

Safety Data Sheet

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Version: 7.2

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

1.1 Product identifier

Trade name/designation:	Phenol AnalAR NORMAPUR® discrete crystals ACS, Reag. Ph. Eur.
Product No.:	20599
CAS No.:	108-95-2
Other means of identification:	Carbolic acid, Guaiacol Impurity B (EP), Hexylresorcinol Impurity A (EP), Hydroxybenzene, Phenylalcohol, Salicylic acid Impurity C (EP)

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

Relevant identified uses:	General chemical reagent
Uses advised against:	The product, as such or as a component of a mixture, is not intended to be used by consumers (as defined by the REACH Regulation).

1.3 Details of the supplier of the safety data sheet

VWR Singapore Pte Ltd.

Street	18 Gul Drive
Postal code/City	Singapore 629468
Telephone	+65 6505 0760

1.4 Emergency phone number

Telephone	+65 (0) 6505 0760 (office hours: 8 am-5 pm)
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Preparation Information

Product Information Compliance

E-mail (competent person)	SDS@avantorsciences.com
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SECTION 2: Hazard identification

2.1 Classification of the substance or mixture

Hazard classes and hazard categories	Hazard statements
Skin corrosion, category 1B	H314
Serious eye damage, category 1	H318
Germ cell mutagenicity, category 2	H341
Specific target organ toxicity (repeated exposure), category 2	H373
Hazardous to the aquatic environment, chronic, category 2	H411
Acute toxicity, category 3, oral, dermal and inhalation	H301+H311+H331
Target Organs	
(1) liver, kidney, nervous system, skin	

2.2 Label elements

Hazard pictograms



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.
H411	Toxic to aquatic life with long lasting effects.

Precautionary statements	
P201	Obtain special instructions before use.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P260	Do not breathe dust/fume/gas/mist/vapours/spray.
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.
P310	Immediately call a POISON CENTER/doctor.

2.3 Other hazards

none

SECTION 3: Composition/information on ingredients

3.1 Substances

Substance name	Phenol
Molecular formula	C ₆ H ₅ OH
Molecular weight	94.11 g/mol
CAS No.	108-95-2

SECTION 4: First aid measures

4.1 Description of first aid measures

General information

Do not leave affected person unattended. Call a physician in any case!

After inhalation

Remove casualty to fresh air and keep warm and at rest. After inhaling vapours, first symptoms of poisoning may develop hours later, so always consult a doctor. If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. If unconscious but breathing normally, place in recovery position and seek medical advice. If breathing is irregular or stopped, administer artificial respiration. Immediately call a doctor.

In case of skin contact

Remove contaminated, saturated clothing immediately. Remove mechanically with textile material or cellulose (whatever available material). Quick cleansing of the skin is a priority. Rinse contaminated skin with a mixture of polyethylene glycol 300 / ethanol (2:1) or with polyethylene glycol 400, alternately with plenty of water. Repeat several times (over at least 20 min). Finally rinse with water. If polyethylene glycol is not available, rinse continuously with plenty of lukewarm water. Immediately call a doctor.

After eye contact:

Immediately rinse carefully and thoroughly with a 30-50% aqueous solution of polyethylene glycol 400 for at least 10 minutes. If polyethylene glycol is not available, rinse continuously with plenty of lukewarm water. Transport to the ophthalmologist or eye clinic as soon as possible. Continue rinsing with isotonic saline solution during transport, alternatively with water.

In case of ingestion

Immediately call a POISON CENTRE/doctor. Never give anything by mouth to an unconscious person or a person with cramps. Rinse mouth thoroughly with water. Spit out all liquid. Do NOT induce vomiting.

Self-protection of the first aider

First aider: Pay attention to self-protection! Wear personal protection equipment (refer to section 8). Avoid mouth to mouth resuscitation. Use mouth to mask ventilation with one way valve to exhaust victim's exhaled air away from rescuer.

4.2 Most important symptoms and effects, both acute and delayed

After inhalation: May cause respiratory irritation. Bronchospasms. Cyanosis (blue coloured blood) After skin contact: Causes severe burns. Inflammatory reactions to necrosis. After eye contact: Conjunctival oedema (chemosis). Risk of blindness. After ingestion: Severe irritation up to severe corrosion. Nausea. Burning/pain and tumescence in the mouth/throat/oesophagus/stomach. After resorption: Spasms Dyspnoea.

