

## Material Safety Data Sheet

Date Printed: 29/SEP/2005

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Version 1.3

According to 91/155/EEC

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1 - Product and Company Information

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Product Name GLUTARIC DIALDEHYDE, 50 WT. % SOLUTION  
IN WATER  
Product Number 340855  
Company Sigma-Aldrich Company Ltd.  
The Old Brickyard  
New Road, Gillingham SP8 4XT  
United Kingdom  
Technical Phone # 44-(0)-1747-833000  
Fax 44-(0)-1747-833313  
Emergency Phone # 44-(0)-1747-833100

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2 - Composition/Information on Ingredients

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Product Name	CAS #	EC no	Annex I Index Number
GLUTARALDEHYDE, 50% AQUEOUS SOLUTION	None	203-856-5	605-022-00-X

Ingredient Name	Percent	CAS #	EC no	Annex I Index Number
GLUTARALDEHYDE	50	111-30-8	203-856-5	605-022-00-X

Symbols: T-N

R-Phrases: 23/25-34-42/43-50

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

WATER	49.5	7732-18-5	231-791-2	None
METHANOL	0.5	67-56-1	200-659-6	603-001-00-X

Symbols: F-T

R-Phrases: 11-23/24/25-39/23/24/25

Highly flammable. Toxic by inhalation, in contact with skin and if swallowed. Toxic: danger of very serious irreversible effects through inhalation, in contact with skin and if swallowed.

Formula C5H8O2  
Molecular Weight 100.12 AMU

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3 - Hazards Identification

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SPECIAL INDICATION OF HAZARDS TO HUMANS AND THE ENVIRONMENT  
Toxic by inhalation and if swallowed. Causes burns. May cause sensitization by inhalation and skin contact. Very toxic to aquatic organisms.

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4 - First Aid Measures

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AFTER INHALATION

If inhaled, remove to fresh air. If not breathing give artificial respiration. If breathing is difficult, give oxygen.

#### AFTER SKIN CONTACT

In case of skin contact, flush with copious amounts of water for at least 15 minutes. Remove contaminated clothing and shoes. Call a physician.

#### AFTER EYE CONTACT

In case of contact with eyes, flush with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Call a physician.

#### AFTER INGESTION

If swallowed, wash out mouth with water provided person is conscious. Call a physician immediately. Do not induce vomiting.

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### 5 - Fire Fighting Measures

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#### EXTINGUISHING MEDIA

Suitable: Water spray. Carbon dioxide, dry chemical powder, or appropriate foam.

#### SPECIAL RISKS

Specific Hazard(s): Emits toxic fumes under fire conditions.

#### SPECIAL PROTECTIVE EQUIPMENT FOR FIREFIGHTERS

Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

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### 6 - Accidental Release Measures

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PERSONAL PRECAUTION PROCEDURES TO BE FOLLOWED IN CASE OF LEAK OR SPILL  
Evacuate area.

#### PROCEDURE(S) OF PERSONAL PRECAUTION(S)

Wear self-contained breathing apparatus, rubber boots, and heavy rubber gloves.

#### METHODS FOR CLEANING UP

Absorb on sand or vermiculite and place in closed containers for disposal. Ventilate area and wash spill site after material pickup is complete.

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### 7 - Handling and Storage

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#### HANDLING

Directions for Safe Handling: Do not breathe vapor. Do not get in eyes, on skin, on clothing. Avoid prolonged or repeated exposure.

#### STORAGE

Conditions of Storage: Store under inert gas. Keep tightly closed.

SPECIAL REQUIREMENTS: Store under inert gas. Air sensitive.

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### 8 - Exposure Controls / Personal Protection

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#### ENGINEERING CONTROLS

Safety shower and eye bath. Use only in a chemical fume hood.



Solvent Content	N/A
Water Content	N/A
Surface Tension	N/A
Conductivity	N/A
Miscellaneous Data	N/A
Solubility	Solubility in Water:Soluble. Other Solvents: SOLUBLE IN ALCOHOL, BENZENE ETHER

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## 10 - Stability and Reactivity

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### STABILITY

Stable: Stable.

Conditions of Instability: May discolor on exposure to air.

Materials to Avoid: Strong oxidizing agents, Strong bases, Strong acids.

### HAZARDOUS DECOMPOSITION PRODUCTS

Hazardous Decomposition Products: Carbon monoxide, Carbon dioxide.

### HAZARDOUS POLYMERIZATION

Hazardous Polymerization: Nonhazardous polymerization may occur.

Avoid initiators, accelerators, heat, pressure, and contamination

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## 11 - Toxicological Information

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### SENSITIZATION

Respiratory: May cause allergic respiratory reaction.

Skin: May cause allergic skin reaction.

### SIGNS AND SYMPTOMS OF EXPOSURE

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated. Symptoms of exposure may include burning sensation, coughing, wheezing, laryngitis, shortness of breath, headache, nausea, and vomiting. Inhalation may result in spasm, inflammation and edema of the larynx and bronchi, chemical pneumonitis, and pulmonary edema. Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin.

### ROUTE OF EXPOSURE

Skin Contact: Causes burns.

Skin Absorption: Harmful if absorbed through skin.

Eye Contact: Causes burns.

Inhalation: Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract. Toxic if inhaled.

Ingestion: Toxic if swallowed.

### TARGET ORGAN INFORMATION

Heart. Central nervous system.

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## 12 - Ecological Information

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## 13 - Disposal Considerations

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### SUBSTANCE DISPOSAL

Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber. Observe all federal, state, and local

environmental regulations.

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## 14 - Transport Information

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### RID/ADR

UN#: 2922  
Class: 8  
PG: II  
Proper Shipping Name: Corrosive liquid, toxic, n.o.s.

### IMDG

UN#: 2922  
Class: 8  
PG: II  
Subrisk: 6.1  
Proper Shipping Name: CORROSIVE LIQUID, TOXIC, N.O.S.  
Marine Pollutant: No  
Severe Marine Pollutant: No  
Technical Name: Required

### IATA

UN#: 2922  
Class: 8  
PG: II  
Subrisk: 6.1  
Proper Shipping Name: Corrosive liquid, toxic, n.o.s.  
Inhalation Packing Group I: No  
Technical Name: Required

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## 15 - Regulatory Information

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### CLASSIFICATION AND LABELING ACCORDING TO EU DIRECTIVES

ANNEX I INDEX NUMBER: 605-022-00-X

INDICATION OF DANGER: T-N

Toxic. Dangerous for the environment.

R-PHRASES: 23/25-34-42/43-50

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

S-PHRASES: 23-26-36/37/39-45-61

Do not breathe vapor. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Wear suitable protective clothing, gloves, and eye/face protection. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). Avoid release to the environment. Refer to special instructions/safety data sheets.

### COUNTRY SPECIFIC INFORMATION

#### Germany

WGK: 2 (Self classification)

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## 16 - Other Information

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### WARRANTY

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Inc.,

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