

## SAFETY DATA SHEET

Version 5.4  
Revision Date 04/24/2015  
Print Date 05/01/2015

**1. PRODUCT AND COMPANY IDENTIFICATION****1.1 Product identifiers**

Product name : Resorcinol

Product Number : 398047  
Brand : Sigma-Aldrich  
Index-No. : 604-010-00-1

CAS-No. : 108-46-3

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

Identified uses : Laboratory chemicals, Manufacture of substances

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

Company : Sigma-Aldrich  
3050 Spruce Street  
SAINT LOUIS MO 63103  
USA

Telephone : +1 800-325-5832  
Fax : +1 800-325-5052

**1.4 Emergency telephone number**

Emergency Phone # : (314) 776-6555

**2. HAZARDS IDENTIFICATION****2.1 Classification of the substance or mixture****GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)**

Acute toxicity, Oral (Category 4), H302  
Skin irritation (Category 2), H315  
Serious eye damage (Category 1), H318  
Acute aquatic toxicity (Category 1), H400

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

**2.2 GHS Label elements, including precautionary statements**

Pictogram



Signal word

Danger

Hazard statement(s)

H302 Harmful if swallowed.  
H315 Causes skin irritation.  
H318 Causes serious eye damage.  
H400 Very toxic to aquatic life.

Precautionary statement(s)

P264 Wash skin thoroughly after handling.  
P270 Do not eat, drink or smoke when using this product.  
P273 Avoid release to the environment.  
P280 Wear eye protection/ face protection.  
P280 Wear protective gloves.

P301 + P312 + P330 IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you feel unwell. Rinse mouth.  
 P302 + P352 IF ON SKIN: Wash with plenty of soap and water.  
 P305 + P351 + P338 + P310 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/ physician.  
 P332 + P313 If skin irritation occurs: Get medical advice/ attention.  
 P362 Take off contaminated clothing and wash before reuse.  
 P391 Collect spillage.  
 P501 Dispose of contents/ container to an approved waste disposal plant.

**2.3 Hazards not otherwise classified (HNOC) or not covered by GHS - none**

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**3. COMPOSITION/INFORMATION ON INGREDIENTS**

**3.1 Substances**

Synonyms : 1,3-Benzenediol  
 Formula : C<sub>6</sub>H<sub>6</sub>O<sub>2</sub>  
 Molecular weight : 110.11 g/mol  
 CAS-No. : 108-46-3  
 EC-No. : 203-585-2  
 Index-No. : 604-010-00-1

**Hazardous components**

Component	Classification	Concentration
<b>1,3-Benzenediol</b>		
	Acute Tox. 4; Skin Irrit. 2; Eye Dam. 1; Aquatic Acute 1; H302, H315, H318, H400	<= 100 %

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

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**4. FIRST AID MEASURES**

**4.1 Description of first aid measures**

**General advice**

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

**If inhaled**

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

**In case of skin contact**

Wash off with soap and plenty of water. Consult a physician.

**In case of eye contact**

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

**If swallowed**

Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

**4.2 Most important symptoms and effects, both acute and delayed**

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

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

No data available

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**5. FIREFIGHTING MEASURES**

**5.1 Extinguishing media**

**Suitable extinguishing media**

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

## 5.2 Special hazards arising from the substance or mixture

Carbon oxides

## 5.3 Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

## 5.4 Further information

No data available

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## 6. ACCIDENTAL RELEASE MEASURES

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

Use personal protective equipment. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.

For personal protection see section 8.

### 6.2 Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

### 6.3 Methods and materials for containment and cleaning up

Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

### 6.4 Reference to other sections

For disposal see section 13.

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## 7. HANDLING AND STORAGE

### 7.1 Precautions for safe handling

Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Further processing of solid materials may result in the formation of combustible dusts. The potential for combustible dust formation should be taken into consideration before additional processing occurs.

Provide appropriate exhaust ventilation at places where dust is formed.

For precautions see section 2.2.

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

Keep container tightly closed in a dry and well-ventilated place.

Air and light sensitive.

