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RE-ISSUED by CHEMSUPP Infosafe No™ 1CH5T Issue Date: July 2018

RESORCINOL Product Name:

Classified as hazardous

1. Identification

GHS Product

RESORCINOL

Identifier **Company Name**

CHEM-SUPPLY PTY LTD (ABN 19 008 264 211)

38 - 50 Bedford Street GILLMAN **Address**

SA 5013 Australia

Telephone/Fax Number

Tel: (08) 8440-2000 Fax: (08) 8440-2001

Recommended use of the chemical and restrictions on use

Resins, resin adhesives, explosives, dyes, cosmetics, tanning, printing textiles, reagent for zinc, hexylresorcinol, p-aminosalicylic acid, pharmaceuticals, cross-linking agent for neoprene, rubber

tackifier, adhesives and laboratory reagent.

Other Names Name **Product Code**

RL003

RESORCINOL LR 1,3-Dihydroxybenzene m-Dihydroxybenzene 3-Hydroxyphenol 1,3-Benzenediol

Resorcin Pyrogallol

Other Information

+61 08 8440 2000 EMERGENCY CONTACT NUMBER: Business hours: 8:30am to 5:00pm, Monday to Friday.

Chem-Supply Pty Ltd does not warrant that this product is suitable for any use or purpose. The user must ascertain the suitability of the product before use or application intended purpose. Preliminary testing of the product before use or application is recommended. Any reliance or purported reliance upon Chem-Supply Pty Ltd with respect to any skill or judgement or advice in relation to the suitability of this product of any purpose is disclaimed. Except to the extent prohibited at law, any condition implied by any statute as to the merchantable quality of this product or fitness for any purpose is hereby excluded. This product is not sold by description. Where the provisions of Part V, Division 2 of the Trade Practices Act apply, the liability of Chem-Supply Pty Ltd is limited to the replacement of supply of equivalent goods or payment of the cost of replacing the goods or acquiring equivalent goods.

2. Hazard Identification

GHS classification Hazardous to the Aquatic Environment - Acute Hazard: Category 1

of the

Eye Damage/Irritation: Category 2A

substance/mixture

Acute Toxicity - Oral: Category 4 Skin Corrosion/Irritation: Category 2 Sensitization - Respiratory: Category 1

Signal Word (s)

WARNING

Hazard Statement

H302 Harmful if swallowed. H315 Causes skin irritation.

(s)

H317 May cause an allergic skin reaction.

H319 Causes serious eye irritation.

H400 Very toxic to aquatic life.

Pictogram (s)

Exclamation mark, Environment,





Precautionary statement -Prevention

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.

P264 Wash thoroughly after handling.

P270 Do not eat, drink or smoke when using this product.

P272 Contaminated work clothing should not be allowed out of the workplace.

P273 Avoid release to the environment.

P280 Wear protective gloves/protective clothing/eye protection/face protection.



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Precautionary statement -

P301+P312+P330 IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.

Rinse mouth.

P302+P352 IF ON SKIN: Wash with plenty of soap and water. Response P332+P313 If skin irritation occurs: Get medical advice/attention.

P362 Take off contaminated clothing and wash before reuse.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses,

if present and easy to do. Continue rinsing.

P337+P313 If eye irritation persists: Get medical advice/attention.

Precautionary statement -**Disposal**

P501 Dispose of contents/container to an approved waste disposal plant.

3. Composition/information on ingredients

Chemical

Solid Characterization

Ingredients CAS **Proportion Hazard Symbol Risk Phrase** <u>Name</u>

> Resorcinol 108-46-3 100 %

4. First-aid measures

Inhalation If inhaled, remove from contaminated area to fresh air immediately. Apply artificial respiration if not

breathing. If breathing is difficult, give oxygen. Immediately obtain medical aid if cough or other

symptoms appear.

Rinse mouth thoroughly with water immediately, repeat until all traces of product have been removed. Ingestion

DO NOT INDUCE VOMITING. Seek immediate medical advice.

Wash affected areas with copious quantities of water immediately. Remove contaminated clothing and Skin

wash before re-use. If rapid recovery does not occur, obtain medical attention

Immediately irrigate with copious quantity of water for at least 15 minutes. Eyelids to be held open. In all Eye contact

cases of eye contamination it is a sensible precaution to seek medical advice.

Maintain eyewash fountain and drench facilities in work area. **First Aid Facilities**

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

For advice, contact a Poisons Information Centre (Phone eg Australia 13 1126; New Zealand 0800 764 Other Information

766) or a doctor.

5. Fire-fighting measures

Hazards from Combustion **Products**

Acrid smoke and toxic and irritating fumes, including carbon dioxide and carbon monoxide.

Specific Methods Small fire: Use dry chemical, CO2 or water spray. If safe to do so, move undamaged containers from fire

area.

