

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

- **Product identifier**
- **Trade name:** Phenol, ultra pure
- **Article number:** 800673
- **CAS Number:**  
108-95-2
- **EC number:**  
203-632-7
- **Index number:**  
604-001-00-2
- **Relevant identified uses of the substance or mixture and uses advised against**  
No further relevant information available.
- **Application of the substance / the mixture** Research use only.
- **Details of the supplier of the safety data sheet**
- **Further information obtainable from:** Quality Control Department
- **Emergency telephone number:** CHEMTREC: 1-800-424-9300 (1-703-527-3887)

## 2 Hazards identification

- **Classification of the substance or mixture**



skull and crossbones

Acute Tox. 3      H301 Toxic if swallowed.  
 Acute Tox. 3      H311 Toxic in contact with skin.  
 Acute Tox. 3      H331 Toxic if inhaled.



health hazard

Muta. 2            H341 Suspected of causing genetic defects.  
 STOT RE 2        H373 May cause damage to organs through prolonged or repeated exposure.



corrosion

Skin Corr. 1B     H314 Causes severe skin burns and eye damage.  
 Eye Dam. 1       H318 Causes serious eye damage.



environment

Aquatic Chronic 2 H411 Toxic to aquatic life with long lasting effects.  
 Aquatic Acute 3    H402 Harmful to aquatic life.

- **Label elements**
- **GHS label elements**

The substance is classified and labelled according to the Globally Harmonised System (GHS).

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## · Hazard pictograms



GHS05   GHS06   GHS08   GHS09

· Signal word *Danger*

## · Hazard-determining components of labelling:

*Phenol, ultra pure*

## · Hazard statements

*Toxic if swallowed, in contact with skin or if inhaled.**Causes severe skin burns and eye damage.**Suspected of causing genetic defects.**May cause damage to organs through prolonged or repeated exposure.**Harmful to aquatic life.**Toxic to aquatic life with long lasting effects.*

## · Precautionary statements

*If medical advice is needed, have product container or label at hand.**Keep out of reach of children.**Read label before use.**Do not breathe dust/fume/gas/mist/vapours/spray.**IF SWALLOWED: Immediately call a POISON CENTER/ doctor.**IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.**IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.**Continue rinsing.**Store locked up.**Dispose of contents/container in accordance with local/regional/national/international regulations.*

## · Other hazards

## · Results of PBT and vPvB assessment

· **PBT:** Not applicable.· **vPvB:** Not applicable.

### 3 Composition/information on ingredients

· Chemical characterisation: *Substances*· CAS No. *Description**108-95-2 Phenol, ultra pure*

## · Identification number(s)

· **EC number:** 203-632-7· **Index number:** 604-001-00-2

### 4 First aid measures

## · Description of first aid measures

## · General information:

*Immediately remove any clothing soiled by the product.**Remove breathing equipment only after contaminated clothing have been completely removed.**In case of irregular breathing or respiratory arrest provide artificial respiration.*

## · After inhalation:

*Supply fresh air or oxygen; call for doctor.**In case of unconsciousness place patient stably in side position for transportation.*

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- **After skin contact:** Immediately wash with water and soap and rinse thoroughly.
- **After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.
- **After swallowing:**  
Do not induce vomiting; call for medical help immediately.  
Drink plenty of water and provide fresh air. Call for a doctor immediately.
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**  
No further relevant information available.

### 5 Firefighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**  
CO<sub>2</sub>, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **Special hazards arising from the substance or mixture**  
During heating or in case of fire poisonous gases are produced.
- **Advice for firefighters**
- **Protective equipment:** Mouth respiratory protective device.

### 6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**  
Mount respiratory protective device.  
Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:**  
Do not allow product to reach sewage system or any water course.  
Inform respective authorities in case of seepage into water course or sewage system.  
In case of seepage into the ground inform responsible authorities.  
In case of gas release or seepage into the ground inform responsible authorities.  
Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**  
Use neutralising agent.  
Dispose contaminated material as waste according to item 13.  
Ensure adequate ventilation.
- **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

- **Handling:**
- **Precautions for safe handling**  
Thorough dedusting.  
Ensure good ventilation/exhaustion at the workplace.  
Open and handle receptacle with care.
- **Information about fire - and explosion protection:** Keep respiratory protective device available.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:** 15-30 °C
- **Requirements to be met by storerooms and receptacles:** No special requirements.

