

# safety data sheet

according to Regulation (EC) No. 1907/2006 (REACH), amended by 2015/830/EU



**m-Cresol ≥99 %, for synthesis**

article number: **9269**  
Version: **1.0 en**

date of compilation: 25.06.2015

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

### 1.1 Product identifier

Identification of the substance	<b>m-Cresol</b>
Article number	9269
Registration number (REACH)	01-2119448335-38-xxxx
Index No	604-004-00-9
EC number	203-577-9
CAS number	108-39-4

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

Relevant identified uses of the substance or mixture and uses advised against      laboratory chemical

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

Carl Roth GmbH + Co KG  
Schoemperlenstr. 3-5  
D-76185 Karlsruhe  
Germany

**Telephone:** +49 (0) 721 - 56 06 0

**Telefax:** +49 (0) 721 - 56 06 149

**e-mail:** [sicherheit@carlroth.de](mailto:sicherheit@carlroth.de)

**Website:** [www.carlroth.de](http://www.carlroth.de)

Competent person responsible for the safety data sheet      : Department Health, Safety and Environment

**e-mail (competent person)**      : [sicherheit@carlroth.de](mailto:sicherheit@carlroth.de)

### 1.4 Emergency telephone number

Emergency information service      **Poison Centre Munich: +49/(0)89 19240**

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

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

Classification acc. to GHS			
Section	Hazard class	Hazard class and category	Hazard statement
3.1O	acute toxicity (oral)	(Acute Tox. 3)	H301
3.1D	acute toxicity (dermal)	(Acute Tox. 3)	H311
3.2	skin corrosion/irritation	(Skin Corr. 1B)	H314

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## 2.2 Label elements

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

**Signal word**

**Danger**

### Pictograms



### Hazard statements

H301+H311 Toxic if swallowed or in contact with skin.  
H314 Causes severe skin burns and eye damage.

### Precautionary statements

#### Precautionary statements - prevention

P260 Do not breathe dust/fume/gas/mist/vapours/spray.  
P280 Wear protective gloves/protective clothing/eye protection/face protection.

#### Precautionary statements - response

P301+P310 IF SWALLOWED: immediately call a POISON CENTER or doctor/physician.  
P302+P352 IF ON SKIN: wash with plenty of water.  
P303+P361+P353 IF ON SKIN (or hair): take off immediately all contaminated clothing. Rinse skin with water/shower.  
P305+P351+P338 IF IN EYES: rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

#### Labelling of packages where the contents do not exceed 125 ml

Signal word: **Danger**

Symbol(s)



H301+H311 Toxic if swallowed or in contact with skin.  
H314 Causes severe skin burns and eye damage.  
P303+P361+P353 IF ON SKIN (or hair): take off immediately all contaminated clothing. Rinse skin with water/shower.  
P305+P351+P338 IF IN EYES: rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

## 2.3 Other hazards

There is no additional information.

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## SECTION 3: Composition/information on ingredients

### 3.1 Substances

Name of substance	m-Cresol
Index No	604-004-00-9
Registration number (REACH)	01-2119448335-38-xxxx
EC number	203-577-9
CAS number	108-39-4
Molecular formula	$C_7H_8O$
Molar mass	108,1 $g/mol$

## SECTION 4: First aid measures

### 4.1 Description of first aid measures



#### General notes

Take off immediately all contaminated clothing. Self-protection of the first aider.

#### Following inhalation

Provide fresh air. Call a physician immediately.

#### Following skin contact

After contact with skin, wash immediately with plenty of water. Call a physician in any case.

#### Following eye contact

In case of contact with eyes flush immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart and consult an ophthalmologist. Protect uninjured eye.

#### Following ingestion

Water, to which activated charcoal may be added. Call a physician immediately. If swallowed danger of perforation of the esophagus and the stomach (strong corrosive effects). Do not allow a neutralisation agent to be drunk.

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

Corrosion, Unconsciousness, Agitation, Cardiac arrhythmias, Headache, Cough, Risk of blindness, Vertigo, Nausea, Gastric perforation, Vomiting, Spasms

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

none

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## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

#### Suitable extinguishing media

Co-ordinate fire-fighting measures to the fire surroundings  
water spray, foam, dry extinguishing powder, carbon dioxide (CO<sub>2</sub>)

#### Unsuitable extinguishing media

water jet

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

combustible. Vapours are heavier than air, spread along floors and form explosive mixtures with air. Vapours can form explosive mixtures with air.

#### Hazardous combustion products

In case of fire may be liberated: carbon monoxide (CO), carbon dioxide (CO<sub>2</sub>)

### 5.3 Advice for firefighters

Fight fire with normal precautions from a reasonable distance. Wear self-contained breathing apparatus. Wear full chemical protective clothing.