Large fire: Use dry chemical, CO2, foam or water spray - Do not use water jets.

Specific hazards arising from the

May burn but do not ignite readily. Runoff may pollute waterways. Fire will produce irritating, poisonous

and/or corrosive gases.

chemical

2Z **Hazchem Code**

Decomposition

> 281 °C (boiling point).

Temp.

Wear SCBA and chemical splash suit. Fully-encapsulating, gas-tight suits should be worn for maximum Precautions in

connection with Fire protection. Structural firefighter's uniform is NOT effective for these materials.

Accidental release measures

Evacuate the area of all non-essential personnel. Avoid substance contact. Avoid generation of dusts: Personal

do not inhale dusts. Ensure supply of fresh air in enclosed rooms. **Precautions**

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

Clean-up Methods -**Small Spillages**

Sweep up (avoid generating dust) and using clean non-sparking tools transfer to a clean, suitable,

clearly labelled container for disposal in accordance with local regulations.

Environmental Prevent contamination of soil and water. Use appropriate containment to avoid environmental

contamination. **Precautions**

7. Handling and storage



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Handling

Precautions for Safe Avoid ingestion or inhalation of dust. Avoid contact with skin, eyes, or clothing. Avoid prolonged or repeated exposure. Minimize dust generation and accumulation. Keep containers closed when not in use. Use only with adequate ventilation. In case of insufficient ventilation, wear suitable respiratory equipment. Wash hands and face thoroughly after working with material. Contaminated clothing should be removed and washed before re-use. Ensure a high level of personal hygiene is maintained when using this product. That is; always wash hands before eating, drinking, smoking or using the toilet. Air and light sensitive. Protect from light. Keep away from incompatibles.

Conditions for safe storage, including

Store in labelled, corrosion-resistant, tightly closed containers, in a cool, dry, well-ventilated area. Air

and light sensitive.

any

incompatabilities

Storage Regulations Refer Australian Standard AS/NZS 4452:1997 'The storage and handling of toxic substances'.

Storage

Store at room temperature (15 to 25 °C recommended).

Temperatures

8. Exposure controls/personal protection

Occupational STEL TWA Name

exposure limit values

> mg/m3 mg/m3 **Footnote** ppm ppm

90 20 45 10 Resorcinol

Other Exposure Information

A time weighted average (TWA) has been established for Resorcinol (Safe Work Australia) of 45 mg/m³. (10 ppm). The corresponding STEL level is 90 mg/m³, (20 ppm). The STEL (Short Term Exposure Limit) is an exposure value that should not be exceeded for more than 15 minutes and should not be repeated for more than 4 times per day. There should be at least 60 minutes between successive exposures at the STEL. The exposure value at the TWA is the average airborne concentration of a particular

substance when calculated over a normal 8 hour working day for a 5 day working week.

Appropriate

In industrial situations maintain the concentrations values below the TWA. This may be achieved by engineering controls process modification, use of local exhaust ventilation, capturing substances at the source, or other methods. These methods should be used in preference to personal protective equipment.

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.

The use of a face shield, chemical goggles or safety glasses with side shield protection as appropriate. **Eye Protection**

Must comply with Australian Standards AS 1337 and be selected and used in accordance with AS 1336. **Hand Protection** Hand protection should comply with AS 2161, Occupational protective gloves - Selection, use and

maintenance. Avoid skin contact when removing gloves from hands, do not touch the gloves outer

surface. Dispose of gloves as hazardous waste.

Personal Protective Equipment

Hygiene Measures

Personal protective equipment should not solely be relied upon to control risk and should only be used when all other reasonably practicable control measures do not eliminate or sufficiently minimise risk. Guidance in selecting personal protective equipment can be obtained from Australian, Australian/New

Zealand or other approved standards.

Clean clothing or protective clothing should be worn, preferably with an apron. Clothing for protection **Body Protection**

against chemicals should comply with AS 3765 Clothing for Protection Against Hazardous Chemicals. Always wash hands before smoking, eating or using the toilet. Wash contaminated clothing and other

protective equipment before storing or re-using.

9. Physical and chemical properties

Form Solid

Appearance White needles, plates, crystals, flakes, or powder, becoming pink on exposure to air or light, or contact

Faint, characteristic, unpleasant, phenol-like odour. Odour

Decomposition **Temperature**

> 281 °C (boiling point).

Melting Point

109 - 111 ºC.



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Boiling Point 280 °C.

Solubility in Water Completely soluble in water (717 g/l (at 25 °C); 141 g/100 g water (at 20 °C)).

Solvents

Solubility in Organic Soluble in alcohol, ether, DMSO, glycerol, benzene, amyl alcohol and acetic acid; slightly soluble in

chloroform.

1.27. **Specific Gravity**

4.4 (55g/L ag. sol.); 5.2 (concentrated aqueous solution).