4.3 Indication of any immediate medical attention and special treatment needed

After inhalation: Supplemental oxygen supply. After inhalation, immediate application of glucocorticoids (inhalative), administration of oxygen and immobilization of the affected person are indicated. If necessary, all further measures of pulmonary edema prophylaxis. After vapor inhalation cardiovascular and pulmonary functions should be carefully monitored. After skin contact: After decontamination of the skin pain treatment and shock prophylaxis. Rinse contaminated skin with a mixture of polyethylene glycol 300 / ethanol (2:1) or with polyethylene glycol 400, alternately with plenty of water. Repeat several times (over at least 20 min). Finally rinse with water. Monitoring of respiratory function. After eye contact: Immediately rinse carefully and thoroughly with a 30-50% aqueous solution of polyethylene glycol 400 for at least 10 minutes. Treat symptomatically. After ingestion: To supervise the blood circulation. After ingestion of large amounts, immediate gastric lavage in intubation should be considered. Polyethylene glycol 400

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

ABC-powder
Carbon dioxide (CO₂).
Dry sand
Nitrogen

Extinguishing media which must not be used for safety reasons

Water spray.
Full water jet

5.2 Special hazards arising from the substance or mixture

Combustible toxic substances (solid)
This material is combustible, but will not ignite readily.
Causes severe skin burns and eye damage.
Toxicity for reproduction
Environmental hazards
Fire may produce irritating, corrosive and/or toxic gases.
In case of fire may be liberated:
Carbon monoxide
Carbon dioxide (CO₂).

5.3 Advice for firefighters

In case of fire and/or explosion do not breathe fumes.
Special protective equipment for firefighters:
Wear a self-contained breathing apparatus and chemical protective clothing.
Co-ordinate fire-fighting measures to the fire surroundings.
In case of fire: Evacuate area.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel: Use personal protective equipment as required. Avoid substance contact. Do not breathe vapour/aerosol. Remove victim out of the danger area. First Aid, decontamination, treatment of symptoms. For emergency responders: Wear a self-contained breathing apparatus and chemical protective clothing. In case of major fire and large quantities: Evacuate area. Fight fire remotely due to the risk of explosion.

6.2 Environmental precautions

Avoid release to the environment. Do not allow to enter into surface water or drains. Cover drains. Advise Authorities if spillage has entered water course or sewer or has contaminated soil or vegetation.

6.3 Methods and material for containment and cleaning up

Large spills: Dike or dam to contain for later disposal. Take up mechanically. Collect spillage. Dispose according to local legislation.

6.4 Reference to other sections

Personal protection equipment: see section 8 Disposal information: see section 13

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advices on safe handling

Obtain special instructions before use.

Ensure procedures and training for emergency decontamination and disposal are in place.

Wear personal protection equipment (refer to section 8).

Avoid contact with eyes.

Do not breathe gas/fumes/vapour/spray.

Use extractor hood (laboratory).

Provide adequate ventilation.

Measures to prevent fire, aerosol and dust generation

Use extractor hood (laboratory).

If handled uncovered, arrangements with local exhaust ventilation should be used if possible.

Measures required to protect the environment

Avoid release to the environment.

Keep container tightly closed.

Collect spillage.

Wash hands before breaks and after work. Avoid contact with eyes and skin. When using do not eat, drink or smoke. Provide eye shower and label its location conspicuously.

7.2 Conditions for safe storage, including any incompatibilities

Recommended storage temperature: 15-25°C

Storage class: 6.1A

Storage: Keep locked up. Keep only in original container. Store in a dry place. Store in a well-ventilated place. Avoid high temperatures or direct sunlight. Packaging materials: High density polyethylene (HDPE) Glass Unsuitable materials and coatings of containers/equipment: Metal.

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

Ingredient (Designation)	Regulatory information	Country	Limit value type (country of origin)	Limit value
Phenol	Workplace Safety and Health (General Provisions) Regulations, WORKPLACE SAFETY AND HEALTH ACT (CHAPTER 354A, SECTION 65)	SG	LTV	5 ppm - 19 mg/m ³

8.2 Exposure controls

Appropriate engineering controls

Technical measures and the application of suitable work processes have priority over personal protection equipment. If handled uncovered, arrangements with local exhaust ventilation have to be used.

Personal protection equipment

Wear suitable protective clothing. When handling with chemical substances, protective clothing with CE-labels including the four control digits must be worn.

