SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006, as amended by Commission Regulation (EU) 2020/878

Version 7.10
Revision Date 24.12.2025
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GENERIC EU MSDS - NO COUNTRY SPECIFIC DATA - NO OEL DATA

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifiers

Product name : Resorcinol

Product Number : 307521
Brand : Sigma-Aldrich
Index-No. : 604-010-00-1
REACH No. : 01-2119480136-40-XXXX
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 Chemie GmbH
Eschenstrasse 5
D-82024 TAUFKIRCHEN

Telephone : +49 (0)89 6513-1130
Fax : +49 (0)89 6513-1161
E-mail address : technischerservice@merckgroup.com

1.4 Emergency telephone number

Emergency Phone # : 0800 181 7059 (CHEMTREC Deutschland)
+49 (0)696 43508409 (CHEMTREC weltweit)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Acute toxicity, Category 4	H302: Harmful if swallowed.
Skin irritation, Category 2	H315: Causes skin irritation.
Serious eye damage, Category 1	H318: Causes serious eye damage.
Skin sensitisation, Sub-category 1B	H317: May cause an allergic skin reaction.

Specific target organ toxicity - single exposure, Category 1, Central nervous system, Blood	H370: Causes damage to organs if swallowed.
Specific target organ toxicity - single exposure, Category 2, Respiratory system	H371: May cause damage to organs if swallowed.
Short-term (acute) aquatic hazard, Category 1	H400: Very toxic to aquatic life.
Long-term (chronic) aquatic hazard, Category 3	H412: Harmful to aquatic life with long lasting effects.

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms :

Signal word : Danger

Hazard statements :

H302	Harmful if swallowed.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H370	Causes damage to organs (Central nervous system, Blood) if swallowed.
H371	May cause damage to organs (Respiratory system) if swallowed.
H410	Very toxic to aquatic life with long lasting effects.

Precautionary statements :

Prevention:

P273	Avoid release to the environment.
P280	Wear protective gloves/ eye protection/ face protection.

Response:

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

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

P308 + P311 IF exposed or concerned: Call a POISON CENTER/ doctor.

Reduced Labelling (<= 125 ml)

Hazard pictograms :

Signal word	Danger
Hazard Statements	
H317	May cause an allergic skin reaction.
H370	Causes damage to organs if swallowed.
H318	Causes serious eye damage.
Precautionary Statements	
P280	Wear protective gloves/ eye protection/ face protection.
P302 + P352	IF ON SKIN: Wash with plenty of 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.
P308 + P311	IF exposed or concerned: Call a POISON CENTER/ doctor.
Supplemental Hazard Statements	none

2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Ecological information: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Toxicological information: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

SECTION 3: Composition/information on ingredients

3.1 Substances

Substance name : 1,3-Benzenediol

Index-No. : 604-010-00-1

EC-No. : 203-585-2

Components

Chemical name	CAS-No. EC-No.	Concentration (% w/w)	M-Factor, SCL, ATE
Resorcinol	108-46-3	>= 90 - <= 100	M-Factor (Acute

	203-585-2		aquatic toxicity): 1Acute toxicity estimate Acute oral toxicity: 500 mg/kg

SECTION 4: First aid measures

4.1 Description of first aid measures

General advice : Show this safety data sheet to the doctor in attendance.

If inhaled : After inhalation: fresh air. Call in physician.

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

In case of eye contact : After eye contact: rinse out with plenty of water. Immediately call in ophthalmologist. Remove contact lenses.

If swallowed : If swallowed: give water to drink (two glasses at most). Seek medical advice immediately. In exceptional cases only, if medical care is not available within one hour, induce vomiting (only in persons who are wide awake and fully conscious), administer activated charcoal (20 - 40 g in a 10% slurry) and consult a doctor as quickly as possible.

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

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media : Water
Foam
Carbon dioxide (CO2)
Dry powder

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

5.2 Special hazards arising from the substance or mixture

Specific hazards during fire fighting	:	Combustible. Vapours are heavier than air and may spread along floors. Forms explosive mixtures with air on intense heating. Development of hazardous combustion gases or vapours possible in the event of fire.
Hazardous combustion products	:	Carbon oxides

5.3 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.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions	:	Advice for non-emergency personnel: Avoid generation and inhalation of dusts in all circumstances. Avoid substance contact. Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert.

