



## 1 Identification of the substance/mixture and of the company/undertaking

### 1.1 Product identifier

**Trade name:** RESORCINOL ≥ 99 %, for biochemistry

**Article number:** 5727

**CAS Number:**

108-46-3

**EC number:**

203-585-2

**Index number:**

604-010-00-1

### Registration number

A registration number is not available for this substance as the substance or its use are exempted from registration according to Article 2 REACH Regulation (EC) No 1907/2006, the annual tonnage does not require a registration or the registration is envisaged for a later registration deadline.

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

#### Application of the substance / the mixture

Laboratory chemical

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

#### Manufacturer/Supplier:

Carl Roth GmbH + Co. KG

Schoemperlenstraße 3-5

76185 Karlsruhe

Germany

Telefon: +49/(0)721 5606-0

Telefax: +49/(0)721 5606-149

E-Mail: [sicherheit@carlroth.de](mailto:sicherheit@carlroth.de)

**Further information obtainable from:** Department Health, Safety and Environment

### 1.4 Emergency telephone number:

Poison Centre Munich

Telefon +49/(0)89 19240

## 2 Hazards identification

### 2.1 Classification of the substance or mixture

#### Classification according to Regulation (EC) No 1272/2008

Aquatic Acute 1 H400 Very toxic to aquatic life.

Acute Tox. 4 H302 Harmful if swallowed.

Skin Irrit. 2 H315 Causes skin irritation.

Eye Irrit. 2 H319 Causes serious eye irritation.

#### Classification according to Directive 67/548/EEC or Directive 1999/45/EC

Xn; Harmful

R22: Harmful if swallowed.

Xi; Irritant

R36/38: Irritating to eyes and skin.

N; Dangerous for the environment

R50: Very toxic to aquatic organisms.

### 2.2 Label elements

#### Labelling according to Regulation (EC) No 1272/2008

The substance is classified and labelled according to the CLP regulation.

(Contd. on page 2)

**Trade name: RESORCINOL ≥ 99 %, for biochemistry**

(Contd. of page 1)

**Hazard pictograms**

GHS07

GHS09

**Signal word** Warning**Hazard statements**

H302 Harmful if swallowed.

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H400 Very toxic to aquatic life.

**Precautionary statements**

P273 Avoid release to the environment.

P302+P352 IF ON SKIN: Wash with plenty of 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.

**Additional information:**

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**2.3 Other hazards**

All chemicals are potentially dangerous. They are therefore only be handled by specially trained personnel with the necessary care.

**Results of PBT and vPvB assessment****PBT:** Not applicable.**vPvB:** Not applicable.

### 3 Composition/information on ingredients

**3.1 Chemical characterization: Substances****CAS No. Description**

108-46-3 resorcinol

**Identification number(s)****EC number:** 203-585-2**Index Number:** 604-010-00-1**Formula:** C<sub>6</sub>H<sub>6</sub>O<sub>2</sub>**Molar mass [g/mol]:** 110,11

### 4 First aid measures

**4.1 Description of first aid measures****General information:**

Remove any clothing soiled by the product.

**After inhalation:**

Supply fresh air; if there is any trouble seek medical help.

(Contd. on page 3)

**Trade name: RESORCINOL ≥ 99 %, for biochemistry**

(Contd. of page 2)

**After skin contact:**

Immediately rinse with water.  
If skin irritation continues, consult a doctor.

**After eye contact:**

Rinse opened eye for 10 minutes under running water. Then consult a doctor.

**After swallowing:**

Rinse out mouth and drink a glass of water. Do not induce vomiting.  
Call for a doctor immediately.

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

CNS disorders  
Irritations

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

No further relevant information available.

**5 Firefighting measures****5.1 Extinguishing media****Suitable extinguishing agents:**

Use fire extinguishing methods suitable to surrounding conditions.  
CO<sub>2</sub>, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

**For safety reasons unsuitable extinguishing agents:**

For this substance/mixture no limitations of extinguishing agents are given.

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

Forms explosive mixtures with air on intense heating.  
Danger of dust explosion.