0.027 Pa at 25 °C. **Vapour Pressure**

Vapour Density

3.8.

(Air=1)

Evaporation Rate Negligible.

Odour Threshold 6.0 mg/l (detection). Partition Coefficient: log P(o/w): 0.8.

n-octanol/water

127 °C (CC). **Flash Point Flammability** Combustible. 608 °C. **Auto-Ignition**

Temperature

Explosion Limit -

1.4 vol% in air @ 200 °C.

Lower

Explosion

Properties

Container explosion may occur under fire conditions. Potentially explosive reaction with concentrated

nitric acid. Dusts at sufficient concentrations can form explosive mixtures with air.

Molecular Weight

Taste: Sweetish taste followed by bitter taste. Other Information

Conversion factor: 1 ppm = 4.49 mg/m³: 1 mg/m³ = 0.223 ppm at 25 °C.

10. Stability and reactivity

Chemical Stability Stable under ordinary conditions of use and storage. May turn pink on exposure to air, light, or on

contact with iron. Hygroscopic: absorbs moisture or water from the air.

Conditions to Avoid Heat, high temperatures (above melting point), flames and other ignition sources (electrostatic charges),

dust generation, exposure to air, light, moist air or water and incompatible materials.

Strong oxidizing agents (e.g nitrates, pechlorates), acetanilide, acids, acid anhydrides, acid chlorides, Incompatible

air, albumin, alkalies, ammonia, antipyrine, camphor, ferric salts, iron, menthol, spirit nitrous ether, **Materials**

urethane and periodate.

Acrid smoke and toxic and irritating fumes, including carbon dioxide and carbon monoxide. **Hazardous**

Decomposition Products

Possibility of

Reacts with strong oxidants, ammonia and amino compounds causing fire and explosion hazard. hazardous reactions Reactive with acids. Potentially explosive reaction with concentrated nitric acid. May form a salt when in contact with strong bases.

Hazardous Will not occur.

Polymerization

11. Toxicological Information

Acute Toxicity - Oral LD50 (rat): 501 mg/kg (OECD) **Acute Toxicity -**

Dermal

LD50 (rabbit): 2830 mg/kg

Toxic. Symptoms may be similar to those of inhalation and absorption through the skin. May cause Ingestion irritation and possible burns to mucous membranes of the gastrointestinal tract. Overexposure may cause gastrointestinal upset with nausea, vomiting, severe diarrhoea, pallor, sweating, hypothermia, blood effects (methaemoglobinaemia (characterized by dizziness, drowsiness, headache, shortness of breath, cyanosis (bluish discolouration of skin due to deficient oxygenation of the blood), rapid heart rate and chocolate-brown coloured blood), haemoglobinuria (haemoglobin in the urine)), respiration effects (cyanosis. dyspnoea), behaviour/nervous system effects (weakness, tetany, tremors, muscle twitching, convulsions, spastic paralysis, excitement, delirium, coma), cardiovascular system effects (hypotension),

liver, kidney and spleen damage, and possible collapse and death.

May be harmful if inhaled. Inhalation of vapours or dust causes irritation to mucous membranes and Inhalation



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respiratory tract, with burning pain in the nose and throat, coughing, wheezing and shortness of breath. Inhalation may produce nausea, abdominal pain, CNS disorders, headache, narcosis, agitation, excitation, weakness, fatigue, confusion, dizziness, vertigo, spasms, shock, methaemoglobinaemia, cyanosis (bluish discolouration of skin due to deficient oxygenation of the blood), convulsions, tachycardia, cardiovascular disorders, unconsciousness, collapse, pulmonary oedema, dyspnoea

(laboured breathing), and death. May cause impaired function of thyroid.

Causes moderate to severe skin irritation, with redness, pain, swelling, itching, corrosion, severe Skin

dermatitis and loss of superficial layers of skin. Danger of skin absorption. Can be absorbed through skin with severe exposures in toxic amounts, producing symptoms similar to ingestion. Absorbed chemical can affect metabolism and can cause restlessness, destruction of haemoglobin, cyanosis, convulsions, increased heart rate, difficulty in breathing, enlargement of local lymph glands, hyperaemia

(an excess of blood in a part), oedema and death. May cause allergic skin reactions.

Causes severe eye irritation, with redness and pain. May cause discomfort, conjunctivitis, corneal Eye

clouding, corneal ulcerations and permanent damage.

Skin Sensitisation Based on the available animal and human data, this chemical is considered to be a moderate to strong

contact skin sensitiser.

Resorcinol [108-46-3] is evaluated in the IARC Monographs (Vol. 15, Suppl. 7, Vol. 71, 1999) as Group Carcinogenicity

3: Not classifiable as to carcinogenicity to humans.

