

SAFETY DATA SHEET

ONICHEM

Onichem Specialities
www.onichem.com

Date Updated: 01.06.2013
Version: EU 4.6
Regulation REACH (EC 1907/2006) & CLP (EC 1272/2008)

Glyoxal 40%

**** SECTION 1 - IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/ UNDERTAKING****

SDS Name: **Glyoxal 40%**

Chemical Name: Glyoxal, 40 wt.% solution in water

Synonym(s): Glyoxal

IUPAC Name: Oxalaldehyde

Company Identification: Dalian Onichem Co., Ltd.

No. 2 Gaoxin Street, Qixianling, Dalian 116023, P.R. China

Tel: 86-411-8479 4022, Fax: 86-411-8479 4077

For emergencies, call CHEMTREC 1-800-424-9300 or 1-202-483-7616

**** SECTION 2 - HAZARDS IDENTIFICATION ****

EU-GHS Classifications

Classifications below according to Regulation (EU) No 1272/2008 on classification, labelling and packaging of Substances and Mixtures (CLP).

Acute toxicity, Inhalation	Category 4	H332
Skin Irritation	Category 2	H315
Eye Irritation	Category 2	H319
Skin Sensitization	Category 1	H317
Specific Target Organ Toxicity	Category 3	H335
Germ cell mutagenicity	Category 2	H341

GHS-Labeling:

Globally Harmonized System of Classification and Labelling (GHS)

Symbol(s):



Hazard Pictogram: GHS07, GHS08

Signal Word: Warning

Hazard Statement:	H332	Harmful if inhaled.
	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

Precautionary Statement:	P261	Avoid breathing dust/fume/gas/mist/vapors/spray.
	P280	Wear protective gloves/protective clothing/eye protection/face protection.
	P302+P352	IF ON SKIN: Wash with soap and water.
	P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do – continue rinsing.
	P333+P313	If skin irritation or a rash occurs: Get medical advice/attention.
	P311	Call a POISON CENTER or doctor/physician

Other Hazards Not a PBT, vPvB substance as per the criteria of the REACH Ordinance

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**** SECTION 3 - COMPOSITION, INFORMATION ON INGREDIENTS ****

Ingredient(Chemical Name)	CAS#	Content
WATER	7732-18-5	60+/-0.5%.
GLYOXAL	107-22-2	40+/-0.5%.
GLYCOL	107-21-1	1%max
FORMALDEHYDE	50-00-0	0.05% max

**** SECTION 4 - FIRST AID MEASURES ****

General information: Take persons to a safe place. Observe self-protection for first aid. Before seeking medical attention remove contaminated clothing and shoes. Take a copy of the Safety Data Sheet when going for medical treatment.

Eyes: Immediately flush eyes with plenty of water for at least 15 minutes and consult a physician.

Skin: Flush skin with plenty of soap and water while removing contaminated clothing and shoes. If irritation develops, consult a physician.

Ingestion: Do not induce vomiting. Never give fluids if patient is unconscious or having convulsions. Allow the victim to rinse his mouth then to drink plenty of water, and consult a physician.

Inhalation: Remove from exposure to fresh air immediately. Assist in breathing if necessary. Consult a physician

Indication of any immediate medical attention and special treatment needed:

Treat symptomatically and supportively

**** SECTION 5 - FIRE FIGHTING MEASURES ****

General Information: Self-contained breathing apparatus and protective clothing should be worn in fighting large fires involving chemicals. Determine the need to evacuate or isolate the area according to your local emergency plan.

Suitable extinguishing media: Use water spray, foam, carbon dioxide, or dry chemical powder.

Further information: Do not direct a solid stream of water or foam into hot, burning pools: this may cause frothing and increase fire intensity. Cool closed containers exposed to fire with water spray.

Special hazards arising from the substance or mixture: Carbon oxides.

Flash Point: Non-flammable.

Auto-ignition temperature: ca. 285°C (545°F)

Explosion limit, Lower: N/A.

Upper: N/A.

HMIS Classification (USA)

NFPA Rating (Canada)

Health 2

Health 2

Flammability 0

Fire 0

Physical hazard 0

Reactivity 0

Advice for firefighters: Water used to extinguish fire should not enter drainage systems, soil or stretches of water. Ensure there are sufficient retaining facilities for water used to extinguish fire. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulation

**** SECTION 6 - ACCIDENTAL RELEASE MEASURES ****

General Information: Use proper personal protective equipment as indicated in Section 8. Keep out unprotected persons, ensure adequate ventilation.

Spills/Leaks: Absorb spill with inert material, (e.g., dry sand or earth), then place into a chemical waste container, to be disposed of in compliance with existing regulations.

Environmental precautions: Do not flush into surface water, sanitary sewer system

**** SECTION 7 - HANDLING AND STORAGE ****

Handling: Ensure thorough ventilation of stores and work areas. Avoid contact with skin and eyes. Avoid inhalation of vapor or mist.

Storage: Keep container tightly closed. Store in a dry and cool area. Protect from air.

Storage stability: Storage duration is about 6 Months. May yellow after lengthy storage. During the

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storage a product characteristic clouding or crystallin precipitation of the trimeric glyoxal hydrate may occur. The process is reversible if warmed up mild(max. 40°C)

**** SECTION 8 - EXPOSURE CONTROLS, PERSONAL PROTECTION ****

Engineering Controls: Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits.

