



## SAFETY DATA SHEET

Date of issue: 27/10/04

### 1. Identification of the substance/preparation and of the company/undertaking

#### *Identification of the product*

Catalogue No: 10188

ID No.: 1018800

Product name: **Phenol AnalaR**

Use of the substance/preparation: Chemical reagent

#### *Manufacturer/supplier identification*

Company: VWR International Ltd  
Hunter Boulevard, Magna Park, Lutterworth, Leicestershire, England, LE17 4XN  
Telephone : + 44 (0) 1455 558600    Telefax : + 44 (0) 1455 558586

Emergency telephone No.: + 44 (0) 1202 669700

### 2. Composition/information on ingredients

#### *Chemical characterization*

Organic solid

Product name: Phenol

Synonyms: Carboic acid, hydroxybenzene, oxybenzene

CAS number: 108-95-2

EC-No.: 203-632-7

EC Index No.: 604-001-00-2

Molecular formula:  $C_6H_5OH = 94.11 \text{ g/mol}$

### 3. Hazards identification

Toxic by inhalation, in contact with skin and if swallowed. Causes burns. Also harmful: danger of serious damage to health by prolonged exposure through inhalation, in contact with skin and if swallowed. Possible risks of irreversible effects.

### 4. First aid measures

Eye contact: Irrigate thoroughly with water for at least 10 minutes. OBTAIN MEDICAL ATTENTION.

Inhalation: Remove from exposure, rest and keep warm. In severe cases, or if exposure has been great, OBTAIN MEDICAL ATTENTION.

Skin contact: Remove contaminated clothing avoiding contamination of unaffected areas and swab contaminated skin with glycerol, polyethylene glycol 400, or a mixture of liquid polyethylene glycol 70 parts and methylated spirits 30 parts for at least 10 minutes. Flush with water for at least 10 minutes if solvents are not immediately available. OBTAIN MEDICAL ATTENTION.

Ingestion: Wash out mouth thoroughly with water and give water to drink. OBTAIN MEDICAL ATTENTION.

### 5. Fire-fighting measures

**Special risks:**

Combustible.

**Suitable extinguishing media:**

Foam, dry powder, carbon dioxide or vaporising liquids

**6. Accidental release measures**

Wear appropriate protective clothing. Inform others to keep at a safe distance.

Mix solids with wet sand and absorb liquids on an inert absorbent, and transfer carefully to sealed container. Arrange for removal by disposal company. Wash site of spillage thoroughly with water and detergent.

For large spillages liquids should be contained with sand or earth and both liquids and solids transferred to salvage containers. Any residues should be treated as for small spillages.

**7. Handling and storage**

**Handling:**

Avoid contact with skin and eyes. Under no circumstances eat, drink or smoke while handling this material. Wash hands and face thoroughly after working with material. Contaminated clothing should be removed and washed before re-use.

Use appropriate containment to avoid environmental contamination.

Unsuitable working materials:: various metals, rubber, various plastics, various alloys.

**Storage:**

Store at room temperature (15 to 25°C recommended). Keep well closed and protected from direct sunlight and moisture.

**8. Exposure controls/personal protection**

**UK Exposure Limits:**

WEL - Phenol:

Long-term: 2 ppm (IOELV, Sk)

**Personal protective equipment:**

As appropriate to the situation and the quantity handled. Engineering methods to control or prevent exposure are preferred. Methods could include process enclosure or mechanical ventilation.

- Ventilation: Fume cupboard required when vapours/mists are generated.
- Respirator: Self-contained breathing apparatus required when vapours/mists are generated.
- Gloves: Butyl rubber, Neoprene (polychloroprene), Viton™ or PE/EVAL (Silver Shield) (Gloves subject to permeation or any sign of degradation must be removed and replaced immediately.)
- Eye Protection: Goggles or face-shield
- Other Precautions: Plastic apron, sleeves, boots - if handling large quantities

