

SAFETY DATA SHEET

M49022 - ANSI - EN



INDSPEC Chemical Corporation

A subsidiary of Occidental Petroleum Corporation

PENACOLITE® RESIN I-868-C

SDS No.: M49022

SDS Revision Date: 15-May-2015

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Company Identification:	INDSPEC Chemical Corporation Subsidiary of Occidental Petroleum Corporation 5005 LBJ Freeway P.O. Box 809050 Dallas, Texas 75380-9050
Manufacturing Address:	INDSPEC Chemical Corporation Subsidiary of Occidental Petroleum Corporation 133 Main Street Petrolia, Pennsylvania 16050 USA Information: (+1) 412-826-3666
24 Hour Emergency Telephone Number:	1-800-733-3665 or 1-972-404-3228 (U.S.); CHEMTREC (U.S.): 1-800-424-9300; CHEMTREC Contract No: CCN16186; CANUTEC (Canada): 1-613-996-6666 MEDICAL EMERGENCIES: 1-800-456-7566
To Request an SDS:	MSDS@oxy.com or 1-972-404-3245
Customer Service:	1-800-752-5151 or 1-972-404-3700
Product Identifier:	PENACOLITE® RESIN I-868-C
Synonyms:	Resorcinol blocked Isocyanate
Product Use:	Component of an RFL dip to enhance rubber adhesion to tire cord
Uses Advised Against:	None identified.
Chemical Family:	Modified Diisocyanate

PENACOLITE® RESIN I-868-C

SDS No.: M49022

SDS Revision Date: 15-May-2015

2. HAZARDS IDENTIFICATION

OSHA REGULATORY STATUS: This material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

EMERGENCY OVERVIEW:

Color: Off-white
Physical State: Solid
Appearance: Powder
Odor: Odorless

Signal Word: **NONE**

MAJOR HEALTH HAZARDS: MAY CAUSE SLIGHT EYE IRRITATION. MAY CAUSE MILD SKIN IRRITATION.

PRECAUTIONARY STATEMENTS: Always use good hygiene measures. Avoid contact with skin and eyes. Wash thoroughly after handling.

ADDITIONAL HAZARD INFORMATION: Even though this material is not classified as hazardous according to US OSHA's 2012 Hazard Communication Standard, good hygiene and safety practices should be followed. Good hygiene practices include but are not limited to: wearing suitable gloves and/or eye protection; washing hands and affected skin immediately after handling, before breaks, and at the end of the workday; regularly cleaning work area and clothing; etc.

GHS CLASSIFICATION:

Note: This material is not classified as hazardous according to the OSHA Hazard Communication Standard (29 CFR 1910.1200).

GHS: CARCINOGENICITY:	Not classified as a carcinogen per GHS criteria. This product is not classified as a carcinogen by NTP, IARC, or OSHA.
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GHS SYMBOL: None

GHS SIGNAL WORD: **NONE**

GHS HAZARD STATEMENTS:

PENACOLITE® RESIN I-868-C

SDS No.: M49022

SDS Revision Date: 15-May-2015

GHS - Physical Hazard Statement(s)

Not classified as a hazardous substance or mixture

GHS - Health Hazard Statement(s)

Not classified as a hazardous substance or mixture

GHS - Precautionary Statement(s) - Prevention

There are no Precautionary Statement(s)-Prevention phrases assigned

GHS - Precautionary Statement(s) - Response

There are no Precautionary Statement(s)-Response phrases assigned

GHS - Precautionary Statement(s) - Storage

There are no Precautionary Statement(s) - Storage phrases assigned

GHS - Precautionary Statement(s) - Disposal

There are no Precautionary Statement(s) - Disposal phrases assigned.

Hazards Not Otherwise Classified (HNOC)

None Known

See Section 11: TOXICOLOGICAL INFORMATION

3. COMPOSITION/INFORMATION ON INGREDIENTS

Synonyms: Resorcinol blocked Isocyanate

Component	Percent [%]	CAS Number
1,3-Benzenediol, polymer with 1,1'-methylenebis[isocyanatobenzene]	85 - 90	1008753-84-1
Resorcinol	1 - 15	108-46-3

4. FIRST AID MEASURES

INHALATION: If inhalation of this material occurs and you feel unwell, move to fresh air. If symptoms of overexposure occur, get medical attention.

SKIN CONTACT: As a precaution, wash contaminated areas with water. If irritation or adverse symptoms develop, seek medical attention.

EYE CONTACT: If in eyes, rinse cautiously with water for several minutes, as a precaution. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists, get medical advice/attention.