Exposure Limits: ACGIH-Threshold Limit Value (TLV): 0.1 mg/m³ TWA (inhalable fraction and vapor).

OSHA Vacated PELs: No OSHA Vacated PELs are listed for this chemical.

Personal Protective Equipment (PPE)

Eyes: Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin: Wear appropriate protective gloves to prevent skin exposure.

Clothing: Wear appropriate protective clothing to prevent skin exposure.

Respirator: Follow the OSHA's 29 CFR 1910.134 or European Standard EN 149. Always use a NIOSH or European Standard EN 149 approved respirator when necessary.

Hygiene measures: When using, do not eat, drink or smoke. Wash face and/or hands before break and end of work. Remove contaminated or saturated clothing. Wash contaminated clothing before re-use.

Protective measures: Handle in accordance with good industrial hygiene and safety practices. If workplace exposure limits are exceeded and/or larger amounts are released(leakage, spilling, dust)the indicated respiratory protection should be used. If there is the possibility of skin/eye contact, the indicated hand/eye/body protection should be used. Do not breathe in vapors or aerosols. Avoid contact with skin and eyes

**** SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES ****

Appearance: Colorless to pale yellow and transparent liquid.

Odor: Faint odor.

pH: 2.0-3.5. (400 g/l) @ 20°C

Vapor Pressure: 20.2 hPa @ 20°C

Vapor Density: N/A.

Evaporation Rate: Not available.

Viscosity: 8 mPa.s. (dynamic) @ 20°C

BP/BP Range: 104°C

Freezing / Melting Point: -50°C - -15°C

Decomposition Temperature: >120°C No decomposition if correctly stored and handled.

Solubility in water: Miscible.

Specific Gravity/Density: 1.265 g/cm³ @ 20°C

Molecular Formula: HCOCHO

Molecular Weight: 58.04

**** SECTION 10 - STABILITY AND REACTIVITY ****

Chemical Stability: Stable under normal temperatures and pressures.

Conditions to Avoid: See section 7.

Materials to Avoid: Strong oxidizing agents, strong alkalis.

Hazardous Decomposition Products: No hazardous decomposition products if stored and handled as indicated.

Hazardous Polymerization: Has not been reported

**** SECTION 11 - TOXICOLOGICAL INFORMATION ****

Registry of Toxic Effects (RTECS): CAS# 107-22-2: MD2625000 MD2650000 MD2700000

Acute oral toxicity: LD50 Rat: >2,000 - < 5,000 mg/kg

Acute inhalation toxicity: LC50 Rat: 2.44mg/l /4h

Acute dermal toxicity: LD50 Rat: >2,000 mg/kg

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Skin irritation: Rabbit, irritant.
Eyes irritation: Rabbit, irritant.
Sensitization: Guinea pig, sensitizing

**** SECTION 12 - ECOLOGICAL INFORMATION ****

Acute toxicity to fish: LC50/ Leuciscus idus/96h >460 - <680 mg/l DIN 38412 Part 15 static
Acute toxicity to aquatic invertebrates: Daphnia magna/EC50/48h 404 mg/l Directive 79/831/EEC static
Acute toxicity to aquatic plants: Green algae/EC50/72h >100 mg/l OECD Guideline 201 static
Microorganisms: Activated sludge/EC20/0.5h >1000 mg/l OECD Guideline 209 static

**** SECTION 13 - DISPOSAL CONSIDERATIONS ****

Dispose of in a manner consistent with federal, state, and local regulations.
Do not reuse empty containers and dispose of in accordance with the regulation issued by the appropriate local authorities. If there is product residue in the emptied container, follow directions for handling on the container's label.
Incorrect disposal or reuse of this container is illegal and can be dangerous.
No waste key number as per the European Waste Typed List can be assigned to this product, since such classification is based on (as yet undetermined) use to which the product is put by the consumer. The waste key number must be determined as per the European Waste Types List (EU Waste Types List 2000/532/EC) in cooperation with the disposal firm, producing firm or authority

**** SECTION 14 - TRANSPORT INFORMATION ****

This product is not regulated as dangerous goods by DOT, IMDG, ADR/RID, IATA/ICAO

**** SECTION 15 - REGULATORY INFORMATION ****

European/International Regulations

European Labeling in Accordance with EC Directives

Statutory basis/list: According to Directive 67/548/EEC or 1999/45/EC.

Hazard Symbols:	Xn	Harmful.
	Xi	Irritant.
Risk Phrases:	R20	Harmful by inhalation.
	R36/38	Irritating to eyes and skin.
	R43	May cause sensitization by skin contact.
	R68	Possible risk of irreversible effects.
	R37	Irritating to respiratory system.
Safety Phrases:	S2	Keep out of reach of children.
	S36/37	Wear suitable protective clothing and gloves

Other international regulations:

Listed on or in accordance with the following inventories

AICS - Listed/registered
EINECS - Listed/registered
ENCS - Listed/registered
IECSC - Listed/registered
KECL - Listed/registered
DSL - Listed/registered
PICCS - Listed/registered
TSCA - Listed/registered

**** SECTION 16 - OTHER INFORMATION ****

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users

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should make their own investigations to determine the suitability of the information for their particular purposes. In no way shall we be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if we have been advised of the possibility of such damages