Eye/face protection

Eye glasses with side protection

Skin protection

Wear suitable gloves. When handling with chemical substances, protective gloves must be worn with the CE-label including the four control digits. In the case of wanting to use the gloves again, clean them before taking off and air them well. Check leak tightness/impermeability prior to use.

By short-term hand contact

Suitable material:	NBR (Nitrile rubber)
Thickness of the glove material:	0,425 mm
Breakthrough time:	78 min

By long-term hand contact

Suitable material:	Butyl caoutchouc (butyl rubber)
Thickness of the glove material:	0,30 mm
Breakthrough time:	> 480 min

Respiratory protection

Usually no personal respiratory protection necessary. Required when dusts are generated. Wear respiratory protection.

Recommended filter type: P3

Additional information

Wash hands before breaks and after work. Avoid contact with eyes and skin. When using do not eat, drink or smoke. Provide eye shower and label its location conspicuously.

Environmental exposure controls

no data available

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance

Physical state:	solid
Colour:	white
Odour:	no data available

Safety relevant basic data

pH:	no data available
Melting point/freezing point:	40.8 °C
Initial boiling point and boiling range:	181.8 °C (1013 hPa)
Flash point:	81 °C (closed cup)
Flammability:	not applicable
Lower and upper explosion limit	
Lower explosion limit:	no data available
Upper explosion limit:	no data available
Vapour pressure:	no data available
Relative vapour density:	no data available
Density and/or relative density	
Density:	1.06 g/cm ³ (20 °C)
Solubility(ies)	
Water solubility:	no data available
Partition coefficient: n-octanol/water:	no data available
Auto-ignition temperature:	no data available
Decomposition temperature:	not applicable
Viscosity	
Kinematic viscosity:	no data available
Dynamic viscosity:	no data available
Particle characteristics:	no nanoform

9.2 Other information

Evaporation rate:	no data available
Explosive properties:	no data available
Oxidising properties:	not applicable
Bulk density:	no data available
Refraction index:	no data available
Dissociation constant:	no data available
Surface tension:	no data available
Henry's Law Constant:	no data available

SECTION 10: Stability and reactivity

10.1 Reactivity

This material is non-reactive under normal conditions.

Hygroscopic.

10.2 Chemical stability

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

10.3 Possibility of hazardous reactions

Reacts with water/moisture.

Oxidising agent.

Strong acids and strong bases, strong oxidizing agents.

10.4 Conditions to avoid

Protect from moisture.

Avoid high temperatures or direct sunlight.

10.5 Incompatible materials:

No further relevant information available.

10.6 Hazardous decomposition products

no data available

SECTION 11: Toxicological information

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute effects

Acute oral toxicity:

LD50: 340 mg/kg - Rat - (Japan GHS Basis for Classification Data)

LD50: 340 mg/kg - Rat - (OECD 401)

Acute dermal toxicity:

LD50: 630 mg/kg - Rabbit - (National Library of Medicine ChemID Plus (NLM CIP))

LD50: 660 mg/kg - Rat - (OECD 402)

Acute inhalation toxicity:

LCLo: 900 mg/m³ (8 h) - Rat - (OECD 403)

LC50: 900 mg/m³ (8 h) - Rat - (OECD 403)

Irritant and corrosive effects:

Primary irritation to the skin:

Causes severe skin burns and eye damage.

Irritation to eyes:

Causes serious eye damage.

Irritation to respiratory tract:

not applicable

Respiratory or skin sensitisation

In case of skin contact: not sensitising

After inhalation: not sensitising

STOT-single exposure

not applicable

STOT-repeated exposure

May cause damage to organs through prolonged or repeated exposure. (liver, kidney, nervous system, skin)

CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**Carcinogenicity**

No indication of human carcinogenicity.

Germ cell mutagenicity

Suspected of causing genetic defects.

Reproductive toxicity

No indications of human reproductive toxicity exist.

Aspiration hazard

not applicable

Other adverse effects

no data available

Additional information

no data available

11.2 Information on other hazards

This substance does not have endocrine disrupting properties with respect to humans.

SECTION 12: Ecological information**12.1 Toxicity****Fish toxicity:**

no data available

Daphnia toxicity:

no data available

Algae toxicity:

no data available

Bacteria toxicity:

no data available

12.2 Persistence and degradability

no data available

12.3 Bioaccumulative potential

Partition coefficient: n-octanol/water: no data available

12.4 Mobility in soil:

no data available

12.5 Results of PBT/vPvB assessment

not applicable

12.6 Endocrine disrupting properties

This substance does not have endocrine disrupting properties with respect to the environment.