## SECTION 6: Accidental release measures

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

#### For non-emergency personnel

Wearing of suitable protective equipment (including personal protective equipment referred to under Section 8 of the safety data sheet) to prevent any contamination of skin, eyes and personal clothing. Do not breathe vapour/spray. Avoid contact with skin.

### 6.2 Environmental precautions

Keep away from drains, surface and ground water.

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

#### Advices on how to contain a spill

Covering of drains.

#### Advices on how to clean up a spill

Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents).

#### Other information relating to spills and releases

Place in appropriate containers for disposal. Ventilate affected area.

#### Reference to other sections

Hazardous combustion products: see section 5. Personal protective equipment: see section 8. Incompatible materials: see section 10. Disposal considerations: see section 13.

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## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

Provision of sufficient ventilation. Handle and open container with care.

#### • Measures to prevent fire as well as aerosol and dust generation



Keep away from sources of ignition - No smoking.

#### Advice on general occupational hygiene

Do not to eat, drink and smoke in work areas. Wash hands before breaks and after work.

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

Keep container tightly closed.

#### Incompatible substances or mixtures

Observe hints for combined storage.

#### Consideration of other advice

Store locked up.

#### • Ventilation requirements

Use local and general ventilation.

#### • Specific designs for storage rooms or vessels

Recommended storage temperature: 15 - 25 °C.

### 7.3 Specific end use(s)

No information available.

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

#### National limit values

#### Occupational exposure limit values (Workplace Exposure Limits)

#### Relevant DNELs/DMELs/PNECs and other threshold levels

#### • human health values

Endpoint	Threshold level	Protection goal, route of exposure	Used in	Exposure time
DNEL	1,47 mg/kg	human, dermal	worker (industry)	acute - systemic effects
DNEL	343 mg/m <sup>3</sup>	human, inhalatory	worker (industry)	acute - systemic effects
DNEL	0,5 mg/kg	human, dermal	worker (industry)	chronic - systemic effects
DNEL	3,5 mg/m <sup>3</sup>	human, inhalatory	worker (industry)	chronic - systemic effects

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### • environmental values

Endpoint	Threshold level	Environmental compartment	Exposure time
PNEC	0,1 mg/l	freshwater	short-term (single instance)
PNEC	0,01 mg/l	marine water	short-term (single instance)
PNEC	1,14 mg/l	sewage treatment plant (STP)	short-term (single instance)
PNEC	0,71 mg/kg	freshwater sediment	short-term (single instance)
PNEC	0,071 mg/kg	marine sediment	short-term (single instance)
PNEC	0,0831 mg/kg	soil	short-term (single instance)
PNEC	0,076 mg/l	water	continuous

## 8.2 Exposure controls

### Individual protection measures (personal protective equipment)



#### Eye/face protection

Use safety goggle with side protection. Wear face protection.

#### Skin protection

##### • hand protection

Wear suitable gloves. Chemical protection gloves are suitable, which are tested according to EN 374. Check leak-tightness/impermeability prior to use. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

##### • type of material

CR: chloroprene (chlorobutadiene) rubber

##### • material thickness

0,65 mm.

##### • breakthrough times of the glove material

>480 minutes (permeation: level 6)

##### • other protection measures

Take recovery periods for skin regeneration. Preventive skin protection (barrier creams/ointments) is recommended.

#### Respiratory protection

Type: A (against organic gases and vapours with a boiling point of  $> 65$  °C, colour code: Brown). Respiratory protection necessary at: Aerosol or mist formation.

Observe the wear time limits according GefStoffV in combination with the rules for using respiratory protection apparatus (BGR 190).

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## Environmental exposure controls

Keep away from drains, surface and ground water.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

#### Appearance

Physical state	liquid (fluid)
Colour	light yellow
Odour	like: Phenol
Odour threshold	No data available

#### Other physical and chemical parameters

pH (value)	5 in 20 g/l water at 20 °C
Melting point/freezing point	11,5 °C
Initial boiling point and boiling range	203 °C at 1.013 hPa
Flash point	86 °C (closed cup)
Evaporation rate	no data available
Flammability (solid, gas)	not relevant (fluid)
<u>Explosive limits</u>	
• lower explosion limit (LEL)	1 vol%
• upper explosion limit (UEL)	this information is not available
Explosion limits of dust clouds	not relevant
Vapour pressure	0,119 hPa at 20 °C 0,279 hPa at 30 °C
Density	1,03 g/cm <sup>3</sup> at 20 °C
Vapour density	3,74 air = 1
Bulk density	Not applicable
Relative density	Information on this property is not available.
<u>Solubility(ies)</u>	
Water solubility	23 g/l at 20 °C

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### Partition coefficient

n-octanol/water (log KOW)	1,98 (Experimental data)
Soil organic carbon/water (log KOC)	1,539 (ECHA)
Auto-ignition temperature	626 °C
Viscosity	not determined
Explosive properties	none
Oxidising properties	none

### 9.2 Other information

There is no additional information.