In case of fire, the following can be released:

In the event of fire development of hazardous combustion gases or vapours possible.  
Carbon monoxide and carbon dioxide

**5.3 Advice for firefighters****Protective equipment:**

Wear self-contained respiratory protective device.  
Wear fully protective suit.

**Additional information**

Collect contaminated fire fighting water separately. It must not enter the sewage system.  
Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.  
Prevent fire-fighting water from entering surface water or groundwater.

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

Ensure adequate ventilation  
Avoid formation of dust.  
Wear personal protective equipment.  
Evacuate the danger area, observe emergency procedures, consult an expert.

**6.2 Environmental precautions**

Keep contaminated washing water and dispose of appropriately.

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

Pick up mechanically.  
Dispose of the material collected according to regulations.

(Contd. on page 4)



**Trade name: RESORCINOL ≥ 99 %, for biochemistry**

(Contd. of page 3)

Dispose contaminated material as waste according to item 13.

#### 6.4 Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

## 7 Handling and storage

### 7.1 Precautions for safe handling

Ensure good ventilation/exhaustion at the workplace.

#### Information about fire - and explosion protection:

Keep respiratory protective device available.

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

#### Storage:

#### Requirements to be met by storerooms and receptacles:

No special requirements.

#### Information about storage in one common storage facility:

Store away from foodstuffs.

#### Further information about storage conditions:

Protect from exposure to the light.

Keep container tightly sealed.

**Recommended storage temperature:** 15 - 25 °C

### 7.3 Specific end use(s)

No further relevant information available.

## 8 Exposure controls/personal protection

#### Additional information about design of technical facilities:

No further data; see item 7.

### 8.1 Control parameters

#### Ingredients with limit values that require monitoring at the workplace:

##### 108-46-3 resorcinol

WEL (Great Britain)	Short-term value: 92 mg/m <sup>3</sup> , 20 ppm Long-term value: 46 mg/m <sup>3</sup> , 10 ppm Sk
IOELV (EU)	Long-term value: 45 mg/m <sup>3</sup> , 10 ppm Skin

#### Additional information:

The lists valid during the making were used as basis.

### 8.2 Exposure controls

#### Personal protective equipment:

#### General protective and hygienic measures:

Do not breathe dust.

Immediately remove all soiled and contaminated clothing.

Wash hands before breaks and at the end of work.

Avoid contact with the eyes and skin.

(Contd. on page 5)

**Trade name: RESORCINOL ≥ 99 %, for biochemistry**

(Contd. of page 4)

**Individual protection measures**

Protective clothing needs to be selected specifically for the workplace, depending on concentrations and quantities of the hazardous substances handled. The chemical resistance of the protective equipment should be enquired at the respective supplier.

**Respiratory protection:**

Required when dusts are generated: filter P2.

**Protection of hands:**

Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

**Material of gloves**

Nitrile, thickness: ≥ 0.11 mm

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

**Penetration time of glove material**

Value for the permeation: Level ≥ 6

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

**As protection from splashes gloves made of the following materials are suitable:**

Nitrile rubber, thickness: ≥ 0.11 mm

Value for the permeation: Level ≥ 6

**Eye protection:**

Tightly sealed goggles

**Body protection:**

Protective work clothing

## 9 Physical and chemical properties

**9.1 Information on basic physical and chemical properties****General Information****Appearance:**

<b>Form:</b>	Solid
<b>Colour:</b>	Whitish
<b>Odour:</b>	Unpleasant
<b>Odour threshold:</b>	No information available.

