

**SAFETY DATA SHEET**

according to the Global Harmonized System (and with all of the information required by the HPR)

Date of issue: 08/03/2018

Version 1.0

**SECTION 1. Identification****Product identifier**

Product number	107593
Product name	Resorcinol GR for analysis
CAS-No.	108-46-3

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

Identified uses	Reagent for analysis
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**Details of the supplier of the safety data sheet**

Company	Millipore (Canada) Ltd.   2149 Winston Park Dr.   Oakville   Ontario L6H 6J8   Canada   General Inquiries: +1 905 829 9500   Monday to Friday, 9:00 AM to 4:00 PM Eastern Time (GMT-5) MilliporeSigma is a business of Merck KGaA, Darmstadt, Germany.
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Emergency telephone	800-424-9300 CHEMTREC (USA) +1-703-527-3887 CHEMTREC (International) 24 Hours/day; 7 Days/week
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**SECTION 2. Hazards identification****GHS Classification**

Acute toxicity, Category 4, Oral, H302  
Skin irritation, Category 2, H315  
Eye irritation, Category 2A, H319

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

**GHS-Labeling***Hazard pictograms**Signal Word*

Warning

*Hazard Statements*

H302 Harmful if swallowed.  
H315 Causes skin irritation.  
H319 Causes serious eye irritation.

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## *Precautionary Statements*

P264 Wash skin thoroughly after handling.

P270 Do not eat, drink or smoke when using this product.

P280 Wear protective gloves/ eye protection/ face protection.

P301 + P312 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.

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.

P321 Specific treatment (see supplemental first aid instructions on this label).

P330 Rinse mouth.

P332 + P313 If skin irritation occurs: Get medical advice/ attention.

P337 + P313 If eye irritation persists: Get medical advice/ attention.

P362 Take off contaminated clothing and wash before reuse.

P501 Dispose of contents/ container to an approved waste disposal plant.

## **Other hazards**

None known.

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## **SECTION 3. Composition/information on ingredients**

Formula

$C_6H_4(OH)_2$

$C_6H_6O_2$  (Hill)

Molar mass

110.11 g/mol

## **Hazardous ingredients**

*Chemical name (Concentration)*

CAS-No.

*Resorcinol (>= 90 % - <= 100 % )*

108-46-3

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## **SECTION 4. First aid measures**

### **Description of first-aid measures**

#### *Inhalation*

After inhalation: fresh air.

#### *Skin contact*

In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower.

#### *Eye contact*

After eye contact: rinse out with plenty of water. Call in ophthalmologist. Remove contact lenses.

#### *Ingestion*

After swallowing: immediately make victim drink water (two glasses at most). Consult a physician.

Never give anything by mouth to an unconscious person.

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

irritant effects, CNS disorders, Methemoglobinemia with headache, cardiac arrhythmia, drop in blood pressure, dyspnoea, and spasms, key symptom: cyanosis (blue coloration of the blood).

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irritant effects

### Indication of any immediate medical attention and special treatment needed

Subsequently administer: activated charcoal (20 - 40 g in 10% slurry).

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## SECTION 5. Fire-fighting measures

### Extinguishing media

*Suitable extinguishing media*

Water, Foam, Carbon dioxide (CO<sub>2</sub>), Dry powder

*Unsuitable extinguishing media*

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

### Special hazards arising from the substance or mixture

Combustible.

Vapors are heavier than air and may spread along floors.

Forms explosive mixtures with air on intense heating.

Development of hazardous combustion gases or vapors possible in the event of fire.

Risk of dust explosion.

### Advice for firefighters

*Special protective equipment for fire-fighters*

Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

*Further information*

Prevent fire extinguishing water from contaminating surface water or the ground water system.

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## SECTION 6. Accidental release measures

### Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel: Avoid inhalation of dusts. Avoid substance contact. Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert.

Advice for emergency responders:

Protective equipment see section 8.

### Environmental precautions

Do not let product enter drains.

### Methods and materials for containment and cleaning up

Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up dry. Dispose of properly. Clean up affected area. Avoid generation of dusts.

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## SECTION 7. Handling and storage

### Precautions for safe handling

Observe label precautions.

### Conditions for safe storage, including any incompatibilities

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Protected from light.

Tightly closed. Dry. Keep in a well-ventilated place. Keep locked up or in an area accessible only to qualified or authorized persons.

Store at +15°C to +25°C (+59°F to +77°F).

