

Deepak Nitrite Limited

Material Safety Data Sheet

Resorcinol

1 Product And Company Identification :

Product Name : **Resorcinol**
 CAS No. : 108-46-3
 Supplier : Deepak Nitrite Ltd.
 National Games Road, Opposite Golf Course,
 Yerawada, Pune – 411 006. (India).
 Tel No. : +91 – 20 – 56090200
 Telefax : +91 – 20 – 26685448
 E – mail : export@deepaknitrite.com
 Emergency tel. No : +91 – 265- 2840639 to 2840644

2 Composition / Information On Ingredients :

Hazardous components : Resorcinol
 Synonyms : 1,3 Dihydroxy benzene, 3-hydroxyphenol,
 m-dihydroxybenzene, m-benzenediol, Resorcin,
 Chemical formula : $C_6H_4(OH)_2$
 Molecular weight : 110.11
 CAS No. : 108-46-3
 UN No. : 2876
 EINECS No. : 203-585-2
 Hazard symbols : Xn, N
 Risk phrases : R22 , R36/38, R50
 Safety phrases : S26, S51

3 Hazards Identification :

Potential Health Effects:

Eyes: Contact with eyes may cause severe irritation and possible eye burns.

Skin: Causes skin burns. May cause skin sensitization, an allergic reaction, which becomes evident upon re-exposure to this material.

Ingestion: Causes gastrointestinal irritation with nausea, vomiting and diarrhea. Causes gastrointestinal tract burns. May cause kidney damage.

Inhalation: Dust is irritating to the respiratory tract. May cause methemoglobinemia, cyanosis, convulsions, tachycardia, dyspnea and death.

Chronic: Not available

Emergency Overview: Harmful if swallowed. Irritating to eyes & skin. Very toxic to aquatic organisms.

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4 First Aid Measures :

Eyes: Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper lids. Get medical aid immediately.

Inhalation: Leave contaminated area immediately, breathe fresh air. Proper respiratory protection must be supplied to any rescuers. If coughing, difficult breathing or any other symptoms develop, seek medical attention at once, even if symptoms develop many hours after exposure.

Ingestion: Do not induce vomiting. If victim is conscious and alert, give 2-4 cupfuls of milk or water. Never give any thing by mouth to an unconscious person. Assure that the person's airway is unobstructed and contact a hospital or poison center.

Skin Contact: Flood all areas of body that have contacted the substance with water. Do not wait to remove contaminated clothing, do it under the water stream. Use soap to help assure removal. Isolate contaminated clothing when removed to prevent contact by others. Get medical attention.

5 Fire Fighting Measures :

Flash Point : 168°C closed cup, 127 °C open cup

Auto ignition temperature : 608 °C

Flammable Limits in air % by volume : Lel : 1.4 % @ 200 °C Uel : Not Know

Fire and Explosion hazard : Dust (powder) may form explosive mixture in air.

Container explosion may occur under fire conditions. When exposed to heat or flame can react with oxidizing materials, keep dust from accumulating.

Fire Extinguishing Media : Carbon dioxide, Dry chemical powder, water spray, Chemical foam.

Special Information : As in any fire, wear a self contained breathing apparatus.

6 Accidental Release Measures : General : Eliminate all ignition sources immediately and ventilate the area. Reduce airborne dust and prevent scattering by moistening with water. Wear appropriate personal protective equipment in cleaning up operation..

Spills/leaks: Collect the material in suitable container. Flush the area with water.

Consult an expert on the disposal of recovered material. Ensure disposal is in compliance with government requirements and ensure conformity of local disposal regulations. Notify the appropriate authorities immediately. Take all additional action necessary to prevent and remedy the adverse effects of spill.

7 Handling & Storage : Handling: Handle with an approved respirator, chemical resistant gloves, safety goggles & other protective clothing at well ventilated place (ex. In chemical fume hood) Equip an eye wash facility and shower for emergency near handling & storing place. Wash hands and face after handling. Observe good personal hygiene practices and recommended procedures.

Storage: in cool, dry, dark and well ventilated place. Keep in a tightly sealed container. Avoid moisture, exposing to sun light and contacting with metals such as iron or copper (other than Aluminum or stainless steel). Keep away from all sources of ignition.

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8 Exposure Control / Personal Protection : Engineering control: Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits. Ventilation fans and other electrical services must be non-sparking and have an explosion proof design.

Personal protective equipment:

Eyes: Wear chemical goggles if splashing is possible.

Skin: Wear appropriate gloves, shoes, apron etc.