## SECTION 10: Stability and reactivity

### 10.1 Reactivity

In case of warming: Vapours can form explosive mixtures with air

### 10.2 Chemical stability

The material is stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

### 10.3 Possibility of hazardous reactions

Violent reaction with: Strong oxidiser, Nitric acid, Sulphuric acid, concentrated

### 10.4 Conditions to avoid

Keep away from heat.

### 10.5 Incompatible materials

iron, copper, bronze, brass, lead

### 10.6 Hazardous decomposition products

Hazardous combustion products: see section 5.

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

#### Acute toxicity

Exposure route	Endpoint	Value	Species	Source
oral	LD50	242 mg/kg	rat	ECHA
dermal	LD50	2050 mg/kg	rabbit	ECHA

#### Skin corrosion/irritation

Causes severe skin burns and eye damage.



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## Serious eye damage/eye irritation

Causes serious eye damage.

## Respiratory or skin sensitisation

Shall not be classified as a respiratory or skin sensitiser.

## Summary of evaluation of the CMR properties

Shall not be classified as germ cell mutagenic, carcinogenic nor as a reproductive toxicant.

### • Specific target organ toxicity - single exposure

Shall not be classified as a specific target organ toxicant (single exposure).

### • Specific target organ toxicity - repeated exposure

Shall not be classified as a specific target organ toxicant (repeated exposure).

## Aspiration hazard

Shall not be classified as presenting an aspiration hazard.

## Symptoms related to the physical, chemical and toxicological characteristics

### • If swallowed

severe abdominal pain, If swallowed danger of perforation of the esophagus and the stomach (strong corrosive effects)

### • If inhaled

cough, pain, choking, and breathing difficulties

### • If on skin

causes severe skin burns and eye damage

## Other information

None.

## SECTION 12: Ecological information

### 12.1 Toxicity

acc. to 1272/2008/EC: Shall not be classified as hazardous to the aquatic environment.

#### Aquatic toxicity (acute)

Endpoint	Value	Species	Source	Exposure time
EC50	18,8 mg/l	daphnia magna	IUCLID	48 hours
LC50	10 mg/l	bluegill (Lepomis macrochirus)	IUCLID	96 hours

### 12.2 Process of degradability

The substance is readily biodegradable.

Theoretical Oxygen Demand: 2,515 mg/mg

Theoretical Carbon Dioxide: 2,849 mg/mg

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Process	Degradation rate	Time
biotic/abiotic	>90 %	28 d
oxygen depletion	90 %	28 d
DOC removal	96 %	10 d

### 12.3 Bioaccumulative potential

The substance fulfils the very bioaccumulative criterion.

n-octanol/water (log KOW) 1,98  
(Experimental data)

BCF 1.720 (ECHA)

### 12.4 Mobility in soil

Henry's law constant 0,087 Pa m<sup>3</sup>/mol at 25 °C

The Organic Carbon normalised adsorption coefficient 1,539

### 12.5 Results of PBT and vPvB assessment

Data are not available.

### 12.6 Other adverse effects

Hazardous to water.

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

This material and its container must be disposed of as hazardous waste. Dispose of contents/container in accordance with local/regional/national/international regulation.

#### Sewage disposal-relevant information

Do not empty into drains.

#### Waste treatment of containers/packagings

It is a dangerous waste; only packagings which are approved (e.g. acc. to ADR) may be used.

### 13.2 Relevant provisions relating to waste

The allocation of waste identity numbers/waste descriptions must be carried out according to the EEC, specific to the industry and process.

### 13.3 Remarks

Waste shall be separated into the categories that can be handled separately by the local or national waste management facilities. Please consider the relevant national or regional provisions.