## SECTION 8. Exposure controls/personal protection

### Exposure limit(s)

#### Ingredients

Basis	Value	Threshold limits	Remarks
<i>Resorcinol 108-46-3</i>			
CAD AB OEL	Time Weighted Average (TWA):	10 ppm 45 mg/m <sup>3</sup>	
	Short Term Exposure Limit (STEL):	20 ppm 90 mg/m <sup>3</sup>	
CAD BC OEL	Short Term Exposure Limit (STEL):	20 ppm	
	Time Weighted Average (TWA):	10 ppm	
CAD MB OEL	Time Weighted Average (TWA):	10 ppm	
	Short Term Exposure Limit (STEL):	20 ppm	
CAD ON OEL	Time Weighted Average (TWAEV):	10 ppm	
	Short Term Exposure Limit (STEV):	20 ppm	
OEL (QUE)	Time Weighted Average (TWA):	10 ppm 45 mg/m <sup>3</sup>	
	Short Term Exposure Limit (STEL):	20 ppm 90 mg/m <sup>3</sup>	

### Engineering measures

Technical measures and appropriate working operations should be given priority over the use of personal protective equipment.

### Individual protection measures

Protective clothing should be selected specifically for the workplace, depending on concentration and quantity of the hazardous substances handled. The chemical resistance of the protective equipment should be inquired at the respective supplier.

### Hygiene measures

Immediately change contaminated clothing. Apply skin- protective barrier cream. Wash hands and face after working with substance.

### Eye/face protection

Safety glasses

### Hand protection

full contact:

Glove material: Nitrile rubber  
Glove thickness: 0.11 mm

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splash contact:	Break through time:	> 480 min
	Glove material:	Nitrile rubber
	Glove thickness:	0.11 mm
	Break through time:	> 480 min

The protective gloves to be used must comply with the specifications of EC Directive 89/686/EEC and the related standard EN374, for example KCL 741 Dermatril® L (full contact), KCL 741 Dermatril® L (splash contact).

The breakthrough times stated above were determined by KCL in laboratory tests acc. to EN374 with samples of the recommended glove types.

This recommendation applies only to the product stated in the safety data sheet and supplied by us as well as to the purpose specified by us. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: [www.kcl.de](http://www.kcl.de)).

*Other protective equipment:*  
protective clothing

#### *Respiratory protection*

required when dusts are generated.

Recommended Filter type: Filter A-(P2)

The entrepreneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are performed according to the instructions of the producer. These measures have to be properly documented.

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## SECTION 9. Physical and chemical properties

Physical state	solid
Color	white
Odor	unpleasant
Odor Threshold	No information available.
pH	ca. 4 - 6 at 100 g/l 68 °F (20 °C)
Melting point	228 - 232 °F (109 - 111 °C)
Boiling point/boiling range	538 °F (281 °C) at 1,013 hPa
Flash point	261 °F (127 °C) Method: c.c.
Evaporation rate	No information available.
Flammability (solid, gas)	No information available.

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Lower explosion limit	1.4 %(V)
Upper explosion limit	No information available.
Vapor pressure	0.1 hPa at 68 °F (20 °C)
Relative vapor density	3.79
Density	ca.1.28 g/cm3 at 68 °F (20 °C)
Relative density	No information available.
Water solubility	1,000 g/l at 68 °F (20 °C)
Partition coefficient: n-octanol/water	log Pow: 0.93 (20 °C) OECD Test Guideline 107 Bioaccumulation is not expected.
Autoignition temperature	No information available.
Decomposition temperature	No information available.
Viscosity, dynamic	No information available.
Explosive properties	Not classified as explosive.
Oxidizing properties	none
Ignition temperature	1121 °F (605 °C) Method: DIN 51794
Bulk density	ca.600 - 700 kg/m3

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## SECTION 10. Stability and reactivity

### Reactivity

highly reactive

Risk of dust explosion.

Forms explosive mixtures with air on intense heating.

A range from approx. 15 Kelvin below the flash point is to be rated as critical.

### Chemical stability

Sensitivity to light

Sensitive to air.

### Possibility of hazardous reactions

Risk of explosion with:

Nitric acid

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Exothermic reaction with:

Ammonia, Amines, organic nitro compounds, Strong oxidizing agents

Violent reactions possible with:

bases, metallic salts, Iron, Acid anhydrides, Acid chlorides

## Conditions to avoid

Strong heating.

## Incompatible materials

no information available

## Hazardous decomposition products

no information available

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## SECTION 11. Toxicological information

### Information on toxicological effects

*Likely route of exposure*

Eye contact, Skin contact, Ingestion

*Acute oral toxicity*

LD50 Rat: 301 mg/kg (RTECS)

LDLO human: 29 mg/kg (RTECS)

Symptoms: Irritation of mucous membranes

*Acute inhalation toxicity*

Symptoms: Possible damages: mucosal irritations

*Acute dermal toxicity*

LD50 Rabbit: 3,360 mg/kg  
(RTECS)

*Skin irritation*

Rabbit

Result: Irritations

(IUCLID)

Causes skin irritation.