INGESTION: If illness or adverse symptoms develop, seek medical attention. Contact a poison center or doctor/physician if you feel unwell.

PENACOLITE® RESIN I-868-C

SDS No.: M49022

SDS Revision Date: 15-May-2015

Most Important Symptoms/Effects (Acute and Delayed) :**Acute Symptoms/Effects:** Listed below.**Inhalation (Breathing):** Inhaling this material may cause irritation to upper respiratory tract (nose and throat).**Skin:** Exposure to skin may cause mild skin irritation: redness, dry skin.**Eye:** Eye exposure may cause temporary irritation and redness to the eye.**Ingestion (Swallowing):** Ingesting this material may cause gastric irritation.**Other Health Effects:** Systemic toxicity may result following inhalation or ingestion of this material.**Delayed Symptoms/Effects:**

- No delayed / chronic effects have been identified

Interaction with Other Chemicals Which Enhance Toxicity: None known.**Medical Conditions Aggravated by Exposure:** May aggravate preexisting conditions such as: eye disorders that decrease tear production or have reduced integrity of the eye; skin disorders that compromise the integrity of the skin; and respiratory conditions including asthma and other breathing disorders.**Protection of First-Aiders:** Avoid contact with skin and eyes. Avoid breathing dust. Use personal protective equipment. Refer to Section 8 for specific personal protective equipment recommendations. At minimum, treating personnel should utilize PPE sufficient for prevention of bloodborne pathogen transmission.**Notes to Physician:** No specific antidote. Treatment is based upon symptomatic and supportive care.

5. FIRE-FIGHTING MEASURES

Fire Hazard: Negligible fire hazard.**Explosive properties:** Closed containers may explode or rupture when exposed to extreme heat (fire). Dust (powder) may form explosive mixture in air.**Extinguishing Media:** Use dry chemical, carbon dioxide, foam, or water spray.**Fire Fighting:** Wear complete fire service protective equipment, including full-face MSHA/NIOSH approved self-contained breathing apparatus. Use water to cool fire-exposed container/structure/protect personnel.

Hazardous Combustion Products:	Oxides of nitrogen, Isocyanates, Oxides of carbon (Carbon monoxide, Carbon dioxide), Hydrogen cyanide
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Sensitivity to Mechanical Impact:	Not sensitive.
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Sensitivity to Static Discharge: Not sensitive.**Lower Flammability Level (air):** No data available

PENACOLITE® RESIN I-868-C

SDS No.: M49022

SDS Revision Date: 15-May-2015

Upper Flammability Level (air): No data available

Flash point: >177 °C (>350 °F)

Auto-ignition Temperature: No data available

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions:

Handle in accordance with good industrial hygiene and safety practice. As a precaution, avoid contact with skin and eyes. Avoid inhalation of dust. Avoid generating dust. Wear appropriate personal protective equipment recommended in Section 8, Exposure Controls / Personal Protection, of the SDS.

Methods and Materials for Containment and Cleaning Up:

Stop leak if possible without personal risk. Confined or solidified spills: Shovel or vacuum into dry containers and cover. Use vacuum or wet mop to clean up dust. Flush spill area with water, if appropriate. Contain runoff from fire control and dilution water.

Environmental Precautions:

Keep out of water supplies and sewers. Releases should be reported, if required, to appropriate regulatory agencies. This product released into the environment must be reported to the National Response Center (1-800-424-8802) when the reportable quantity or more is spilled or leaked. The reportable quantity (RQ) for this product is 33,333 pounds. The US EPA intends to issue a Significant New Use Rule (SNUR) for this substance under 40 CFR Part 721.10571 with regard to no release to water. See Federal Register Vol 77 No. 194 dated October 5, 2012.

7. HANDLING AND STORAGE

Precautions for Safe Handling:

Handle in accordance with good industrial hygiene and safety practice. Avoid breathing dust. Avoid contact with skin and eyes. Wash thoroughly after handling. Wear personal protective equipment as described in Exposure Controls/Personal Protection (Section 8) of the SDS.

Safe Storage Conditions:

Store and handle in accordance with all current regulations and standards. Store in a cool, dry, well ventilated area. Protect from physical damage. Keep in properly labeled containers. Maintain good housekeeping.

Incompatibilities/ Materials to Avoid:

Acids and bases, Alcohols, Amines, Ammonia, Metal compounds

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

PENACOLITE® RESIN I-868-C

SDS No.: M49022

SDS Revision Date: 15-May-2015

Regulatory Exposure Limit(s): Listed below for the product components that have regulatory occupational exposure limits (OEL's).

