Safety data sheet
according to 1907/2006/EC, Article 31

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

· **1.1 Product identifier**

· **Trade name: Phenol**

· **Article number:** 32046
· **CAS Number:**
108-95-2
· **EC number:**
203-632-7
· **Index number:**
604-001-00-2
· **1.2 Relevant identified uses of the substance or mixture and uses advised against**
No further relevant information available.
· **Application of the substance / the mixture** Laboratory chemicals

· **1.3 Details of the supplier of the safety data sheet**
· **Manufacturer/Supplier:**
SERVA Electrophoresis GmbH
Carl-Benz-Str. 7
D-69115 Heidelberg
Tel.: +49 6221 13840-0
FAX: +49 6221 13840-10
msds.info@serva.de

· **Information department:** Product Safety department Tel.: +49 6221 13840-35
· **1.4 Emergency telephone number:**
Medical Emergency Information in case of poisoning:
Poison Information Center Mainz - Phone: +49 (0) 6131 19240
(advisory service in German or English language)

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SECTION 2: Hazards identification

· **2.1 Classification of the substance or mixture**
· **Classification according to Regulation (EC) No 1272/2008**

GHS06

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

GHS08

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

GHS05

Skin Corr. 1B H314 Causes severe skin burns and eye damage.

· **2.2 Label elements**
· **Labelling according to Regulation (EC) No 1272/2008**
The substance is classified and labelled according to the CLP regulation.
· **Hazard pictograms** GHS05, GHS06, GHS08

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· ***Signal word*** *Danger*
· ***Hazard statements***
H301+H311+H331 Toxic if swallowed, in contact with skin or if inhaled.
H314 Causes severe skin burns and eye damage.
H341 Suspected of causing genetic defects.
H373 May cause damage to organs through prolonged or repeated exposure.
· ***Precautionary statements***
P201 Obtain special instructions before use.
P260 Do not breathe dusts or mists.
P264 Wash thoroughly after handling.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor.
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***
· ***Results of PBT and vPvB assessment***
· ***PBT:*** *PBT - assessment not available.*
· ***vPvB:*** *vPvB - assessment not available.*

*
SECTION 3: Composition/information on ingredients

· ***3.1 Chemical characterisation: Substances***
· ***CAS No. Description:***
108-95-2 phenol
· ***Identification number(s):***
· ***EC number:*** *203-632-7*
· ***Index number:*** *604-001-00-2*
· ***Description:***
· ***Empirical formula:*** C_6H_6O
· ***MW:*** *94.1*

*
SECTION 4: First aid measures

· ***4.1 Description of first aid measures***
· ***General information***
Remove contaminated clothing.
Remove breathing apparatus 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.*
· ***After skin contact***
Immediately wash with water and soap and rinse thoroughly.
Wash with polyethylene glycol 400 and then rinse with copious amounts of water.
· ***After eye contact*** *Rinse opened eye for several minutes under running water. Then consult doctor.*
· ***After swallowing*** *Do not induce vomiting; call for medical help immediately.*
· ***4.2 Most important symptoms and effects, both acute and delayed***
No further relevant information available.
· ***4.3 Indication of any immediate medical attention and special treatment needed***
No further relevant information available.

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SECTION 5: Firefighting measures

· **5.1 Extinguishing media**
· **Suitable extinguishing agents**
CO_2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
· **5.2 Special hazards arising from the substance or mixture**
Can form explosive gas-air mixtures.
Formation of dangerous gases or vapours is possible in case of fire.
· **5.3 Advice for firefighters**
· **Protective equipment:**
Wear self-contained respiratory protective device.
Wear fully protective suit.

*
SECTION 6: Accidental release measures

· **6.1 Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
· **6.2 Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
· **6.3 Methods and material for containment and cleaning up:**
Use neutralising agent.
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
· **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.

*
SECTION 7: Handling and storage

· **7.1 Precautions for safe handling**
Ensure good ventilation/exhaustion at the workplace.
Open and handle receptacle with care.
· **Information about protection against explosions and fires:** Keep respiratory protective device available.

· **7.2 Conditions for safe storage, including any incompatibilities**
· **Storage**
· **Requirements to be met by storerooms and receptacles:**
Store in cool, dry place in tightly closed receptacles.
Store only in the original receptacle.
· **Information about storage in one common storage facility:**
Do not store together with strong oxidizing agents.
· **Further information about storage conditions:**
Store under lock and key and with access restricted to technical experts or their assistants only.
Keep receptacle tightly sealed.
This product is hygroscopic.
Protect from exposure to the light.
· **7.3 Specific end use(s)** No further relevant information available.

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SECTION 8: Exposure controls/personal protection

· **Additional information about design of technical systems:** No further data; see item 7.

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· ***8.1 Control parameters***

· **Components with limit values that require monitoring at the workplace:**	
108-95-2 phenol (80-100%)	
WEL	Short-term value: 16 mg/m³, 4 ppm Long-term value: 7.8 mg/m³, 2 ppm Sk

· ***Additional information:*** *The lists that were valid during the creation were used as basis.*

· ***8.2 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 and skin.
· ***Breathing equipment:***
Short term filter device:
Filter A/P2.
In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.
· ***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.
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 trough time has to be found out by the manufacturer of the protective gloves and has to be observed.
· ***For the permanent contact of a maximum of 15 minutes gloves made of the following materials are suitable:***
Rubber gloves
Neoprene gloves
· ***Eye protection:*** *Tightly sealed goggles.*
· ***Body protection:*** *Protective work clothing.*

*
SECTION 9: Physical and chemical properties

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

Form:	*Crystalline*
Colour:	*Colourless*
· ***Odour:***	*Characteristic*
· ***pH-value (50 g/l) at 20 °C:***	*ca. 5*
· ***Change in condition***	
Melting point/freezing point:	*40 °C*
Initial boiling point and boiling range:	*181 °C*