**9. Physical and chemical properties**

**General information:**

Form:

solid

Colour:

almost colourless

Odour: characteristic

**Health, safety and environmental information:**

Melting temperature	40 - 41°C
Boiling temperature	182°C
Density(g/ml)	1.07
Bulk density:	0.62 g/ml
Vapour pressure	0.2 hPa (20°C)
Relative vapour density:	3.24
Solubility in water	Soluble (84 g/l, 20°C)
pH value	~5 (50g/l H <sub>2</sub> O)
Flash point	81°C
Explosion limits:	lower: 1.3% v/v
	upper: 9.5% v/v
Auto-ignition temperature	595°C
Viscosity:	3.44 mPas (50°C)
Log P(o/w):	1.46

**10. Stability and reactivity**

hygroscopic. sensitive to air

Substances to be avoided

aluminium, aldehydes, halogens, nitrites, nitrates, hydrogen peroxide, iron(III) compounds, salts of oxyhalogenic acids, peroxy compounds.

The possibility of reaction with other substances cannot be excluded.

**11. Toxicological information**

- After inhalation: Irritation of the mucous membranes, coughing, and dyspnoea., damage to respiratory tract
- After skin contact: Rapid absorption. toxic, burns.
- After eye contact: Burns. Risk of blindness!
- After ingestion: toxic. Burns of: mouth, pharynx, oesophagus, gastrointestinal tract.
- Systemic effect: headache, drowsiness, inebriation, confusion, unconsciousness, cardiovascular disorders, changes in the blood picture, respiratory arrest, death. Damage to: liver, kidneys.

Further hazardous properties cannot be excluded. This substance should be handled with particular care.

**Further data**

Odour threshold: 0.05 p p m  
LD50 (oral, rat): 317 mg/kg  
LDLo (oral, human): 140 mg/kg  
LC50 (inhalation, rat): 316 mg/m<sup>3</sup>  
LD50 (dermal, rat): 669 mg/kg  
Sensitization test (guinea pig): negative

Has been found to cause cancer in laboratory animals. May cause adverse mutagenic or teratogenic effects.

**12. Ecological information**

Toxic for aquatic organisms Toxic effect on fish and plankton. Forms toxic mixtures in water, dilution measures notwithstanding.

**Further ecological data:**

Biological degradability: good.  
Bioaccumulation potential: low (Log Pow < 2).

**Fish toxicity:**

LC50 (Lebistes reticulatus): 39 mg/l/96hr

LC50 (Lepomis macrochirus): 6 mg/l/96hr

LC50 (Onchorrhynchus mykiss): 5.4 mg/l/96hr

**Daphnia toxicity:**

EC50 (Daphnia magna): 10 mg/l/48hr

**Algal toxicity:**

IC50 (Selenastrum capricornutum): 66 mg/l/5d

The literature data available to us do not conform with the labelling prescribed by the EC. The EC has dossiers of the manufacturers which have not been published.

**Remarks:**

Hazard for drinking water supplies. Do not allow to enter drinking water supplies, waste water, or soil!

**13. Disposal considerations**

Chemical residues are generally classified as hazardous or special waste, and as such are covered by regulations which vary according to location. Contact your local waste disposal authority for advice, or pass to a chemical disposal company. Rinse out empty containers thoroughly before returning for recycling.

When recovery and recycling is not possible, incineration in a high temperature incinerator is the recommended method of disposal.

**14. Transport information**

UN-No.: 1671

Class: 6.1

Packaging group: II

Proper shipping name: PHENOL, SOLID

**15. Regulatory information**

**Labelling according to EC directives**

Symbol(s): T C Toxic. Corrosive.

R-phrases: R23/24/25-34-48/20/21/22c-68

Toxic by inhalation, in contact with skin and if swallowed. Causes burns. Also harmful: danger of serious damage to health by prolonged exposure through inhalation, in contact with skin and if swallowed. Possible risks of irreversible effects.

S-phrases: S24/25-26-28B-36/37/39-45

Avoid contact with skin and eyes. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. After contact with skin, wash immediately with polyethylene glycol 400, then with plenty of water. Wear suitable protective clothing, gloves, and eye/face protection. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

EC-No.: 203-632-7

Mutagen, Category 3

**Local Regulations**

Within the UK, the use of this material must be assessed under the Control of Substances Hazardous to Health (COSHH)

regulations.

## **16. Other information**

Revision.

Supersedes issue of 27/07/04

Changes in Section : 3,6,15

Date of issue: 27/10/04

Date of print: 19/10/05