Component	OSHA Final PEL TWA	OSHA Final PEL STEL	OSHA Final PEL Ceiling
Particles Not Otherwise Regulated (PNOR) 00-00-001	15 mg/m ³ (Total) 5 mg/m ³ (Respirable)	-----	-----

OEL: Occupational Exposure Limit; OSHA: United States Occupational Safety and Health Administration; PEL: Permissible Exposure Limit; TWA: Time Weighted Average; STEL: Short Term Exposure Limit

NON-REGULATORY EXPOSURE LIMIT(S): Listed below for the product components that have advisory (non-regulatory) occupational exposure limits (OEL's) established.

Component	CAS Number	ACGIH TWA	ACGIH STEL	ACGIH Ceiling	OSHA TWA (Vacated)	OSHA STEL (Vacated)	OSHA Ceiling (Vacated)
Particulates Not Otherwise Specified (PNOS)	Not Assigned	10 mg/m ³ (Inhalable) 3 mg/m ³ (Respirable)	-----	-----	-----	-----	-----
Resorcinol	108-46-3	10 ppm	20 ppm	-----	10 ppm 45 mg/m ³	20 ppm 90 mg/m ³	-----

- The Non-Regulatory United States Occupational Safety and Health Administration (OSHA) limits, if shown, are the Vacated 1989 PEL's (vacated by 58 FR 35338, June 30, 1993).

- The American Conference of Governmental Industrial Hygienists (ACGIH) is a voluntary organization of professional industrial hygiene personnel in government or educational institutions in the United States. The ACGIH develops and publishes recommended occupational exposure limits each year called Threshold Limit Values (TLVs) for hundreds of chemicals, physical agents, and biological exposure indices.

Additional Advice: Even though this material is not classified as hazardous according to US OSHA's 2012 Hazard Communication Standard, good hygiene and safety practices should be followed. Good hygiene practices include but are not limited to: wearing suitable gloves and/or eye protection; washing hands and affected skin immediately after handling, before breaks, and at the end of the workday; regularly cleaning work area and clothing; etc.

ENGINEERING CONTROLS: Provide local exhaust ventilation where dust may be generated. Ensure compliance with applicable exposure limits.

PERSONAL PROTECTIVE EQUIPMENT:

Eye Protection: Use good hygiene practices when handling this material. Wear safety glasses with side-shields.

Skin and Body Protection: As a good hygiene practice, wear protective clothing to minimize skin contact such as standard industrial work clothes, coveralls, safety footwear.

Hand Protection: As a good hygiene practice, wear appropriate chemical resistant gloves. Consult a glove supplier for assistance in selecting an appropriate chemical resistant glove.

PENACOLITE® RESIN I-868-C

SDS No.: M49022

SDS Revision Date: 15-May-2015

Protective Material Types: Butyl rubber, Natural rubber, Neoprene, Vinyl

Respiratory Protection: A NIOSH approved respirator with N95 cartridges may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits, or when symptoms have been observed that are indicative of overexposure. The added protection of a full face-piece respirator is required when visible dusty conditions are encountered and eye irritation may occur. A respiratory protection program that meets 29 CFR 1910.134 must be followed whenever workplace conditions warrant use of a respirator.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State:	Solid
Appearance:	Powder
Color:	Off-white
Odor:	Odorless
Odor Threshold [ppm]:	No data available.
Chemical Family:	Modified Diisocyanate
Decomposition Temperature:	880 °C (1616 °F)
Boiling Point/Range:	Not applicable to solids
Freezing Point/Range:	Not applicable to solids.
Melting Point/Range:	112 °C
Vapor Pressure:	Not applicable
Vapor Density (air=1):	Not applicable
Relative Density/Specific Gravity (water=1):	1.3 @ 25 °C
Water Solubility:	<0.09 mg/l
pH:	4 - 4.5
Volatility:	Not applicable
Evaporation Rate (ether=1):	Not applicable
Partition Coefficient (n-octanol/water):	Water soluble
Flash point:	>177 °C (>350 °F)
Flammability (solid, gas):	No data available
Lower Flammability Level (air):	No data available
Upper Flammability Level (air):	No data available
Auto-ignition Temperature:	No data available
Viscosity:	Not applicable to solids

10. STABILITY AND REACTIVITY

Reactivity: Not reactive under normal temperatures and pressures.

Chemical Stability: Stable at normal temperatures and pressures.

PENACOLITE® RESIN I-868-C

SDS No.: M49022

SDS Revision Date: 15-May-2015

Possibility of Hazardous Reactions:

None known.

Conditions to Avoid:

(e.g., static discharge, shock, or vibration) -. None known.

Incompatibilities/ Materials to Avoid:

Acids and bases. Alcohols. Amines. Ammonia. Metal compounds.

