

Safety Data Sheet PHENOL RED

SDS no. 22WYKNB4 • Version 1.0 • Date of issue: 2024-06-24

SECTION 1: Identification

GHS Product identifier

Product name PHENOL RED

Other means of identification

Name	Product Code
PHENOL RED AR	PA079
PHENOL RED SODIUM SALT AR	PA356
PHENOL RED LR	PL079
Phenolsulfonephthalein, Phenol red, free acid, Phenolsulfonphthalein, 4,4- (3H-2,1-benzoxathiol-3-ylidene)bis-phenol,S,S-dioxide	

Recommended use of the chemical and restrictions on use

pH indicator: pH 0.0 (pink) to pH 2.0 (yellow), pH 6.8 (yellow) to pH 8.4 (red), analytical reagent, laboratory reagent and diagnostic agent for measuring kidney function (injected intramuscularly or intravenously) and intestinal absorption of drugs (taken orally), laboratory reagent.

Supplier's details

Name	ChemSupply Australia Pty Ltd
Address	38-50 Bedford Street 5013 Gillman South Australia Australia

Telephone	08 8440 2000
email	www.chemsupply.com.au

Emergency phone number

CHEMCALL 1800 127 406 (Australia) / +64-4-917-9888 (International)

SECTION 2: Hazard identification

Classification of the substance or mixture

GHS classification in accordance with: UN GHS revision 7

- Serious eye damage/eye irritation, Cat. 2A
- Skin corrosion/irritation, Cat. 2
- Specific target organ toxicity following single exposure, Cat. 3

GHS label elements, including precautionary statements

Pictograms



Signal word

Warning

Hazard statement(s)

H315 Causes skin irritation
H319 Causes serious eye irritation
H335 May cause respiratory irritation

Precautionary statement(s)

P261 Avoid breathing dust/fume/gas/mist/vapors/spray.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P302+P352 IF ON SKIN: Wash with plenty of water/soap
P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P312 Call a POISON CENTER/doctor/physician if you feel unwell.
P332+P313 If skin irritation occurs: Get medical advice/attention.
P337+P313 If eye irritation persists: Get medical advice/attention.
P362+P364 Take off contaminated clothing and wash it before reuse.
P403+P233 Store in a well-ventilated place. Keep container tightly closed.
P405 Store locked up.
P501 Dispose of contents/container to an approved waste disposal facility

SECTION 3: Composition/information on ingredients

Mixtures

Molecular weight: 354.38

Available as the pure compound (acid) and as the water-soluble monosodium salt [34487-61-1]. Much of the information in this record also applies to the sodium salt.
Commonly used as the sodium salt or as a solution in dilute sodium bicarbonate or sodium hydroxide.

Components

Component	CAS no.	Concentration
Phenol Red (EC no.: 205-609-7)	143-74-8	<= 100 % (weight)
CLASSIFICATIONS: Skin corrosion/irritation, Cat. 2; Specific target organ toxicity following single exposure, Cat. 3. HAZARDS: H315 - Causes skin irritation; H335 - May cause respiratory irritation.		
Phenol Red, Sodium Salt (EC no.: 252-057-8)	34487-61-1	<= 100 % (weight)
CLASSIFICATIONS: Serious eye damage/eye irritation, Cat. 2A; Skin corrosion/irritation, Cat. 2; Specific target organ toxicity following single exposure, Cat. 3. HAZARDS: H315 - Causes skin irritation; H319 - Causes serious eye irritation; H335 - May cause respiratory irritation.		

SECTION 4: First-aid measures

Description of necessary first-aid measures

If inhaled Remove victim to fresh air. Seek medical advice if effects persist.

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In case of skin contact	Wash affected area thoroughly with soap and water. Remove contaminated clothing and wash before reuse or discard. If symptoms develop seek medical attention.
In case of eye contact	Immediately irrigate with copious quantity of water for at least 15 minutes. Eyelids to be held open. Seek medical advice if effects persist.
If swallowed	Rinse mouth thoroughly with water immediately, repeat until all traces of product have been removed. DO NOT INDUCE VOMITING. Seek medical advice if effects persist.