Reproductive

Toxicity Chronic Effects

In one study, resorcinol was found not to cause reproductive effects in rats.

Chronic exposure may cause blood effects (methemoglobinemia), goiter (enlargement of the thyroid gland), liver, kidney, and heart damage, unconsciousness and possible death. Prolonged or repeated ingestion may affect the endocrine system (adrenal gland, thymus), liver, kidneys, and metabolism. Prolonged or repeated exposure may cause sensitization and cross-sensitization with other phenolic materials in certain sensitive individuals. Prolonged or repeated skin contact may cause dermatitis, an

allergic skin reaction.

Serious eye damage/irritation Mutagenicity

Standard Draize test, rabbit, eye: 100 mg, Remarks: Severe irritation effect.

Mutagenic in bacteria, yeasts and isolated mammalian cells.

Cytogenetic analysis, Human Lymphocyte: 80 mg/L.

Cytogenetic analysis, Human Cells - not otherwise specified: 40 mg/L.

DNA damage, rat, Liver: 10 mmol/L.

Cytogenetic analysis, hamster, Ovary: 1600 mg/L.

Mutation in microorganisms, Bacteria - Salmonella typhimurium: 20 µmol/plate.

Gene conversion and mitotic recombination, Yeast - Saccharomyces cerevisiae,: 1 gm/L.

Standard Draize test, rabbit, skin: 20 mg/24 h, Remarks: Moderate irritation effect.

Skin corrosion/irritation Resorcinol produced necrosis of the skin of rabbits treated with 2000-8000 mg/kg.

Rabbits exposed to 1000 mg/kg showed signs of slight hyperhematosis (overgrowth of the horney layer

of the skin) following signs of moderate to severe irritation after 24 hours.

Other Information NICNAS: 1,3-Benzenediol: Human health tier II assessment

12. Ecological information

Ecotoxicity Formation of health-hazardous mixtures possible with water. Highly toxic for aquatic organisms.

Persistence and

Readily degradable in water.

degradability

BOD 61% of ThOD /5 d; COD 100% of ThOD; ThOD: 1.89 g/g.

Mobility **Bioaccumulative** Distribution: log P(o/w): 0.8.

Potential

Low bioaccumulation potential.

Environmental

Do not allow to enter waters, waste water, or soil!

Protection

13. Disposal considerations

Disposal Considerations

Whatever cannot be saved for recovery or recycling should be handled as hazardous waste and disposed of according to relevant local, state and federal government regulations.

14. Transport information

Transport Information Dangerous Goods of Class 6 (Toxic and Infectious Substances) are incompatible in a placard load with any of the following: -Class 1, Class 3, if the Class 3 dangerous goods are nitromethane, Class 8, if the Class 6 dangerous goods are cyanides and the Class 8 dangerous goods are acids; and are incompatible with food and food packaging in any quantity.



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U.N. Number

UN proper shipping RESORCINOL

Transport hazard

class(es)

6.1

2876

Hazchem Code 27 Ш **Packing Group EPG Number** 6B3 **IERG Number** 36

15. Regulatory information

Regulatory Information Listed in the Australian Inventory of Chemical Substances (AICS). Not listed under WHS Regulation 2011, Schedule 10 - Prohibited carcinogens, restricted carcinogens and restricted hazardous chemicals.

Poisons Schedule Not Scheduled

16. Other Information

Literature References 'Standard for the Uniform Scheduling of Medicines and Poisons.', Commonwealth of Australia.

Lewis, Richard J. Sr. 'Hawley's Condensed Chemical Dictionary 13th. Ed.', Rev., John Wiley and Sons,

Inc., NY, 1997.

National Road Transport Commission, 'Australian Code for the Transport of Dangerous Goods by Road

and Rail 7th. Ed.', 2007.

Safe Work Australia, 'National Code of Practice fot the Preparation of Safety Data Sheets for Hazardous

Chemicals', 2011.

Standards Australia, 'SAA/SNZ HB 76:2010 Dangerous Goods - Initial Emergency Response Guide',

Standards Australia/Standards New Zealand, 2010.

Safe Work Australia, 'Approved Criteria for Classifying Hazardous Substances [NOHSC:1008 (2004)]'.

Safe Work Australia, 'Hazardous Substances Information System, 2005'.

Safe Work Australia, 'National Code of Practice for the Labelling of Safe Work Hazardous Substances

(2011)'

Safe Work Australia, 'National Exposure Standards for Atmospheric Contaminants in the Occupational

Environment [NOHSC:1003(1995) 3rd Edition]'.

Contact Person/Point Paul McCarthy Ph. (08) 8440 2000 DISCLAIMER STATEMENT:

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Structural Formula

Empirical Formula & Empirical Formula: C6H4(OH)2. Structural Formula: C6-H6-O2.

...End Of MSDS...

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