12.7 Other adverse effects

no data available

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Appropriate disposal / Product

This product and its container must be disposed of as hazardous waste. Dispose according to local legislation. Consult the appropriate local waste disposal expert about waste disposal.

Waste code product: 160508

Appropriate disposal / Package

Dispose according to local legislation. Handle contaminated packages in the same way as the substance itself.

Additional information

European waste management legislation
none

National waste management legislation
No further relevant information available.

SECTION 14: Transport information

Land transport (ADR/RID)

14.1	UN number or ID number:	1671
14.2	UN proper shipping name:	PHENOL, SOLID
14.3	Transport hazard class(es):	6.1
	Classification code:	T2
	Hazard label(s):	6.1
14.4	Packing group:	II
14.5	Environmental hazards:	Dangerous for the environment
14.6	Special precautions for user:	
	Hazard identification number (Kemler No.):	60
	Tunnel restriction code:	D/E
		(Passage forbidden through tunnels of category D when carried in bulk or in tanks. Passage forbidden through tunnels of category E.)

Sea transport (IMDG)

14.1	UN number or ID number:	1671
14.2	UN proper shipping name:	PHENOL, SOLID
14.3	Transport hazard class(es):	6.1
	Classification code:	
	Hazard label(s):	6.1
14.4	Packing group:	II
14.5	Environmental hazards:	Dangerous for the environment
	Marine pollutant:	Yes (P)
14.6	Special precautions for user:	
	Segregation group:	-
	EmS-No.	F-A S-A
14.7	Maritime transport in bulk according to IMO instruments	not relevant

Air transport (ICAO-TI / IATA-DGR)

14.1	UN number or ID number:	1671
14.2	UN proper shipping name:	PHENOL, SOLID
14.3	Transport hazard class(es):	6.1
	Classification code:	
	Hazard label(s):	6.1
14.4	Packing group:	II
14.5	Special precautions for user:	

SECTION 15: Regulatory information

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

National regulations

- Workplace Safety and Health Act
- Workplace Safety and Health (Permissible Exposure Levels of Toxic Substances) Order
- Environmental Protection and Management Act (EPMA) - Second Schedule, Part 1, Control of Hazardous Substances
- Maritime and Port Authority of Singapore (MPA) - Dangerous Goods, Petroleum and Explosives Regulations

SECTION 16: Other information

Abbreviations and acronyms

ACGIH - American Conference of Governmental Industrial Hygienists
 ADR - European Agreement concerning the International Carriage of Dangerous Goods by Road
 AGS - Committee on Hazardous Substances (Ausschuss für Gefahrstoffe)
 CLP - Regulation on Classification, Labelling and Packaging of Substances and Mixtures
 DFG - German Research Foundation (Deutsche Forschungsgemeinschaft)
 DNEL - Derived No Effect Level
 Gestis - Information system on hazardous substances of the German Social Accident Insurance (Gefahrstoffinformationssystem der Deutschen Gesetzlichen Unfallversicherung)
 IATA-DGR - International Air Transport Association-Dangerous Goods Regulations
 ICAO-TI - International Civil Aviation Organization-Technical Instructions
 IMDG - International Maritime Code for Dangerous Goods
 KOSHA - Korea Occupational Safety and Health Agency
 LTV - Long Term Value
 NIOSH - National Institute for Occupational Safety and Health
 OSHA - Occupational Safety & Health Administration
 PBT - Persistent, Bioaccumulative and Toxic
 PNEC - Predicted No Effect Concentration
 RID - Regulation concerning the International Carriage of Dangerous Goods by Rail
 STV - Short Term Value
 SVHC - Substances of Very High Concern
 vPvB - very Persistent, very Bioaccumulative

Key literature references and sources for data

This Safety Data Sheet has been prepared based on information available for public as TOXNET information, European Chemicals Agency (ECHA) substance dossier, papers from international cancer research institutes (IARC Monographs), U.S. National Toxicology Program data, U.S. Agency for Toxic Substances and Disease Control (ATSDR), PubChem websites and SDS from our raw material manufacturers.

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Additional information

Indication of changes

Implementation: Commission Regulation (EU) 2020/878 and Review and revision of Section 2.

If you need an explanation of the change, contact the supplier (SDS@avantorsciences.com).

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.