Most important symptoms/effects, acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

Indication of immediate medical attention and special treatment needed, if necessary

Treat symptomatically based on judgement of doctor and individual reactions of the patient.

For advice, contact the National Poisons Information Centre (Phone Australia 13 11 26; New Zealand 0800 764 766) or a doctor.

SECTION 5: Fire-fighting measures

Suitable extinguishing media

Small fire: Use dry chemical, CO₂, water spray or foam.

Large fire: Use water spray, fog or foam.

Specific hazards arising from the chemical

Hazards from Combustion Products: May liberate toxic fumes in fire (oxides of carbon and sulphur).

May burn but do not ignite readily. Containers may explode when heated. Runoff may pollute waterways. Fire may produce irritating, poisonous and/or corrosive gases.

Special protective actions for fire-fighters

Wear SCBA and structural firefighter's uniform.

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures

Avoid inhalation, contact with skin, eyes and clothing. Avoid dust formation and avoid breathing dust.

Wear protective clothing specified for normal operations (see Section 8)

Methods and materials for containment and cleaning up

Sweep up (avoid generating dust) and remove to a suitable, clearly labelled container for disposal in accordance with local regulations.

SECTION 7: Handling and storage

Precautions for safe handling

Avoid generation or accumulation of dusts. Do not breathe dust. Do not get in eyes, on skin, on clothing.

Conditions for safe storage, including any incompatibilities

Store in a cool, dry place. Store in well ventilated area. Keep containers securely sealed and protected against physical damage. Keep away from heat and other sources of ignition.

SECTION 8: Exposure controls/personal protection

Appropriate engineering controls

In industrial situations maintain the concentrations values below the TWA. This may be achieved by process modification, use of local exhaust ventilation, capturing substances at the source, or other methods.

Individual protection measures, such as personal protective equipment (PPE)

Eye/face protection

The use of a face shield, chemical goggles or safety glasses with side shield protection as appropriate. Must comply with Australian Standards AS 1337 and be selected and used in accordance with AS 1336.

Skin protection

Clean impervious clothing should be worn. Clothing for protection against chemicals should comply with AS 3765 Clothing for Protection Against Hazardous Chemicals.

Hand Protection: Ensure hand protection complies with AS 2161, Occupational protective gloves - Selection, use and maintenance.

Body protection

Clean clothing or protective clothing should be worn, preferably with an apron. Clothing for protection against chemicals should comply with AS 3765 Clothing for Protection Against Hazardous Chemicals.

Respiratory protection

Where ventilation is not adequate, respiratory protection may be required. Avoid breathing dust, vapours or mists. Respiratory protection should comply with AS 1716 - Respiratory Protective Devices and be selected in accordance with AS 1715 - Selection, Use and Maintenance of Respiratory Protective Devices. Filter capacity and respirator type depends on exposure levels. In event of emergency or planned entry into unknown concentrations a positive pressure, full-facepiece SCBA should be used. If respiratory protection is required, institute a complete respiratory protection program including selection, fit testing, training, maintenance and inspection.

SECTION 9: Physical and chemical properties

Basic physical and chemical properties

Physical state	Solid
Appearance	Bright to dark red powder.
Color	No data available.
Odor	Weak odour.
Odor threshold	No data available.
Melting point/freezing point	>300 °C
Boiling point or initial boiling point and boiling range	No data available.
Flammability	No data available.
Lower and upper explosion limit/flammability limit	No data available.
Flash point	No data available.
Explosive properties	No data available.
Auto-ignition temperature	No data available.
Decomposition temperature	No data available.
Oxidizing properties	No data available.
pH	No data available.
Kinematic viscosity	No data available.
Solubility	Solubility in Water: 0.77 g/l at 100°C Solubility in Organic Solvents: Slightly soluble in alcohol and acetone. Almost insoluble in chloroform and ether. Soluble in alkali hydroxides and carbonates.
Partition coefficient n-octanol/water (log value)	logP(o/w): 3.02

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Vapor pressure
Evaporation rate
Density and/or relative density
Relative vapor density
Particle characteristics

No data available.
No data available.
No data available.
No data available.
No data available.