(Contd. on page 6)

## Safety data sheet

according to Regulation (EC) No. 1907/2006



Printing date 04.04.2014

Version number 2

Revision: 04.04.2014

Trade name: RESORCINOL ≥ 99 %, for biochemistry

(Contd. of page 5)

<b>pH-value (100 g/l) at 20 °C:</b>	4 - 6
<b>Change in condition</b>	
<b>Melting point/Melting range:</b>	110 °C
<b>Boiling point/Boiling range:</b>	281.4 °C
<b>Flash point:</b>	127 °C
<b>Flammability (solid, gaseous):</b>	Product is not flammable.
<b>Ignition temperature:</b>	605 °C
<b>Decomposition temperature:</b>	>200 °C
<b>Self-igniting:</b>	No information available
<b>Danger of explosion:</b>	Product does not present an explosion hazard.
<b>Explosion limits:</b>	
<b>Lower:</b>	1.4 Vol %
<b>Upper:</b>	No information available.
<b>Oxidizing properties:</b>	No information available.
<b>Vapour pressure at 20 °C:</b>	0.01 hPa
<b>Density at 20 °C:</b>	1.271 g/cm <sup>3</sup>
<b>Relative density</b>	No Information available.
<b>Vapour density</b>	No information available
<b>Evaporation rate</b>	No information available
<b>Solubility in / Miscibility with water at 20 °C:</b>	1400 g/l
<b>Partition coefficient (n-octanol/water):</b>	0.8 log POW
<b>Viscosity:</b>	
<b>Dynamic:</b>	No information available.
<b>Kinematic:</b>	No information available.
<b>9.2 Other information</b>	No further relevant information available.

## 10 Stability and reactivity

### 10.1 Reactivity

highly reactive

Risk of dust explosion.

Forms explosive mixtures with air on intense heating.

### 10.2 Chemical stability

#### Thermal decomposition / conditions to be avoided:

No decomposition if used and stored according to specifications.

### 10.3 Possibility of hazardous reactions

Danger of explosion with:

Nitric acid

Exothermic reaction with:

Ammonia

Amines

organic nitro compounds

Strong oxidizing agents

Strong reaction possible with:

Reacts with alkali (lyes).

(Contd. on page 7)



**Trade name: RESORCINOL ≥ 99 %, for biochemistry**

(Contd. of page 6)

metallic salts  
Iron  
Acid anhydrides  
Acid chlorides

**10.4 Conditions to avoid**

Strong Heating.

**10.5 Incompatible materials:**

No information available.

**10.6 Hazardous decomposition products:**

In case of fire: see item 5.

**Additional information:**

Light-sensitive.  
Sensitive to air.

## 11 Toxicological information

**11.1 Information on toxicological effects****Acute toxicity:****LD/LC50 values relevant for classification:**

Oral	LD <sub>50</sub>	301 mg/kg (rat) (RTECS)
	LDLO	29 mg/kg (Men) (RTECS)
Dermal	LD <sub>50</sub>	3360 mg/kg (rabbit)

**Specific symptoms in biological assay:**

Skin irritation test (rabbit): irritations.  
Eye irritation test (rabbit): severe irritations.

**Primary irritant effect:****on the skin:**

Irritant to skin and mucous membranes.

**on the eye:**

Irritating effect.

**after inhalation:**

Irritations in the respiratory tract, coughing, dyspnoea.

**Sensitization:**

No sensitizing effects known.

**CMR effects:****Germ cell mutagenicity:**

No information available.

**Carcinogenicity:**

No information available.

**Reproductive toxicity:**

No information available.

**Aspiration hazard:**

No information available.

**Specific target organ toxicity - single exposure**

The substance or mixture is not classified as specific target organ toxicant, single exposure.

**Specific target organ toxicity - repeated exposure**

The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

(Contd. on page 8)



**Trade name: RESORCINOL ≥ 99 %, for biochemistry**

(Contd. of page 7)

**Additional toxicological information:**Systemic effects:

CNS-disorders

cardiac arrhythmia

Blood pressure drop

Dyspnoea

Spasms

Cyanosis

methaemoglobinaemia with headache

Damage to:

Cardiac

Damage of liver and kidneys.

**Further information:**

The product should be handled with the care usual when dealing with chemicals.