Storage class (TRGS 510): Non-combustible, acute toxic Cat.3 / toxic hazardous materials or hazardous materials causing chronic effects

### 7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

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## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1 Control parameters

#### Components with workplace control parameters

Component	CAS-No.	Value	Control parameters	Basis
1,3-Benzenediol	108-46-3	TWA	10 ppm	USA. ACGIH Threshold Limit Values (TLV)
	Remarks	Eye irritation Skin irritation Not classifiable as a human carcinogen		
		TWA	10.000000 ppm	USA. ACGIH Threshold Limit Values (TLV)
		Skin & eye irritation Not classifiable as a human carcinogen		
		STEL	20 ppm	USA. ACGIH Threshold Limit Values (TLV)
		Eye irritation Skin irritation		

		Not classifiable as a human carcinogen		
		STEL	20.000000 ppm	USA. ACGIH Threshold Limit Values (TLV)
		Skin & eye irritation Not classifiable as a human carcinogen		
		TWA	10.000000 ppm 45.000000 mg/m3	USA. NIOSH Recommended Exposure Limits
		ST	20.000000 ppm 90.000000 mg/m3	USA. NIOSH Recommended Exposure Limits
		TWA	10 ppm 45 mg/m3	USA. NIOSH Recommended Exposure Limits
		ST	20 ppm 90 mg/m3	USA. NIOSH Recommended Exposure Limits

#### Biological occupational exposure limits

Component	CAS-No.	Parameters	Value	Biological specimen	Basis
1,3-Benzenediol	108-46-3	Methemoglobin	1.500 %	In blood	ACGIH - Biological Exposure Indices (BEI)
	Remarks	During or end of shift			
		Methemoglobin	1.5% Hb	In blood	ACGIH - Biological Exposure Indices (BEI)
		During or at the end of the shift			

## 8.2 Exposure controls

### Appropriate engineering controls

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

### Personal protective equipment

#### Eye/face protection

Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

#### Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

#### Full contact

Material: Nitrile rubber

Minimum layer thickness: 0.11 mm

Break through time: 480 min

Material tested: Dermatrill® (KCL 740 / Aldrich Z677272, Size M)

#### Splash contact

Material: Nitrile rubber

Minimum layer thickness: 0.11 mm

Break through time: 480 min

Material tested: Dermatrill® (KCL 740 / Aldrich Z677272, Size M)

data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de, test method: EN374

If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

### Body Protection

Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

### Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

### Control of environmental exposure

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

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## 9. PHYSICAL AND CHEMICAL PROPERTIES

### 9.1 Information on basic physical and chemical properties

- |   |   |
|---|---|
| a) Appearance                                   | Form: solid   |
| b) Odour  | No data available                                       |
| c) Odour Threshold                              | No data available                                       |
| d) pH   | 4.4 at 50 g/l at 20 °C (68 °F)                          |
| e) Melting point/freezing point                 | Melting point/range: 109 - 112 °C (228 - 234 °F) - lit. |
| f) Initial boiling point and boiling range      | 178 °C (352 °F) at 21 hPa (16 mmHg) - lit.              |
| g) Flash point                                  | 127 °C (261 °F) - closed cup                            |
| h) Evaporation rate                             | No data available                                       |
| i) Flammability (solid, gas)                    | No data available                                       |
| j) Upper/lower flammability or explosive limits | Lower explosion limit: 1.4 %(V)                         |
| k) Vapour pressure                              | 1 hPa (1 mmHg) at 21.1 °C (70.0 °F)                     |
| l) Vapour density                               | No data available                                       |
| m) Relative density                             | 1.272 g/cm <sup>3</sup>                                 |
| n) Water solubility                             | soluble   |
| o) Partition coefficient: n-octanol/water       | log Pow: 0.8  |
| p) Auto-ignition temperature                    | No data available                                       |
| q) Decomposition temperature                    | No data available                                       |
| r) Viscosity                                    | No data available                                       |
| s) Explosive properties                         | No data available                                       |
| t) Oxidizing properties                         | No data available                                       |

### 9.2 Other safety information

No data available

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## 10. STABILITY AND REACTIVITY

### 10.1 Reactivity

No data available

## 10.2 Chemical stability

Stable under recommended storage conditions.

## 10.3 Possibility of hazardous reactions

No data available

## 10.4 Conditions to avoid

No data available

## 10.5 Incompatible materials

Oxidizing agents, Iron and iron salts.

## 10.6 Hazardous decomposition products

Other decomposition products - No data available

In the event of fire: see section 5

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## 11. TOXICOLOGICAL INFORMATION

### 11.1 Information on toxicological effects

#### Acute toxicity

LD50 Oral - Rat - 301 mg/kg

Remarks: Behavioral:Convulsions or effect on seizure threshold. Gastrointestinal:Changes in structure or function of salivary glands. Lungs, Thorax, or Respiration:Dyspnea.