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- **Further information about storage conditions:** Store in nitrogen.
- **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.
- **Control parameters**

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

#### 108-95-2 Phenol, ultra pure

PEL (USA)	Long-term value: 19 mg/m <sup>3</sup> , 5 ppm Skin
REL (USA)	Long-term value: 19 mg/m <sup>3</sup> , 5 ppm Ceiling limit: 60* mg/m <sup>3</sup> , 15,6* ppm *15-min; Skin
TLV (USA)	Long-term value: 19 mg/m <sup>3</sup> , 5 ppm Skin; BEI
IOELV (EU)	Short-term value: 16 mg/m <sup>3</sup> , 4 ppm Long-term value: 8 mg/m <sup>3</sup> , 2 ppm Skin
WEL (Great Britain)	Short-term value: 16 mg/m <sup>3</sup> , 4 ppm Long-term value: 7,8 mg/m <sup>3</sup> , 2 ppm Sk

### · **Ingredients with biological limit values:**

#### 108-95-2 Phenol, ultra pure

BEI (USA)	250 mg/g creatinine urine end of shift Phenol with hydrolysis (background, nonspecific)
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- **Additional information:** The lists valid during the making were used as basis.

### · **Exposure controls**

#### · **Personal protective equipment:**

#### · **General protective and hygienic measures:**

- Keep away from foodstuffs, beverages and feed.
- Immediately remove all soiled and contaminated clothing
- Wash hands before breaks and at the end of work.
- Store protective clothing separately.
- Avoid contact with the eyes.
- Avoid contact with the eyes and skin.

#### · **Respiratory protection:**

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.

#### · **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.  
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

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- Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation*
- **Material of gloves**  
*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**  
*The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.*
  - **Eye protection:**



Tightly sealed goggles

## 9 Physical and chemical properties

- **Information on basic physical and chemical properties**
- **General Information**
- **Appearance:**
  - Form:** Solid material
  - Colour:** Colourless
- **Odour:** Indeterminate
- **Odour threshold:** Not determined.
- **pH-value:** Not applicable.
- **Change in condition**
  - Melting point/Melting range:** Undetermined.
  - Boiling point/Boiling range:** Undetermined.
- **Flash point:** Not applicable.
- **Flammability (solid, gaseous):** Product is not flammable.
- **Ignition temperature:**
  - Decomposition temperature:** Not determined.
- **Self-igniting:** Not determined.
- **Danger of explosion:** Product does not present an explosion hazard.
- **Explosion limits:**
  - Lower:** Not determined.
  - Upper:** Not determined.
- **Vapour pressure:** Not applicable.
- **Density:** Not determined.
- **Relative density** Not determined.
- **Vapour density** Not applicable.
- **Evaporation rate** Not applicable.
- **Solubility in / Miscibility with** -
- **water:** Insoluble.
- **Partition coefficient (n-octanol/water):** Not determined.
- **Viscosity:**
  - Dynamic:** Not applicable.

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<b>Kinematic:</b>	Not applicable.
<b>· Solvent content:</b>	
<b>Organic solvents:</b>	100,0 %
<b>VOC (EC)</b>	0,00 %
<b>Solids content:</b>	100,0 %
<b>· Other information</b>	No further relevant information available.

## 10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

## 11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity**

### · LD/LC50 values relevant for classification:

**108-95-2 Phenol, ultra pure**

Oral	LD50	317 mg/kg (rat)
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Dermal	LD50	630 mg/kg (rabbit)
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- **Primary irritant effect:**
- **Skin corrosion/irritation** Caustic effect on skin and mucous membranes.
- **Serious eye damage/irritation**  
Strong caustic effect.  
Strong irritant with the danger of severe eye injury.
- **Respiratory or skin sensitisation** No sensitising effects known.
- **Additional toxicological information:**  
Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.
- **CMR effects (carcinogenity, mutagenicity and toxicity for reproduction)**  
Muta. 2

## 12 Ecological information

- **Toxicity**

### · Aquatic toxicity:

**108-95-2 Phenol, ultra pure**

Oral	LC50 / 96 h	36,1 - 68,8 mg/L (Carassius auratus)
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- **Persistence and degradability** No further relevant information available.
- **Behaviour in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.

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- **Ecotoxicological effects:**
- **Remark:** Toxic for fish
- **Additional ecological information:**
- **General notes:**  
Water hazard class 2 (German Regulation) (Assessment by list): hazardous for water  
Do not allow product to reach ground water, water course or sewage system.  
Must not reach sewage water or drainage ditch undiluted or unneutralised.  
Danger to drinking water if even small quantities leak into the ground.  
Also poisonous for fish and plankton in water bodies.  
Toxic for aquatic organisms
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

**13 Disposal considerations**

- **Waste treatment methods**
- **Recommendation**  
Must not be disposed together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.