*Eye irritation*

Rabbit

Result: Severe irritations

(IUCLID)

Causes serious eye irritation.

*Genotoxicity in vitro*

Mutagenicity (mammal cell test): micronucleus.

Result: negative

(IUCLID)

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Ames test

Result: negative  
(IUCLID)

*Specific target organ systemic toxicity - single exposure*

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

*Specific target organ systemic toxicity - repeated exposure*

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

*Aspiration hazard*

Regarding the available data the classification criteria are not fulfilled.

## Carcinogenicity

IARC

No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

OSHA

No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

NTP

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

ACGIH

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

## Further information

Systemic effects:

CNS disorders, Risk of methemoglobin formation with headache, cardiac dysrhythmia, drop in blood pressure, dyspnoea and spasms, principal symptom: cyanosis (blue discoloration of the blood).

Causes impaired function of:

thyroid

Damage to:

Liver, Kidney, Cardiac

Other dangerous properties can not be excluded.

Handle in accordance with good industrial hygiene and safety practice.

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## SECTION 12. Ecological information

### Ecotoxicity

*Toxicity to fish*

LC50 *Leuciscus idus* (Golden orfe): 31.6 mg/l; 96 h (IUCLID)

*Toxicity to daphnia and other aquatic invertebrates*

EC50 *Daphnia magna* (Water flea): 1.28 mg/l; 48 h (IUCLID)

*Toxicity to algae*

IC50 *Chlorella vulgaris* (Fresh water algae): 605 mg/l; 6 h (IUCLID)



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### *Toxicity to bacteria*

microtox test EC50 Photobacterium phosphoreum: 264 mg/l; 30 min

### **Persistence and degradability**

#### *Biodegradability*

66.7 %; 14 d

OECD Test Guideline 301C

Readily biodegradable.

#### *Theoretical oxygen demand (ThOD)*

1,890 mg/g

(Lit.)

#### *Ratio BOD/ThBOD*

BOD5 61 %

(Lit.)

#### *Ratio COD/ThBOD*

100 %

(Lit.)

### **Bioaccumulative potential**

#### *Partition coefficient: n-octanol/water*

log Pow: 0.93 (20 °C)

OECD Test Guideline 107

Bioaccumulation is not expected.

### **Mobility in soil**

No information available.

#### *Additional ecological information*

Formation of health-hazardous mixtures possible with water.

Discharge into the environment must be avoided.

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## **SECTION 13. Disposal considerations**

The information presented only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations. Disposal should be in accordance with applicable regional, national and local laws and regulations.

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## **SECTION 14. Transport information**

### **Land transport (DOT)**

UN number

UN 2876

Proper shipping name

RESORCINOL

Class

6.1

Packing group

III

Environmentally hazardous

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### **Air transport (IATA)**

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**UN number** UN 2876  
**Proper shipping name** RESORCINOL  
**Class** 6.1  
**Packing group** III  
**Environmentally hazardous** --  
**Special precautions for user** no

### Sea transport (IMDG)

**UN number** UN 2876  
**Proper shipping name** RESORCINOL  
**Class** 6.1  
**Packing group** III  
**Environmentally hazardous** --  
**Special precautions for user** yes  
EmS F-A S-A

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## SECTION 15. Regulatory information

### United States of America

### Canada

This product has been classified in accordance with the hazard criteria of the Hazardous Products Regulations (HPR) and the SDS contains all the information required by the HPR.

### Notification status

TSCA: All components of the product are listed in the TSCA-inventory.

DSL: All components of this product are on the Canadian DSL

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## SECTION 16. Other information

### Training advice

Provide adequate information, instruction and training for operators.

### Labeling

#### Hazard pictograms



### Signal Word

Warning

### Hazard Statements

H302 Harmful if swallowed.

H315 Causes skin irritation.

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H319 Causes serious eye irritation.

H400 Very toxic to aquatic life.

### *Precautionary Statements*

#### Prevention

P273 Avoid release to the environment.

#### Response

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.

P313 Get medical advice/ attention.

### **Key or legend to abbreviations and acronyms used in the safety data sheet**

Used abbreviations and acronyms can be looked up at [www.wikipedia.org](http://www.wikipedia.org).

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The information contained herein is based on the present state of our knowledge. It characterizes the product with regard to appropriate safety precautions. It does not represent a warranty of any product properties and we assume no liability for any loss or injury which may result from the use of this information. Users should conduct their own investigations to determine the suitability of the information.

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