



MATERIAL SAFETY DATA SHEET

PENACOLITE B-20-S

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND COMPANY

Product name: Penacolite B-20-S
Synonym: None
Product Use: Used as rubber additive to improve adhesion
Chemical Family: Resorcinol-Formaldehyde Substituted Carbo Monocyclic Resin
Formula: Mixture
Supplier: Castle Chemicals Ltd, Peak House
6 Oxford Road, Altrincham, Cheshire WA14 2DY
Tel: +44 161 608 8800 Fax: +44 161 608 1910
Email: info@castlechemicals.com

2. HAZARD IDENTIFICATION

Risk Phrases	According to Council Directive 67/548/EEC	
R Phrases:	Irritating to Eyes and Skin	
R36/38	Irritant Xi	
Signal Word	GHS	
GHS	GHS	GHS
Hazard Class	Hazard Category	Hazard Statement
Acute Toxicity	5	H303 May be Harmful if Swallowed H313 May be Harmful in Contact with Skin
Skin Corrosion/ Irritation	2	H316 Causes Mild Skin Irritation
Serious Eye Damage/ Eye Irritation	2A	H319 Causes Serious Eye Irritation
Acute Hazards to Aquatic Environment	2	H401 Toxic to Aquatic Life
Signal Word	Warning	Pictogram – GHS 07 Exclamation Mark

3. COMPOSITION INFORMATION ON INGREDIENTS

Hazardous Ingredients	Resorcinol
Percent	1-5
Hazard Class	R22, Xn, H302, GHS07
US TSCA	108-46-3
EC EINECS	203-585-2
Korea KECI	KE-02557
China IECSC	Yes

Hazardous Ingredients	Formaldehyde Polymer with 1, 3-benzenediol, and ethenylbenzene
Percent	95-99
US TSCA	135020-80-3
EC EINECS	Exempt
Korea KECI	Yes
China IECSC	Yes

4. FIRST AID MEASURES

Eye Contact:	Remove contact lenses. Immediately flush eyes and surrounding areas with large amounts of lukewarm water for at least 15 minutes. Seek immediate medical aid.
Skin Contact:	Remove contaminated clothing. Wipe material from skin. Immediately flush area with large amounts of water for at least 15 minutes. If any irritation is present seek medical aid. Wash contaminated clothing before reuse.
Inhalation:	Remove from exposure. If breathing has stopped or is difficult, administer artificial respiration or oxygen as indicated. Seek medical aid.
Ingestion:	DO NOT ATTEMPT TO GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON. Remove any evidence of substance from patient's mouth. If victim is conscious and alert, give 8-12 ounces of water or milk. Immediately seek medical aid.
Note To Physician:	Further treatment may be necessary. Contact local Poison Control Center.

5. FIREFIGHTING MEASURES

TDG Flammability Classification:	None
Extinguishing Media:	Use dry chemical, carbon dioxide, foam or water spray.
Fire-Fighting Procedures:	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.
Fire and Explosion Hazards:	Closed containers may explode or rupture when exposed to extreme heat (fire).
Sensitivity to Mechanical Impact / Static Discharge	Not Defined

6. ACCIDENTAL RELEASE MEASURES

Spill or Leak Procedure: Stop spill/leak if no risk involved. Stay upwind. Shovel back into original dry container or waste receptacle. Flush area with water. Contain runoff from fire control and dilution water.

7. HANDLING AND STORAGE

Handling: Avoid prolonged or repeated breathing of vapors, mists or fumes. Avoid prolonged or repeated contact with skin or eyes.

Storage: Keep in a closed, labeled container within a cool (well shaded), dry well ventilated area. Protect from physical damage. Keep containers closed when material is not in use. Maintain good housekeeping.

Other: Not for use or storage in or around the home. Do not use until manufacturer's precautions have been read / understood. Wash exposed areas promptly and thoroughly after skin contact and before eating, drinking, using tobacco products or restrooms.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Eye Protection: Industrial safety glasses, minimum. Also at a minimum, comply with 29 CFR 1910.133 or equivalent and evaluate work area conditions: use side shields, goggles or face shield.