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## SECTION 14: Transport information

<b>14.1</b>	UN number	<b>2076</b>
<b>14.2</b>	UN proper shipping name	<b>CRESOLS, LIQUID</b>
	Hazardous ingredients	M-cresol
<b>14.3</b>	Transport hazard class(es)	
	Class	6.1 (toxic substances)
<b>14.4</b>	Packing group	II (substance presenting medium danger)
<b>14.5</b>	Environmental hazards	none (non-environmentally hazardous acc. to the dangerous goods regulations)
<b>14.6</b>	<b>Special precautions for user</b>	
	Provisions for dangerous goods (ADR) should be complied within the premises.	
<b>14.7</b>	<b>Transport in bulk according to Annex II of MARPOL and the IBC Code</b>	
	The cargo is not intended to be carried in bulk.	
<b>14.8</b>	<b>Information for each of the UN Model Regulations</b>	
	<b>• Transport of dangerous goods by road, rail and inland waterway (ADR/RID/ADN)</b>	
	UN number	2076
	Proper shipping name	CRESOLS, LIQUID
	Particulars in the transport document	UN2076, CRESOLS, LIQUID, 6.1 (8), II, (D/E)
	Class	6.1
	Classification code	TC1
	Packing group	II
	Danger label(s)	6.1+8
		
	Special provisions (SP)	802(ADN)
	Excepted quantities (EQ)	E4
	Limited quantities (LQ)	100 ml
	Transport category (TC)	2
	Tunnel restriction code (TRC)	D/E
	Hazard identification No	68

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### • International Maritime Dangerous Goods Code (IMDG)

UN number	2076
Proper shipping name	CRESOLS, LIQUID
Particulars in the shipper's declaration	UN2076, CRESOLS, LIQUID, 6.1 (8), II
Class	6.1
Subsidiary risk(s)	8
Packing group	II
Danger label(s)	6.1+8
	
Special provisions (SP)	-
Excepted quantities (EQ)	E4
Limited quantities (LQ)	100 ml
EmS	F-A, S-B
Stowage category	B

## SECTION 15: Regulatory information

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

#### Relevant provisions of the European Union (EU)

- **Regulation 649/2012/EU concerning the export and import of hazardous chemicals (PIC)**  
Not listed.
- **Regulation 1005/2009/EC on substances that deplete the ozone layer (ODS)**  
Not listed.
- **Regulation 850/2004/EC on persistent organic pollutants (POP)**  
Not listed.
- **Restrictions according to REACH, Annex XVII**  
not listed
- **List of substances subject to authorisation (REACH, Annex XIV)**  
not listed

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- **Limitation of emissions of volatile organic compounds due to the use of organic solvents in certain paints and varnishes and vehicle refinishing products (2004/42/EC, Deco-Paint Directive)**

VOC content 100 %

- **Directive on industrial emissions (VOCs, 2010/75/EU)**

VOC content 100 %

## **Directive 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS) - Annex II**

not listed

## **Regulation 166/2006/EC concerning the establishment of a European Pollutant Release and Transfer Register (PRTR)**

not listed

## **Directive 2000/60/EC establishing a framework for Community action in the field of water policy (WFD)**

not listed

### **National inventories**

Substance is listed in the following national inventories:

- EINECS/ELINCS/NLP (Europe)
- REACH (Europe)

## **15.2 Chemical Safety Assessment**

No Chemical Safety Assessment has been carried out for this substance.

## **SECTION 16: Other information**

### **Abbreviations and acronyms**

<b>Abbr.</b>	<b>Descriptions of used abbreviations</b>
ADN	Accord européen relatif au transport international des marchandises dangereuses par voies de navigation intérieures (European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways)
ADR	Accord européen relatif au transport international des marchandises dangereuses par route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
BCF	BioConcentration Factor
CAS	Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)
CLP	Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures
CMR	Carcinogenic, Mutagenic or toxic for Reproduction
DMEL	Derived Minimal Effect Level
DNEL	Derived No-Effect Level
EINECS	European Inventory of Existing Commercial Chemical Substances
ELINCS	European List of Notified Chemical Substances
EmS	Emergency Schedule
GHS	"Globally Harmonized System of Classification and Labelling of Chemicals" developed by the United Nations
IMDG	International Maritime Dangerous Goods Code
index No	the Index number is the identification code given to the substance in Part 3 of Annex VI to Regulation (EC) No 1272/2008
MARPOL	International Convention for the Prevention of Pollution from Ships (abbr. of "Marine Pollutant")

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Abbr.	Descriptions of used abbreviations
NLP	No-Longer Polymer
PBT	Persistent, Bioaccumulative and Toxic
PNEC	Predicted No-Effect Concentration
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals
RID	Règlement concernant le transport International ferroviaire des marchandises Dangereuses (Regulations concerning the International carriage of Dangerous goods by Rail)
VOC	Volatile Organic Compounds
vPvB	very Persistent and very Bioaccumulative

### Key literature references and sources for data

- Regulation (EC) No. 1907/2006 (REACH), amended by 2015/830/EU
- Regulation (EC) No. 1272/2008 (CLP, EU GHS)

### List of relevant phrases (code and full text as stated in chapter 2 and 3)

Code	Text
H301	toxic if swallowed
H311	toxic in contact with skin
H314	causes severe skin burns and eye damage

### Disclaimer

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.