

EN

## \*\*\*\* MATERIAL SAFETY DATA SHEET \*\*\*\*

Glutaric dialdehyde, 50 wt.% solution in water

## \*\*\*\* SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION \*\*\*\*

MSDS Name: Glutaric dialdehyde, 50 wt.% solution in water

Catalog Numbers:

41096-0000, 41096-0030, 41096-5000

Synonyms:

Pentanedial, Glutaraldehyde.

Company Identification (Europe): Acros Organics BVBA  
 Janssen Pharmaceuticaaan 3a  
 2440 Geel, Belgium

Company Identification (USA): Acros Organics  
 One Reagent Lane  
 Fairlawn, NJ 07410

For information in North America, call: 800-ACROS-01

For information in Europe, call: 0032(0) 14575211

For emergencies in the US, call CHEMTREC: 800-424-9300

For emergencies in Europe, call: 0032(0) 14575299

## \*\*\*\* SECTION 2 - COMPOSITION, INFORMATION ON INGREDIENTS \*\*\*\*

CAS#	Chemical Name	%	EINECS#	Haz Symbols	Risk Phrases
111-30-8	Glutaric dialdehyde	50-51%	203-856-5	T N   23/25	34 42/43 50
7732-18-5	Water	49-50%	231-791-2		

Text for R-phrases: see Section 16

Hazard Symbols: T N

Risk Phrases: 23/25 34 42/43 50

## \*\*\*\* SECTION 3 - HAZARDS IDENTIFICATION \*\*\*\*

## EMERGENCY OVERVIEW

Toxic by inhalation and if swallowed. Causes burns. May cause sensitization by inhalation and skin contact. Very toxic to aquatic organisms.

## Potential Health Effects

## Eye:

Causes eye burns. May cause irreversible eye injury. Causes severe burning pain and redness of the conjunctiva. May cause permanent visual impairment.

## Skin:

Causes skin burns. May cause skin sensitization, an allergic reaction, which becomes evident upon re-exposure to this material. May cause irritation with burning pain, itching and redness. Produces harmless yellow stains on the skin.

## Ingestion:

Poison by ingestion. Causes gastrointestinal tract burns. May cause severe digestive tract irritation with abdominal pain, nausea, vomiting and diarrhea. Ingestion may produce shock, collapse, and convulsions.

## Inhalation:

Causes chemical burns to the respiratory tract. May cause lung damage. Toxic if inhaled.

## Chronic:

Prolonged or repeated skin contact may cause dermatitis.

## \*\*\*\* SECTION 4 - FIRST AID MEASURES \*\*\*\*

**Eyes:**

Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid immediately.

**Skin:**

Get medical aid immediately. Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.

**Ingestion:**

If victim is conscious and alert, give 2-4 cupfuls of milk or water. Get medical aid immediately.

**Inhalation:**

Get medical aid immediately. Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.

**Notes to Physician:****\*\*\*\* SECTION 5 - FIRE FIGHTING MEASURES \*\*\*\*****General Information:**

As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear.

**Extinguishing Media:**

Use water spray, dry chemical, carbon dioxide, or chemical foam.

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

**General Information:** Use proper personal protective equipment as indicated in Section 8.

**Spills/Leaks:**

Cover with sand, dry lime or soda ash and place in a closed container for disposal.

**\*\*\*\* SECTION 7 - HANDLING and STORAGE \*\*\*\*****Handling:**

Use with adequate ventilation. Do not breathe dust, vapor, mist, or gas. Do not get in eyes, on skin, or on clothing. Use only in a chemical fume hood.

**Storage:**

Store in a tightly closed container. Store in a dry area. Keep refrigerated. (Store below 4°C/39°F.) Store under an inert atmosphere.

**\*\*\*\* SECTION 8 - EXPOSURE CONTROLS, PERSONAL PROTECTION \*\*\*\*****Engineering Controls:**

Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate ventilation to keep airborne concentrations low.

**Personal Protective Equipment****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.

**Respirators:**

Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Always use a NIOSH or European Standard EN 149 approved respirator when necessary.

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

Physical State: Clear liquid  
Color: Not available.  
Odor: pungent odor  
pH: 3.2 - 4.2  
Vapor Pressure: 15 mm Hg @20 deg C  
Viscosity: Not available.  
Boiling Point: > 100 deg C  
Freezing/Melting Point: -15 deg C  
Autoignition Temperature: Not available.  
Flash Point: Not available.  
Explosion Limits, lower: Not available.  
Explosion Limits, upper: Not available.  
Decomposition Temperature:  
Solubility in water: Miscible.  
Specific Gravity/Density: 1.13g/cm3  
Molecular Formula: OHC(CH2)3CHO  
Molecular Weight: 100.12

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

Chemical Stability:  
Stable.  
Conditions to Avoid:  
Incompatible materials, exposure to air, temperatures above 50°C (122°F).  
Incompatibilities with Other Materials:  
Strong oxidizing agents, strong acids, strong bases.  
Hazardous Decomposition Products:  
Carbon monoxide, carbon dioxide.  
Hazardous Polymerization: Will not occur.