For personal protection see section 8.

6.2 Environmental precautions

Environmental precautions	:	Do not let product enter drains.

6.3 Methods and material for containment and cleaning up

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

6.4 Reference to other sections

For disposal considerations see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Hygiene measures	:	Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after

working with substance.

For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities

Further information on storage conditions	:	Tightly closed. Dry. Keep in a well-ventilated place. Keep locked up or in an area accessible only to qualified or authorised persons.
Storage class (TRGS 510)	:	6.1C, Combustible, acute toxic Cat.3 / toxic compounds or compounds which causing chronic effects
Further information on storage stability	:	Air and light sensitive.
Packaging material	:	Suitable material: Amber Glass Bottle/Jar

7.3 Specific end use(s)

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

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational Exposure Limits

8.2 Exposure controls

Personal protective equipment

Eye/face protection	:	Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Tightly fitting safety goggles

Hand protection

Material	:	Nitrile rubber
Break through time	:	480 min
Glove thickness	:	0,11 mm
Protective index	:	Full contact
Manufacturer	:	KCL 741 Dermatril® L

Material	:	Nitrile rubber
Break through time	:	480 min
Glove thickness	:	0,11 mm
Protective index	:	Splash contact
Manufacturer	:	KCL 741 Dermatril® L

Remarks	:	This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN 16523-1 please contact the

supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de).

Skin and body protection	:	protective clothing
Respiratory protection	:	required when dusts are generated. Our recommendations on filtering respiratory protection are based on the following standards: DIN EN 143, DIN 14387 and other accompanying standards relating to the used respiratory protection system.
Recommended Filter type:	:	Filter A-(P2)

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

Environmental exposure controls

Advice	:	Do not let product enter drains.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state	:	solid (20 °C, 1.013 hPa)
Form	:	flakes
Color	:	No data available
Odor	:	No data available
Melting point/ range	:	109 - 111 °C
Boiling point/boiling range	:	178 °C (21 hPa) Method: lit.
Flammability	:	No data available
Upper explosion limit / Upper flammability limit	:	No data available
Lower explosion limit / Lower flammability limit	:	1,4 %(V)
Flash point	:	127 °C Method: closed cup
Autoignition temperature	:	608 °C

Decomposition temperature	:	No data available
pH	:	4,4 (20 °C) Concentration: 50 g/l
Viscosity, dynamic	:	No data available
Viscosity, kinematic	:	No data available
Flow time	:	No data available
Solubility(ies) Water solubility	:	717 g/l (25 °C) pH: 7 soluble
Partition coefficient: n-octanol/water	:	log Pow: 0,8 (20 °C) Bioaccumulation is not expected.
Vapor pressure	:	1 hPa (21,1 °C)
Relative density	:	No data available
Density	:	1,28 g/cm3 (20 °C)
Relative vapour density	:	No data available

9.2 Other information

Explosives	:	Not classified as explosive.
Oxidizing properties	:	none
Burning rate	:	No data available
Self-ignition	:	605 - 608 °C 1.013 hPa
Evaporation rate	:	No data available
Surface tension	:	72 mN/m, 1 g/l, 20 °C, OECD Test Guideline 115, GLP: yes

Molecular weight	:	110,11 g/mol

SECTION 10: Stability and reactivity

10.1 Reactivity

Forms explosive mixtures with air on intense heating.
A range from approx. 15 Kelvin below the flash point is to be rated as critical.
The following applies in general to flammable organic substances and mixtures: in correspondingly fine distribution, when whirled up a dust explosion potential may generally be assumed.

10.2 Chemical stability

The product is chemically stable under standard ambient conditions (room temperature) .

10.3 Possibility of hazardous reactions

Hazardous reactions : Risk of explosion with:

Nitric acid

Exothermic reaction with:

Ammonia
Amines
organic nitro compounds
Strong oxidizing agents
Violent reactions possible with:

bases
metallic salts
Iron
Acid anhydrides
Acid chlorides

10.4 Conditions to avoid

Conditions to avoid : Strong heating.