Supplemental information regarding physical hazard classes

No data available.

Further safety characteristics (supplemental)

Other Information: Basicity: Weak base - $pK_a = 7.9$

SECTION 10: Stability and reactivity

Reactivity

Stable under normal conditions of storage and handling.

Chemical stability

Stable in air. Stable to heat (can be autoclaved).

Possibility of hazardous reactions

Hazardous Polymerization: Will not occur.

Conditions to avoid

Exposure to moisture.

Avoid storing in direct sunlight and avoid extremes of temperature.

Incompatible materials

Strong acids and bases, strong oxidising agents and strong reducing agents.

Hazardous decomposition products

Oxides of sulfur and carbon.

SECTION 11: Toxicological information

Information on toxicological effects

Acute toxicity

Ingestion: Phenol red is used medically as a marker for intestinal absorption of drugs. It seems to have no harmful effects when taken in small doses. Large doses may cause nausea, vomiting and diarrhea. May be a strong laxative. May cause blood pressure to fall or itching skin rash.

Inhalation: Dusts or mists may be irritating to mucous membranes and upper respiratory tract.

Skin corrosion/irritation

Dusts or mists may be irritating.

Serious eye damage/irritation

Dusts or mists may be irritating.

Respiratory or skin sensitization

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No data available.

Germ cell mutagenicity

Mutagenic in a bacterial test (Ames Salmonella) with and without addition of a liver extract (Chung et al., 'Mutagenicity testing of some commonly used dyes', Applied and Environmental Microbiology, 1981).

Carcinogenicity

No data available.

Reproductive toxicity

No data available.

Summary of evaluation of the CMR properties

No data available.

Specific target organ toxicity (STOT) - single exposure

May cause respiratory irritation.

Specific target organ toxicity (STOT) - repeated exposure

No data available.

Aspiration hazard

No data available.

Additional information

Chronic Effects: Allergic reactions may occasionally occur.

Phenol Red: mouse LD50 intravenous 1368mg/kg (1368mg/kg) Drugs in Japan Vol. -, Pg. 930, 1990.

rat LD50 intravenous 752mg/kg (752mg/kg) Drugs in Japan Vol. -, Pg. 930, 1990.

rat LD50 subcutaneous > 600mg/kg (600mg/kg) Clinical Toxicology. Vol. 4(2), Pg. 185, 1971.

SECTION 12: Ecological information

Bioaccumulative potential

Not expected log Pow:3.02.

SECTION 13: Disposal considerations

Disposal methods

Product disposal

Waste material must be disposed of in accordance with the national and local regulations. Leave chemicals in original containers.

Sewage disposal

Not expected log Pow:3.02.

Other disposal recommendations

Do not discharge this material into waterways, drains and sewers.

SECTION 14: Transport information

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DOT (US)

Not dangerous goods

IMDG

Not dangerous goods

IATA

Not dangerous goods

SECTION 15: Regulatory information

Safety, health and environmental regulations specific for the product in question

Australia SUSMP

Poison Schedule: NS

SECTION 16: Other information

Further information/disclaimer

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Preparation information

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Standard for the Uniform Scheduling of Medicines and Poisons, Commonwealth of Australia

National Road Transport Commission, 'Australian Code for the Transport of Dangerous Goods by Road and Rail 7th. Ed.'

Safe Work Australia, 'National Code of Practice for the Preparation of Safety Data Sheets for Hazardous Chemicals', July 2020.

Safe Work Australia, 'National Guide for Classifying Hazardous Chemicals', July 2020.

Safe Work Australia, Workplace Exposure Standards for Airborne Contaminants, December 2019

Safe Work Australia, Hazardous Chemical Information System (HCIS), hcis.safeworkaustralia.gov.au

IATA, Dangerous Goods Regulations (DGR)

IMO, International Maritime Dangerous Goods Code (IMDG)