Hazardous Decomposition Products: Oxides of nitrogen, Isocyanates, Oxides of carbon (Carbon monoxide, Carbon dioxide), Hydrogen cyanide (hydrocyanic acid)**Hazardous Polymerization:** Will not occur.

11. TOXICOLOGICAL INFORMATION

IRRITATION DATA: As listed below**Standard Draize (Eye):** Score - 6.0 @ 1 hr.**Standard Draize (Skin):** Score - 0.2 (Rabbit - 24 hrs.)**TOXICITY DATA:****PRODUCT TOXICITY DATA:** PENACOLITE® RESIN I-868-C

LD50 Oral: > 2,000 mg/kg (Rat)	LD50 Dermal: >2000 mg/kg (Rabbit)	LC50 Inhalation: No data available
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COMPONENT TOXICITY DATA:**Note:** The component toxicity data is populated by the LOLI database and may differ from the product toxicity data given.

Component	LD50 Oral:	LD50 Dermal:	LC50 Inhalation:
Resorcinol 108-46-3	202 mg/kg (Rat)	3360 mg/kg (Rabbit)	21.3 mg/L (1 hr-Rat)

POTENTIAL HEALTH EFFECTS:**Eye contact:** May cause slight eye irritation.**Skin contact:** May cause mild skin irritation.**Inhalation:** May cause slight upper respiratory irritation and systemic effects based on similar products.

PENACOLITE® RESIN I-868-C

SDS No.: M49022

SDS Revision Date: 15-May-2015

Ingestion: May cause gastric irritation. Systemic effects are possible.

Chronic Effects: None known.

SIGNS AND SYMPTOMS OF EXPOSURE:

Inhalation (Breathing): Inhaling this material may cause irritation to upper respiratory tract (nose and throat).

Skin: Exposure to skin may cause mild skin irritation: redness, dry skin.

Eye: Eye exposure may cause temporary irritation and redness to the eye.

Ingestion (Swallowing): Ingesting this material may cause gastric irritation.

Other Health Effects: Systemic toxicity may result following inhalation or ingestion of this material.

Interaction with Other Chemicals Which Enhance Toxicity: None known.

GHS HEALTH HAZARDS:

This material is not classified as hazardous according to the OSHA Hazard Communication Standard (29 CFR 1910.1200). There is not a GHS classification associated with this non-hazardous material.

Skin Absorbent / Dermal Route? No.

GHS: CARCINOGENICITY:

Not classified as a carcinogen per GHS criteria. This product is not classified as a carcinogen by NTP, IARC, or OSHA.

12. ECOLOGICAL INFORMATION

ECOTOXICITY DATA:

Fish Toxicity:

Resorcinol: Fathead minnow - LC50 53 mg/l (96 hr.)

Invertebrate Toxicity:

Resorcinol: Daphnia - LD0 0.8 mg/l; Grass Shrimp - LC50 42 mg/l (96 hr.)

Algae Toxicity:

Resorcinol: Scenedesmus - LD0 60 mg/l

Other Toxicity:

Resorcinol: LD0 Bacteria E.Coli: < 1000 mg/L

FATE AND TRANSPORT:

BIODEGRADATION: Resorcinol: Biodegradation - Adapted culture / 89% removal after 48 hr. incubation, feed 446 mg/l

PERSISTENCE: Resorcinol: BOD: 61% ThOD; COD: 100% ThOD; ThOD: 1.89

PENACOLITE® RESIN I-868-C

SDS No.: M49022

SDS Revision Date: 15-May-2015

BIOCONCENTRATION: No data available.

BIOACCUMULATIVE POTENTIAL: Resorcinol: BCF 3.16.

MOBILITY IN SOIL: Resorcinol: Koc at 20°C - 10.36.

13. DISPOSAL CONSIDERATIONS

Waste from material:

Reuse or reprocess, if possible. The US EPA has issued a non 5e Significant New Use Rule (SNUR) for this substance under 40 CFR Part 721 Subpart E with regard to no release to water. Restrictions as identified in 40 CFR Part 721.90(a)(4), (b)(4), (c)(4) apply to this substance. No release into the waters of the US from any predictable or purposeful release of a manufacturing stream associated with any use of the substance, from any site; any substance from any site; or any predictable or purposeful release of a use stream containing the substance associated with any use of the substance from any site. This includes but is not limited to use for purging pipe lines, equipment cleanout, transport container cleaning, etc.

Container Management:

Dispose of container in accordance with applicable local, regional, national, and/or international regulations. Container rinsate must be disposed of in compliance with applicable regulations.