10.5 Incompatible materials

No data available

10.6 Hazardous decomposition products

In the event of fire: see section 5

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity
Acute toxicity estimate Oral - 500 mg/kg
(Expert judgement)
Remarks: Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)
Inhalation: No data available

LD50 Dermal - Rabbit - male - 2.830 mg/kg
Remarks: (ECHA)

Skin corrosion/irritation
Skin - Rabbit
Result: Irritating to skin. - 24 h
Remarks: (ECHA)
Remarks: Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

Serious eye damage/eye irritation
Eyes - Rabbit
Result: Irreversible effects on the eye - 72 h
Remarks: (ECHA)

Respiratory or skin sensitization
Local lymph node assay (LLNA) - Mouse
Result: positive
(OECD Test Guideline 429)

Germ cell mutagenicity
Test Type: Ames test
Test system: Salmonella typhimurium
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 471
Result: negative
Test Type: Mutagenicity (mammal cell test): micronucleus.
Test system: Human lymphocytes
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 487
Result: positive
Test Type: sister chromatid exchange assay
Test system: Chinese hamster ovary cells
Metabolic activation: with and without metabolic activation
Result: positive
Remarks: (ECHA)
Test Type: In vitro mammalian cell gene mutation test
Test system: mouse lymphoma cells
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 476
Result: Positive results were obtained in some in vitro tests.

Test Type: sister chromatid exchange assay
Species: Rat

Application Route: Oral

Result: negative
Remarks: (ECHA)

Test Type: Micronucleus test
Species: Rat
Cell type: Bone marrow
Application Route: Oral
Method: OECD Test Guideline 474
Result: negative

Test Type: in vivo assay
Species: Drosophila melanogaster

Application Route: Oral

Result: negative
Remarks: (ECHA)

Test Type: sister chromatid exchange assay
Species: Rat

Application Route: Intraperitoneal

Result: negative
Remarks: (ECHA)

Test Type: sister chromatid exchange assay
Species: Rat

Application Route: Dermal

Result: negative
Remarks: (ECHA)

Carcinogenicity
No data available

Reproductive toxicity
No data available

Specific target organ toxicity - single exposure
Oral - Causes damage to organs. - Central nervous system, Blood
Oral - May cause damage to organs. - Respiratory system

Specific target organ toxicity - repeated exposure
No data available

Aspiration hazard
No data available

11.2 Additional Information

Endocrine disrupting properties

Product:

Assessment	The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Repeated dose toxicity - Rat - male and female - Oral - No observed adverse effect level - 80 mg/kg

RTECS: VG9625000

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

SECTION 12: Ecological information

12.1 Toxicity

Components:

Resorcinol:

Toxicity to fish	:	LC50 (Pimephales promelas (fathead minnow)): 29,5 mg/l Exposure time: 96 h Test Type: flow-through test Analytical monitoring: yes Method: US-EPA
Toxicity to daphnia and other aquatic invertebrates	:	LC50 (Daphnia magna (Water flea)): 1 mg/l End point: Immobilization Exposure time: 48 h Test Type: semi-static test Analytical monitoring: yes Method: OECD Test Guideline 202 GLP: yes
Toxicity to algae/aquatic plants	:	ErC50 (Pseudokirchneriella subcapitata (green algae)): > 97 mg/l Exposure time: 72 h Test Type: static test Analytical monitoring: yes Method: OECD Test Guideline 201 GLP: yes
M-Factor (Acute aquatic toxicity)	:	1
Toxicity to microorganisms	:	EC50 (activated sludge): 79 mg/l Exposure time: 3 h Method: OECD Test Guideline 209 GLP: yes
Toxicity to fish (Chronic toxicity)	:	LC50: 260 mg/l Exposure time: 60 d Species: Oncorhynchus mykiss (rainbow trout) Remarks: (ECHA)
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	NOEC: >= 0,172 mg/l End point: reproduction rate Exposure time: 21 d Species: Daphnia magna (Water flea) Test Type: flow-through test Analytical monitoring: yes Method: OECD Test Guideline 211

GLP: yes

Ecotoxicology Assessment

Acute aquatic toxicity : Very toxic to aquatic life.