Inhalation: No data available

LD50 Dermal - Rabbit - 3,360 mg/kg

Remarks: Skin irritation Nutritional and Gross Metabolic:Weight loss or decreased weight gain.

No data available

#### Skin corrosion/irritation

Skin - Rabbit

Result: Skin irritation - 24 h

#### Serious eye damage/eye irritation

Eyes - Rabbit

Result: Severe eye irritation

#### Respiratory or skin sensitisation

No data available

#### Germ cell mutagenicity

Rat

Liver

DNA damage

Human

lymphocyte

Cytogenetic analysis

#### Carcinogenicity

Carcinogenicity - Mouse - Skin

Tumorigenic:Equivocal tumorigenic agent by RTECS criteria. Skin and Appendages: Other: Tumors.

This product is or contains a component that is not classifiable as to its carcinogenicity based on its IARC, ACGIH, NTP, or EPA classification.

IARC: 3 - Group 3: Not classifiable as to its carcinogenicity to humans (1,3-Benzenediol)

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

**Reproductive toxicity**

No data available

No data available

**Specific target organ toxicity - single exposure**

No data available

**Specific target organ toxicity - repeated exposure**

No data available

**Aspiration hazard**

No data available

**Additional Information**

RTECS: VG9625000

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Stomach - Irregularities - Based on Human Evidence

Stomach - Irregularities - Based on Human Evidence

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**12. ECOLOGICAL INFORMATION****12.1 Toxicity**

Toxicity to daphnia and other aquatic invertebrates      EC50 - Daphnia magna (Water flea) - 0.25 mg/l - 96 h

Toxicity to algae      EC50 - Chlorella pyrenoidosa - 1.1 - 72 mg/l - 72 h

**12.2 Persistence and degradability**

Biodegradability      Biotic/Aerobic Chemical oxygen demand - Exposure time 4 d  
Result: - Readily biodegradable

**12.3 Bioaccumulative potential**

No data available

**12.4 Mobility in soil**

No data available

**12.5 Results of PBT and vPvB assessment**

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

**12.6 Other adverse effects**

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.  
Very toxic to aquatic life.

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**13. DISPOSAL CONSIDERATIONS****13.1 Waste treatment methods****Product**

Offer surplus and non-recyclable solutions to a licensed disposal company. 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.

**Contaminated packaging**

Dispose of as unused product.

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**14. TRANSPORT INFORMATION****DOT (US)**

UN number: 2876      Class: 6.1

Packing group: III

Proper shipping name: Resorcinol

Reportable Quantity (RQ): 5000 lbs

Poison Inhalation Hazard: No

**IMDG**

UN number: 2876      Class: 6.1      Packing group: III      EMS-No: F-A, S-A  
 Proper shipping name: RESORCINOL  
 Marine pollutant:yes

**IATA**

UN number: 2876      Class: 6.1      Packing group: III  
 Proper shipping name: Resorcinol

**15. REGULATORY INFORMATION****SARA 302 Components**

No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

**SARA 313 Components**

This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

**SARA 311/312 Hazards**

Acute Health Hazard, Chronic Health Hazard

**Massachusetts Right To Know Components**

	CAS-No.	Revision Date
1,3-Benzenediol	108-46-3	1994-04-01

**Pennsylvania Right To Know Components**

	CAS-No.	Revision Date
1,3-Benzenediol	108-46-3	1994-04-01

**New Jersey Right To Know Components**

	CAS-No.	Revision Date
1,3-Benzenediol	108-46-3	1994-04-01

**California Prop. 65 Components**

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

**16. OTHER INFORMATION****Full text of H-Statements referred to under sections 2 and 3.**

Acute Tox.	Acute toxicity
Aquatic Acute	Acute aquatic toxicity
Eye Dam.	Serious eye damage
H302	Harmful if swallowed.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H400	Very toxic to aquatic life.
Skin Irrit.	Skin irritation

**HMIS Rating**

Health hazard:	2
Chronic Health Hazard:	*
Flammability:	1
Physical Hazard	0

**NFPA Rating**

Health hazard:	2
Fire Hazard:	1
Reactivity Hazard:	0



**Further information**

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**Preparation Information**

Sigma-Aldrich Corporation  
Product Safety – Americas Region  
1-800-521-8956

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