14. TRANSPORT INFORMATION

LAND TRANSPORT

U.S. DOT 49 CFR 172.101:

Status: Not regulated.

CANADIAN TRANSPORTATION OF DANGEROUS GOODS:

Status: Not regulated.

MARITIME TRANSPORT (IMO / IMDG) :

Status - IMO / IMDG: Not Regulated

PENACOLITE® RESIN I-868-C

SDS No.: M49022

SDS Revision Date: 15-May-2015

15. REGULATORY INFORMATION**U.S. REGULATIONS****OSHA REGULATORY STATUS:**

This material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

CERCLA SECTIONS 102a/103 HAZARDOUS SUBSTANCES (40 CFR 302.4):

Not regulated.

Component	CERCLA Reportable Quantities:
Resorcinol	5000 lb (final RQ)

SARA EHS Chemical (40 CFR 355.30)

Not regulated

EPCRA SECTIONS 311/312 HAZARD CATEGORIES (40 CFR 370.10):

None

EPCRA SECTION 313 (40 CFR 372.65):

Not regulated.

OSHA PROCESS SAFETY (PSM) (29 CFR 1910.119):

Not regulated

NATIONAL INVENTORY STATUS**U.S. INVENTORY STATUS: Toxic Substance Control Act (TSCA):** All components are listed or exempt.**TSCA 12(b):** This product is not subject to export notification.**Canadian Chemical Inventory:** All components of this product are listed on either the DSL or the NDSL.**STATE REGULATIONS****California Proposition 65:**

This product does not contain substances at levels which the State of California has found to cause cancer, birth defects, or other reproductive harm.

Component	California Proposition 65 Cancer WARNING:	California Proposition 65 CRT List - Male reproductive toxin:	California Proposition 65 CRT List - Female reproductive toxin:	Massachusetts Right to Know Hazardous Substance List	New Jersey Right to Know Hazardous Substance List	New Jersey Special Health Hazards Substance List
Resorcinol 108-46-3	Not Listed	Not Listed	Not Listed	Listed	1634	Not Listed

PENACOLITE® RESIN I-868-C

SDS No.: M49022

SDS Revision Date: 15-May-2015

Component	New Jersey - Environmental Hazardous Substance List	Pennsylvania Right to Know Hazardous Substance List	Pennsylvania Right to Know Special Hazardous Substances	Pennsylvania Right to Know Environmental Hazard List	Rhode Island Right to Know Hazardous Substance List
Resorcinol 108-46-3	Not Listed	Listed	Not Listed	Present	Listed

CANADIAN REGULATIONS

• This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the SDS contains all the information required by the Controlled Products Regulations

WHMIS - Classifications of Substances:

• Not Classified

16. OTHER INFORMATION

Prepared by: OxyChem Corporate HESS - Product Stewardship

Rev. Date: 15-May-2015

HMIS: (SCALE 0-4) (Rated using National Paint & Coatings Association HMIS: Rating Instructions, 2nd Edition)

Health Rating: 0

Flammability Rating: 0

Reactivity Rating: 0

NFPA 704 - Hazard Identification Ratings (SCALE 0-4)

Health Rating: 0

Flammability: 0

Reactivity Rating: 0

Reason for Revision:

- Authored safety data sheet using the WERCS software
- Changed the SDS format to meet the GHS requirements of the revised 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

IMPORTANT:

The information presented herein, while not guaranteed, was prepared by technical personnel and is true and accurate to the best of our knowledge. NO WARRANTY OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE, OR WARRANTY OR GUARANTY OF ANY OTHER KIND, EXPRESS OR IMPLIED, IS MADE REGARDING PERFORMANCE, SAFETY, SUITABILITY, STABILITY OR OTHERWISE. This information is not intended to be all-inclusive as to the manner and conditions of use, handling, storage, disposal and other factors that may involve other or additional legal, environmental, safety or performance considerations, and INDSPEC Chemical Corporation assumes no liability whatsoever for the use of or reliance upon this information. While our technical personnel will be happy to respond to questions, safe handling and use of the product remains the responsibility of the customer. No suggestions for use are intended as, and nothing herein shall be construed as, a recommendation to infringe any existing patents or to violate any Federal, State, local or foreign laws.

PENACOLITE® RESIN I-868-C

SDS No.: M49022

SDS Revision Date: 15-May-2015

OSHA Standard 29 CFR 1910.1200 requires that information be provided to employees regarding the hazards of chemicals by means of a hazard communication program including labeling, safety data sheets, training and access to written records. We request that you, and it is your legal duty to, make all information in this Safety Data Sheet available to your employees

End of Safety Data Sheet