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· **Flash point:**	81 °C
· **Flammability (solid, gaseous)**	Product is not flammable.
· **Ignition temperature:**	595 °C
· **Explosive properties:**	Product does not present an explosion hazard.
· **Explosion limits:**	
Lower:	1.3 Vol %
Upper:	9.5 Vol %
· **Vapour pressure at 20 °C:**	0.2 hPa
· **Density at 20 °C:**	1.0567 g/cm³
· **Bulk density at 20 °C:**	ca. 62 kg/m³
· **Solubility in / Miscibility with**	
Water at 20 °C:	82 g/l
· **Alcohols:**	Readily soluble
· **Partition coefficient: n-octanol/water at 30 °C:**	1.47 log POW
· **Viscosity:**	
dynamic at 50 °C:	3.437 mPas
· **9.2 Other information**	No further relevant information available.

*
SECTION 10: Stability and reactivity

· **10.1 Reactivity** No further relevant informations available
· **10.2 Chemical stability**
· **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
· **10.3 Possibility of hazardous reactions**
Reacts with oxidizing agents
Strong exothermic reaction with acids
Reacts with alkali (lyes)
Danger of explosion with:
nitrates, nitrites, peroxid compounds, strong oxidizing agents
· **10.4 Conditions to avoid** No further relevant information available.
· **10.5 Incompatible materials:**
Halogens
Aldehydes
Hydrogen peroxide
Fe(III) - compounds
· **10.6 Hazardous decomposition products:** No dangerous decomposition products known

*
SECTION 11: Toxicological information

· **11.1 Information on toxicological effects**
· **Acute toxicity**
Toxic if swallowed, in contact with skin or if inhaled.

· **LD/LC50 values that are relevant for classification:**

Oral	LD50	300 mg/kg (Maus)
		317 mg/kg (rat)
Dermal	LD50	670 mg/kg (rat)
Inhalative	LC50/4 h	316 mg/l (rat)

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· ***Primary irritant effect:***
· ***Skin corrosion/irritation***
Causes severe skin burns and eye damage.
· ***Serious eye damage/irritation***
Causes severe skin burns and eye damage.
· ***Respiratory or skin sensitisation*** *Based on available data, the classification criteria are not met.*
· ***CMR effects (carcinogenity, mutagenicity and toxicity for reproduction)***
· ***Germ cell mutagenicity***
Suspected of causing genetic defects.
· ***Carcinogenicity*** *Based on available data, the classification criteria are not met.*
· ***Reproductive toxicity*** *Based on available data, the classification criteria are not met.*
· ***STOT-single exposure*** *Based on available data, the classification criteria are not met.*
· ***STOT-repeated exposure***
May cause damage to organs through prolonged or repeated exposure.
· ***Aspiration hazard*** *Based on available data, the classification criteria are not met.*

*
SECTION 12: Ecological information

· ***12.1 Toxicity***
· ***Aquatic toxicity:*** *No further relevant information available.*
· ***12.2 Persistence and degradability*** *No further relevant information available.*
· ***Other information:*** *The product is biodegradable.*
· ***12.3 Bioaccumulative potential*** *No further relevant information available.*
· ***12.4 Mobility in soil*** *No further relevant information available.*
· ***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.
· ***12.5 Results of PBT and vPvB assessment***
· ***PBT:*** *PBT - assessment not available.*
· ***vPvB:*** *vPvB - assessment not available.*
· ***12.6 Other adverse effects*** *No further relevant information available.*

SECTION 13: Disposal considerations

· ***13.1 Waste treatment methods***
· ***Recommendation***
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

· ***Uncleaned packagings:***
· ***Recommendation:*** *Disposal must be made according to official regulations.*

*
SECTION 14: Transport information

· ***14.1 UN-Number***	
· ***ADR, IMDG, IATA***	*UN1671*
· ***14.2 UN proper shipping name***	
· ***ADR***	*1671 PHENOL, SOLID*
· ***IMDG***	*PHENOL, SOLID*
· ***IATA***	*Phenol, solid*

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· ***14.3 Transport hazard class(es)***

· ***ADR, IMDG, IATA***

· ***Class***	*6.1 Toxic substances.*
· ***Label***	*6.1*
· ***14.4 Packing group***	
· ***ADR, IMDG, IATA***	*II*
· ***14.5 Environmental hazards:***	
· ***Marine pollutant:***	*No*
· ***14.6 Special precautions for user***	*Warning: Toxic substances.*
· ***Danger code (Kemler):***	*60*
· ***EMS Number:***	*F-A,S-A*
· ***14.7 Transport in bulk according to Annex II of Marpol and the IBC Code***	*Not applicable.*
· ***Transport/Additional information:***	
· ***ADR***	
· ***Limited quantities (LQ)***	*500 g*
· ***Transport category***	*2*
· ***Tunnel restriction code***	*D/E*
· ***UN "Model Regulation":***	*UN1671, PHENOL, SOLID, 6.1, II*

*
SECTION 15: Regulatory information

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

· ***National regulations***

· ***Technical instructions (air):***

Class	***Share in %***
I	*100.0*

· ***Water hazard 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.*

*
SECTION 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:*** *Product safety department*
· ***Contact:*** *+49 6221 13840-35*
· ***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)
ICAO: International Civil Aviation Organisation
PBT: persistent, bioaccumulative, toxic substance (REACH)
vPvB: very persistent, very bioaccumulative substance (REACH)
REACH: Regulation concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals
CLP: Regulation on classification, labelling and packaging of substances and mixtures
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

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IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonised 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
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
Muta. 2: Germ cell mutagenicity – Category 2
STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2

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