12.2 Persistence and degradability

Components:

Resorcinol:

Biodegradability	:	Test Type: aerobic Inoculum: activated sludge, non-adapted Concentration: 100 mg/l Result: Readily biodegradable. Biodegradation: 66,7 % Exposure time: 14 d Method: OECD Test Guideline 301C
BOD/COD	:	BOD/COD: 1,74 %
ThOD	:	1.890 mg/g Remarks: (Lit.)
BOD/ThOD	:	61 % Remarks: (Lit.)

12.3 Bioaccumulative potential

Components:

Resorcinol:

Partition coefficient: n-octanol/water	:	log Pow: 0,8 (20 °C) Remarks: Bioaccumulation is not expected.

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

Product:

Assessment : This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6 Endocrine disrupting properties

Product:

Assessment : The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

No data available

12.7 Other adverse effects

No data available

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product	:	Waste material must be disposed of in accordance with the national and local regulations. Leave chemicals in original containers. No mixing with other waste. Handle uncleaned containers like the product itself.

SECTION 14: Transport information

14.1 UN number or ID number

ADR	:	UN 2876
IMDG	:	UN 2876
IATA	:	UN 2876

14.2 UN proper shipping name

ADR	:	RESORCINOL
IMDG	:	RESORCINOL
IATA	:	Resorcinol

14.3 Transport hazard class(es)

		Class	Subsidiary risks
ADR	:	6.1	
IMDG	:	6.1	
IATA	:	6.1	

14.4 Packing group

ADR

Packing group	:	III
Classification Code	:	T2
Hazard Identification Number	:	60
Labels	:	6.1
Tunnel restriction code	:	(E)

IMDG

Packing group	:	III
Labels	:	6.1

EmS Code	:	F-A, S-A

IATA (Cargo)

Packing instruction (cargo aircraft)	:	677
Packing instruction (LQ)	:	Y645
Packing group	:	III
Labels	:	Division 6.1 - Toxic substances

IATA_P (Passenger)

Packing instruction (passenger aircraft)	:	670
Packing instruction (LQ)	:	Y645
Packing group	:	III
Labels	:	Division 6.1 - Toxic substances

14.5 Environmental hazards

ADR

Environmentally hazardous	:	yes

IMDG

Marine pollutant	:	yes

14.6 Special precautions for user

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

14.7 Maritime transport in bulk according to IMO instruments

Not applicable for product as supplied.

SECTION 15: Regulatory information

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

REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles (Annex XVII)	:	Conditions of restriction for the following entries should be considered: Number on list 75: If you intend to use this product as tattoo ink, please contact your vendor.
REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59).	:	Not applicable
Regulation (EU) No 2024/590 on substances that deplete the ozone layer	:	Not applicable
Regulation (EU) 2019/1021 on persistent organic pollutants (recast)	:	Not applicable
REACH - List of substances subject to authorisation (Annex XIV)	:	Not applicable

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances.	H3	STOT SPECIFIC TARGET ORGAN TOXICITY – SINGLE EXPOSURE
	E1	ENVIRONMENTAL HAZARDS

15.2 Chemical safety assessment

For this product a chemical safety assessment was not carried out

SECTION 16: Other information

Full text of other abbreviations

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - Agreement concerning the International Carriage of Dangerous Goods by Road; AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA - European Chemicals Agency; EC-Number - European Community number; ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonised System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organisation; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardisation; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NZIoC - New Zealand Inventory of Chemicals; OECD - Organisation for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; SVHC - Substance of Very High Concern; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TRGS - Technical Rule for Hazardous Substances; TSCA - Toxic Substances Control Act (United States); UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative

Further information

Other information	:	The information is believed to be correct but is not exhaustive and will be used solely as a guideline, which is based on current knowledge of the chemical substance or mixture and is applicable to appropriate safety precautions for the product. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Corporation and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product. See www.sigma-aldrich.com and/or the reverse side of invoice or packing slip for additional terms and conditions of sale.

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