## 12 Ecological information

**12.1 Toxicity****Aquatic toxicity:****Fish toxicity:**

LC <sub>50</sub>	31.6 mg/l/96 h (Leuciscus idus) (IUCLID)
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**Daphnia toxicity:**

EC50	1.28 mg/l/48 h (Daphnia magna) (IUCLID)
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**12.2 Persistence and degradability**

Biodegradation: 66.7 %/ 14 d (OECD 301C)

Easily biodegradable

**Other information:** Theoretical Oxygen Demand, ThOD: 1890 mg/g**12.3 Bioaccumulative potential**

Due to the distribution coefficient n-octanol/water a worth-mentioning accumulation in organisms is not expected.

**12.4 Mobility in soil**

No further relevant information available.

**Ecotoxicological effects:****Remark:**

Do not allow to enter waters, waste water, or soil!

Also poisonous for fish and plankton in water bodies.

**12.5 Results of PBT and vPvB assessment****PBT:** Not applicable.**vPvB:** Not applicable.**12.6 Other adverse effects**

No further relevant information available.

## 13 Disposal considerations

**Waste treatment methods****Recommendation**

This material and its container must be disposed of as hazardous waste.

(Contd. on page 9)

## Safety data sheet

according to Regulation (EC) No. 1907/2006



Printing date 04.04.2014

Version number 2

Revision: 04.04.2014

**Trade name: RESORCINOL ≥ 99 %, for biochemistry**

(Contd. of page 8)

The disposal is regionally differently regulated, therefore the kind of disposal is to be inquired at the responsible authorities.

**Uncleaned packaging:****Recommendation:**

Disposal according to official regulations.

**Recommended cleansing agents:** Water, if necessary together with cleansing agents.

### 14 Transport information

<b>14.1 UN-Number</b>	
ADR, IMDG, IATA	UN2876
<b>14.2 UN proper shipping name</b>	
ADR	2876 RESORCINOL, ENVIRONMENTALLY HAZARDOUS
IMDG	RESORCINOL, MARINE POLLUTANT
IATA	RESORCINOL
<b>14.3 Transport hazard class(es)</b>	
ADR, IMDG	
 	
<b>Class</b>	6.1 Toxic substances.
<b>Label</b>	6.1
IATA	
	
<b>Class</b>	6.1 Toxic substances.
<b>Label</b>	6.1
<b>14.4 Packing group</b>	
ADR, IMDG, IATA	III
<b>14.5 Environmental hazards:</b>	Environmentally hazardous substance, solid; Marine Pollutant
<b>Marine pollutant:</b>	Symbol (fish and tree)
<b>Special marking (ADR):</b>	Symbol (fish and tree)
<b>14.6 Special precautions for user</b>	Warning: Toxic substances.
<b>Danger code (Kemler):</b>	60
<b>EMS Number:</b>	F-A,S-A
<b>14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b>	Not applicable.

(Contd. on page 10)



**Trade name: RESORCINOL ≥ 99 %, for biochemistry**

(Contd. of page 9)

**Transport/Additional information:**

**ADR**

Limited quantities (LQ)	5 kg
Transport category	2
Tunnel restriction code	E

<b>UN "Model Regulation":</b>	UN2876, RESORCINOL, ENVIRONMENTALLY HAZARDOUS, 6.1, III
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## 15 Regulatory information

### 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

**National regulations:**

**Information about limitation of use:**

Employment restrictions concerning pregnant and lactating women must be observed.  
Employment restrictions concerning juveniles must be observed.

**Breakdown regulations:**

**Waterhazard class:**

Water hazard class 2 (Assessment by list): hazardous for water.

### 15.2 Chemical safety assessment

A Chemical Safety Assessment has not been carried out.

## 16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

**Department issuing MSDS:** Department: Health, Safety and Environment

**Contact:** Herr Heine

**Abbreviations and acronyms:**

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)

ICAO: International Civil Aviation Organization

ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO)

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

LD50\*: Lethal Dose, 50 percent (Not relevant for classification)

LD50\*: Lethal Concentration, 50 percent (Not relevant for classification)

Acute Tox. 4: Acute toxicity, Hazard Category 4

Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2

Eye Irrit. 2: Serious eye damage/eye irritation, Hazard Category 2

Aquatic Acute 1: Hazardous to the aquatic environment - Acute Hazard, Category 1

**\* Data compared to the previous version altered.**