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

RTECS#:  
CAS# 111-30-8: MA2450000  
CAS# 7732-18-5: ZC0110000  
LD50/LC50:  
CAS# 111-30-8: Draize test, rabbit, eye: 1 mg Severe; Draize test, rabbit, eye: 250 ug/24H Severe; Draize test, rabbit, skin: 2 mg/24H Severe; Inhalation, rat: LC50 = 480 mg/m3/4H; Oral, mouse: LD50 = 100 mg/kg; Oral, mouse: LD50 = 231 mg/kg; Oral, rat: LD50 = 134 mg/kg; Oral, rat: LD50 = 140 mg/kg; Skin, rabbit: LD50 = 560 uL/kg; Skin, rat: LD50 = >2500 mg/kg.  
CAS# 7732-18-5: Oral, rat: LD50 = >90 mL/kg.  
Carcinogenicity:  
Glutaric dialdehyde -  
Not listed by ACGIH, IARC, NIOSH, NTP, or OSHA.  
Water -  
Not listed by ACGIH, IARC, NIOSH, NTP, or OSHA.  
See actual entry in RTECS for complete information.

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

Ecotoxicity:  
Daphnia: 29.7mg/l; 48h; EC/LC50Algae: 0.84mg/l; 96h; EC/LC50Bacteria: 13.3mg/l; 17h; EC/LC50  
Other  
Do not empty into drains. Biodegradable.

## \*\*\*\* SECTION 13 - DISPOSAL CONSIDERATIONS \*\*\*\*

Dispose of in a manner consistent with federal, state, and local regulations.

## \*\*\*\* SECTION 14 - TRANSPORT INFORMATION \*\*\*\*

## IATA

Shipping Name: TOXIC LIQUID, CORROSIVE, ORGANIC, N.O.S.\*  
Hazard Class: 6.1  
UN Number: 2927  
Packing Group: II

## IMO

Shipping Name: TOXIC LIQUID, CORROSIVE, ORGANIC, N.O.S.  
Hazard Class: 6.1  
UN Number: 2927  
Packing Group: II

## RID/ADR

Shipping Name: TOXIC LIQUID, CORROSIVE, ORGANIC, N.O.S.  
Hazard Class: 6.1  
UN Number: 2927  
Packing group: II

## \*\*\*\* SECTION 15 - REGULATORY INFORMATION \*\*\*\*

## European/International Regulations

## European Labeling in Accordance with EC Directives

Hazard Symbols: T N

## Risk Phrases:

R 23/25 Toxic by inhalation and if swallowed.  
R 34 Causes burns.  
R 42/43 May cause sensitization by inhalation and skin contact.  
R 50 Very toxic to aquatic organisms.

## Safety Phrases:

S 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.  
S 36/37/39 Wear suitable protective clothing, gloves and eye/face protection.  
S 45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).  
S 61 Avoid release to the environment. Refer to special instructions/safety data sheets.

## WGK (Water Danger/Protection)

CAS# 111-30-8: 2

CAS# 7732-18-5: No information available.

## United Kingdom Occupational Exposure Limits

## United Kingdom Maximum Exposure Limits

CAS# 111-30-8: MEL-United Kingdom, TWA 0.05 ppm TWA; 0.2 mg/m<sup>3</sup> TWA

CAS# 111-30-8: MEL-United Kingdom, STEL 0.05 ppm STEL; 0.2 mg/m<sup>3</sup>

STEL

## Canada

CAS# 111-30-8 is listed on Canada's DSL List.

CAS# 7732-18-5 is listed on Canada's DSL List.

CAS# 111-30-8 is listed on Canada's Ingredient Disclosure List.

CAS# 7732-18-5 is not listed on Canada's Ingredient Disclosure List.

## Exposure Limits

CAS# 111-30-8: OEL-AUSTRALIA:TWA 0.2 ppm (0.7 mg/m<sup>3</sup>)

OEL-BELGIUM:TWA 0.2 mg/m<sup>3</sup>;STEL 0.82 mg/m<sup>3</sup>

OEL-DENMARK:STEL 0.2 ppm (0.8 mg/m<sup>3</sup>)

OEL-FINLAND:STEL 0.2 ppm (0.8 mg/m<sup>3</sup>)

OEL-FRANCE:STEL 0.2 ppm (0.8 mg/m<sup>3</sup>)

OEL-GERMANY:TWA 0.2 ppm (0.8 mg/m<sup>3</sup>)

OEL-THE NETHERLANDS:TWA 0.25 mg/m<sup>3</sup>

OEL-RUSSIA:STEL 5 mg/m<sup>3</sup>

OEL-SWEDEN:STEL 0.2 ppm (0.8 mg/m3)

OEL-SWITZERLAND:TWA 0.2 ppm (0.8 mg/m3);STEL 0.4 ppm (1.6 mg/m3)

OEL-UNITED KINGDOM:TWA 0.2 ppm (0.7 mg/m3);STEL 0.2 ppm

OEL IN BULGARIA, COLOMBIA, JORDAN, KOREA check ACGIH TLV

OEL IN NEW ZEALAND, SINGAPORE, VIETNAM check ACGI TLV

US FEDERAL

TSCA

CAS# 111-30-8 is listed on the TSCA inventory.

CAS# 7732-18-5 is listed on the TSCA inventory.

\*\*\*\* SECTION 16 - ADDITIONAL INFORMATION \*\*\*\*

MSDS Creation Date: 7/16/1996 Revision #3 Date: 8/08/2003

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 should make their own investigations to determine the suitability of the information for their particular purposes. In no way shall the company 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 the company has been advised of the possibility of such damages.

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