

### 12.1. Toxicity Ecotoxicity Effects

Substances	CAS Number	Toxicity to Algae	Toxicity to Fish	Toxicity to Microorganisms	Toxicity to Invertebrates
Glyoxal	107-22-2	EC50 (72h) > 100 mg/L (Desmodesmus subspicatus)	No information available	No information available	LC50 (96h) 53.2 mg/L (Americamysis bahia) NOEC 3.19 mg/L (21d) (Daphnia magna)

### 12.2. Persistence and degradability

Substances	CAS Number	Persistence and Degradability
Glyoxal	107-22-2	(90% @ 19d)

**12.3. Bioaccumulative potential**

Substances	CAS Number	Log Pow
Glyoxal	107-22-2	-1.15 BCF = 3.2

**12.4. Mobility in soil**

Substances	CAS Number	Mobility
Glyoxal	107-22-2	KOC = 2.1

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

This mixture contains no substance considered to be persistent, bioaccumulating nor toxic (PBT). This mixture contains no substance considered to be very persistent nor very bioaccumulating (vPvB).

Substances	PBT and vPvB assessment
Glyoxal	Not PBT/vPvB

**12.6. Other adverse effects****Endocrine Disruptor Information**

This product does not contain any known or suspected endocrine disruptors

<b>SECTION 13: Disposal Considerations</b>
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**13.1. Waste treatment methods****Disposal Method**

Bury in a licensed landfill according to federal, state, and local regulations.

**Contaminated Packaging**

Follow all applicable national or local regulations.

<b>SECTION 14: Transport Information</b>
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**IMDG/IMO**

UN Number:	Not restricted
UN Proper Shipping Name:	Not restricted
Transport Hazard Class(es):	Not applicable
Packing Group:	Not applicable
Environmental Hazards:	Not applicable

**RID**

UN Number:	Not restricted
UN Proper Shipping Name:	Not restricted
Transport Hazard Class(es):	Not applicable
Packing Group:	Not applicable
Environmental Hazards:	Not applicable

**ADR**

UN Number:	Not restricted
UN Proper Shipping Name:	Not restricted
Transport Hazard Class(es):	Not applicable
Packing Group:	Not applicable
Environmental Hazards:	Not applicable

**IATA/ICAO**

UN Number:	Not restricted
UN Proper Shipping Name:	Not restricted
Transport Hazard Class(es):	Not applicable
Packing Group:	Not applicable
Environmental Hazards:	Not applicable

**14.1. UN Number:** Not restricted

**14.2. UN Proper Shipping Name:** Not restricted

**14.3. Transport Hazard Class(es):** Not applicable

**14.4. Packing Group:** Not applicable

**14.5. Environmental Hazards:** Not applicable

**14.6. Special Precautions for User:** None

**14.7. 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**

#### **International Inventories**

<b>EINECS Inventory</b>	This product, and all its components, complies with EINECS
<b>US TSCA Inventory</b>	All components listed on inventory or are exempt.
<b>Canadian DSL Inventory</b>	All components listed on inventory or are exempt.

#### **Legend**

**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory

**EINECS/ELINCS** - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances

**DSL/NDL** - Canadian Domestic Substances List/Non-Domestic Substances List

**Germany, Water Endangering Classes (WGK)** WGK 1: Low hazard to waters.

### **15.2. Chemical Safety Assessment**

No information available

## SECTION 16: Other Information

### **Full text of H-Statements referred to under sections 2 and 3**

H302 - Harmful if swallowed  
 H315 - Causes skin irritation  
 H317 - May cause an allergic skin reaction  
 H319 - Causes serious eye irritation  
 H335 - May cause respiratory irritation  
 H341 - Suspected of causing genetic defects

### **Key or legend to abbreviations and acronyms**

bw – body weight  
 CAS – Chemical Abstracts Service  
 CLP – REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL on Classification, Labelling and Packaging of substances and mixtures  
 EC – European Commission  
 EC10 – Effective Concentration 10%  
 EC50 – Effective Concentration 50%  
 EEC – European Economic Community  
 ErC50 – Effective Concentration growth rate 50%  
 IBC Code – International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk  
 LC50 – Lethal Concentration 50%  
 LD50 – Lethal Dose 50%  
 LL0 – Lethal Loading 0%  
 LL50 – Lethal Loading 50%  
 MARPOL – International Convention for the Prevention of Pollution from Ships  
 mg/kg – milligram/kilogram  
 mg/L – milligram/liter  
 NIOSH – National Institute for Occupational Safety and Health  
 NOEC – No Observed Effect Concentration  
 NTP – National Toxicology Program  
 OEL – Occupational Exposure Limit  
 PBT – Persistent Bioaccumulative and Toxic  
 PC – Chemical Product category  
 PEL – Permissible Exposure Limit  
 ppm – parts per million  
 PROC – Process category  
 REACH – REGULATION (EC) No 1907/2006 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL concerning the

Registration, Evaluation, Authorisation and Restriction of Chemicals  
STEL – Short Term Exposure Limit  
SU – Sector of Use category

**Key literature references and sources for data**

[www.ChemADVISOR.com/](http://www.ChemADVISOR.com/)

**Revision Date:** 14-Sep-2015

**Revision Note**

SDS sections updated: 1

**This safety data sheet complies with the requirements of Regulation (EC) No. 453/2010**

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**End of Safety Data Sheet**