Respiratory: If ventilation is inadequate to maintain personal exposure below TLV (PEL), use appropriate approved respiratory protection. If within OSHA protection factor, air purifying organic vapour cartridge/canister with particulate filter is acceptable.

OSHA permissible exposure limits : Not established.

ACGIH Threshold limit values : TWA 10 ppm (45 mg / m³) ; STEL 20 ppm (90 mg / m³)

OSHA : PEL 10 ppm (45 mg / m³) ; STEL 20 ppm (90 mg / m³)

9 Physical And Chemical Properties :

Colour	: White to off white flakes
Odour	: Slightly phenolic
pH	: -
Boiling Point/range	: 276.7 °C/760mmHg
Melting point	: 109 - 111°C
Flash Point	: 127 °C
Explosion properties	: -
Density	: 1.3 g/ cm ³
Solubility	: 110 gm / 100ml water, soluble in ethanol, acetone, benzene
Specific Gravity (15°C/4°C)	: 1.272
Vapour Density	: 3.79
Vapour Pressure	: 4.5 mm at 70 °C

10 Stability And Reactivity :

Stability	: Stable at normal condition.
Hazardous Decomposition Products	: Carbon monoxide, carbon dioxide
Hazardous Polymerisation	: Will not occur
Incompatibility	: Strong oxidizing agents, bases, antipyrine, acetanilide.

11 Toxicological Information :

Acute toxicity	: LD ₅₀ ,oral, mouse : 200 mg/kg LD ₅₀ , oral, rat : 301mg/kg Single dose skin penetration, rabbit, LD50 :3360 mg/kg Oral, human, LDLO : 29 mg/kg Single dose oral – LD ₅₀ : 980 mg/kg Ames Salmonella/microsome test for mutagenicity : negative
Skin irritation	: 500 mg/kg. Not a primary skin irritant as defined by FHSA
Eye irritation	: 10 % solution caused pain conjunctiva inflammation and ulceration of cornea in the rabbit eyes.
RTECS#	: VG9625000
Carcinogenicity	: ACGIH A4 – not classifiable as a Human carcinogen
EPA / IRIS Classification	: Reported in EPA - TSCA Inventory 1980

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12	<p>Ecological Information : Acute fish toxicity</p> <p>Environmental Fate : The major degradation process for Resorcinol in soil is expected to be bio degradation. A number of biological studies have found Resorcinol to be readily biodegradable. In a laboratory soil degradation study using a chernozem soil which had been exposed to the cooking industry, 500 ppm Resorcinol was degraded in 2 days. Resorcinol is expected leach readily in soil, however leaching may not be important if concurrent biodegradation occurs at a rapid rate.</p> <p>Aquatic fate: The major degradation processes for Resorcinol in natural water may be biodegradation and photooxidation. . A number of biological studies have found Resorcinol to be readily biodegradable. By analogy to other phenol compounds, resorcinol may react relatively rapidly in sunlit natural water.</p> <p>Atmospheric fate: It is expected to degrade rapidly in air by reaction with photochemically produced hydroxyl radicals.</p>
13	<p>Disposal Considerations : This product is a hazardous waste when it is discarded or intended to be discarded. Dispose off as a hazardous waste in accordance with national and regional regulations. Stop spill / leak if no risk involved. Stay upwind. Shovel back into original dry container or waste receptacle. Flush area with water. Contain run off from fire control and dilution water. Burn in a controlled incinerator</p>
14	<p>Transport Information :</p> <p>UN No. : 2876 Hazard Class : 6.1(Toxic) Packing Group : II</p> <p>Proper shipping name : Resorcinol</p> <p>Declaration for land shipment : As above</p> <p>Declaration for sea shipment : As above</p> <p>Declaration for air shipment (IATA) : As above</p> <p>Packing instruction, passenger :</p> <p>Packing instruction, cargo :</p>
15	<p>Regulatory Information :</p> <p>Symbols : Xn, N</p> <p>Contains Resorcinol</p> <p>European labeling in accordance with EC Directives</p> <p>Hazard symbols: Xn, N</p> <p>Risk Phrases:</p> <p>R 22 : Harmful if swallowed.</p> <p>R 36/38 : Irritating to eyes and skin.</p> <p>R 50 : Very toxic to aquatic organisms</p> <p>Safety Phrases:</p> <p>S 26 : In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.</p> <p>S 61 : Avoid release to the environment. Refer to special instructions/ safety data sheets.</p> <p>TSCA : Listed on TSCA inventory</p> <p>CERCLA : Reportable quantity is 5000 pounds.</p> <p>Canada: Listed on Canada's DSL/NDSL list.</p>
16	<p>Other Information:</p>

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