**14 Transport information**

· <b>UN-Number</b> · <b>ADR, IMDG, IATA</b>	UNI671
· <b>UN proper shipping name</b> · <b>ADR</b>	1671 PHENOL, SOLID, ENVIRONMENTALLY HAZARDOUS
· <b>IMDG</b> · <b>IATA</b>	PHENOL, SOLID, MARINE POLLUTANT PHENOL, SOLID
· <b>Transport hazard class(es)</b> · <b>ADR, IMDG</b>	
 	
· <b>Class</b> · <b>Label</b>	6.1 Toxic substances. 6.1
· <b>IATA</b>	
	
· <b>Class</b> · <b>Label</b>	6.1 Toxic substances. 6.1

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· <b>Packing group</b> · <b>ADR, IMDG, IATA</b>	II
· <b>Environmental hazards:</b> · <b>Marine pollutant:</b> · <b>Special marking (ADR):</b>	Symbol (fish and tree) Symbol (fish and tree)
· <b>Special precautions for user</b> · <b>Danger code (Kemler):</b> · <b>EMS Number:</b> · <b>Stowage Category</b>	Warning: Toxic substances. 60 F-A,S-A A
· <b>Transport in bulk according to Annex II of Marpol and the IBC Code</b>	Not applicable.
· <b>Transport/Additional information:</b>	
· <b>ADR</b> · <b>Limited quantities (LQ)</b> · <b>Excepted quantities (EQ)</b>	500 g Code: E4 Maximum net quantity per inner packaging: 1 g Maximum net quantity per outer packaging: 500 g
· <b>Transport category</b> · <b>Tunnel restriction code</b>	2 D/E
· <b>IMDG</b> · <b>Limited quantities (LQ)</b> · <b>Excepted quantities (EQ)</b>	500 g Code: E4 Maximum net quantity per inner packaging: 1 g Maximum net quantity per outer packaging: 500 g
· <b>UN "Model Regulation":</b>	UN 1671 PHENOL, SOLID, 6.1, II, ENVIRONMENTALLY HAZARDOUS

### 15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **GHS label elements**  
The substance is classified and labelled according to the Globally Harmonised System (GHS).
- **Hazard pictograms**



GHS05 GHS06 GHS08 GHS09

- **Signal word** *Danger*
- **Hazard-determining components of labelling:**  
*Phenol, ultra pure*
- **Hazard statements**  
*Toxic if swallowed, in contact with skin or if inhaled.*  
*Causes severe skin burns and eye damage.*  
*Suspected of causing genetic defects.*  
*May cause damage to organs through prolonged or repeated exposure.*  
*Harmful to aquatic life.*

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*Toxic to aquatic life with long lasting effects.***Precautionary statements***If medical advice is needed, have product container or label at hand.**Keep out of reach of children.**Read label before use.**Do not breathe dust/fume/gas/mist/vapours/spray.**IF SWALLOWED: Immediately call a POISON CENTER/ doctor.**IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.**IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.**Continue rinsing.**Store locked up.**Dispose of contents/container in accordance with local/regional/national/international regulations.***Directive 2012/18/EU****Named dangerous substances - ANNEX I** Substance is not listed.**Seveso category**

H2 ACUTE TOXIC

E2 Hazardous to the Aquatic Environment

**Qualifying quantity (tonnes) for the application of lower-tier requirements** 50 t**Qualifying quantity (tonnes) for the application of upper-tier requirements** 200 t**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 SDS:** Quality Control Dept.**Abbreviations and acronyms:***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**EINECS: European Inventory of Existing Commercial Chemical Substances**CAS: Chemical Abstracts Service (division of the American Chemical Society)**VOC: Volatile Organic Compounds (USA, EU)**LC50: Lethal concentration, 50 percent**LD50: Lethal dose, 50 percent**PBT: Persistent, Bioaccumulative and Toxic**vPvB: very Persistent and very Bioaccumulative**Acute Tox. 3: Acute toxicity – Category 3**Skin Corr. 1B: Skin corrosion/irritation – Category 1B**Eye Dam. 1: Serious eye damage/eye irritation – Category 1**Muta. 2: Germ cell mutagenicity – Category 2**STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2**Aquatic Acute 3: Hazardous to the aquatic environment - acute aquatic hazard – Category 3**Aquatic Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard – Category 2*