Skin Protection: As required, industrial resistant flexible-type gloves. Depending on working conditions, i.e., contact potential, wear impervious protective garments such as head/neck cover, aprons, jackets, pants, coveralls, boots, etc.

Respiratory Protection: Not required under normal use conditions. If ventilation does not maintain inhalation exposures below TLV (PEL), use MSHA/NIOSH approved units as per current 29 CFR 1910.134 or equivalent and manufacturers' "Instructions" and "Warnings". If within OSHA protection factor, air purifying organic vapor cartridge/canister with particulate filter is acceptable.

Ventilation: Provide sufficient general/local exhaust ventilation in pattern/volume to control inhalation exposures below current exposure limits and areas below flammable vapor concentrations.

Hazardous Ingredients	Exposure Limit	PPM	MG/M3
Resorcinol	ACGIH-TLV	10	45
	ACHIG-STEL	20	90
Formaldehyde Polymer with 1, 3-benzenediol, and ethenylbenzene	None Established	-	-

9. PHYSICAL AND CHEMICAL PROPERTIES

Flash Point & Method:	>220° C (>428°F)
Auto ignition Temp:	NA
Flammable Limits (% BY VOLUME/AIR):	Lower: NA Upper: NA
Specific Gravity	1.37 @ 23 °C
% Volatile By Vol:	NA
Boiling Point:	NA
Evaporation Rate (ETHER=1):	NA
Melting Point:	105 °C (221 °F)
Viscosity:	<1 poise @ 50% Solution
Vapor Pressure:	<1 mm
pH:	4.3 @ 50% 50:50 ethanol/water
Vapor Density (AIR=1):	NA
Solubility (WATER):	Negligible
VOC:	NA
Coefficient of Water/Oil Distribution:	ND
Appearance / odor:	Dark brown pastille; slight phenolic odor

10. STABILITY AND REACTIVITY

Conditions Contributing to Instability:	None
Compatibility:	Reaction with formaldehyde is mildly exothermic.
Hazardous Reactions / Decomposition / Combustion Products:	Water, Carbon Dioxide, Carbon Monoxide
Conditions Contributing to Hazardous Polymerization:	None

11. TOXICOLOGICAL INFORMATION

Acute Toxicity	
Oral Toxicology:	5 g/kg Oral-Rat LD50
Dermal Toxicology:	>2 g/kg Intact and Abraded Skin- Rabbit LD50 24 hrs..
Skin Corrosion/Irritation:	Score 4 – Moderate Irritation Rabbit 24 hrs
Serious Eye Damage/Irritation	Score 8 @24, 2 @48 and 0.4 @72 hrs. – Serious Eye Damage Rabbit
Respiratory Sensitization:	Not Determined
Skin Sensitization:	Not Determined
Mutagenicity:	Not Determined
Carcinogenicity:	Not Determined
Reproductive Toxicity:	Not Determined
Specific Target Organ Systemic Toxicity	Repeat Exposure - Individual with pre-existing disease, or a history or ailments involving skin, mucus membranes, thyroid or eyes may be at greater risk of

adverse health effects when exposed to resorcinol. Animal studies have indicated that exposure to high doses of resorcinol can result in reversible damage to the thyroid gland. In other animal studies, high doses of resorcinol caused damage to the following target organs/tissues: blood, G.I. tract, spleen, liver, kidneys, lungs, nervous system and skin. This product contains less than 10 percent resorcinol.

Acute Hazards to Aquatic Environment

Based on SAR for polyphenols LC50 >1 mg/l and < 0mg/l

12. ECOLOGICAL INFORMATION

Ecotoxicity	No Data Available
Mobility	No Data Available
Persistence/Degradability	No Data Available
Bioaccumulative Potential	No Data Available

13. DISPOSAL CONSIDERATIONS

Waste Disposal: Dispose of in accordance with national and regional regulations.

14. TRANSPORT INFORMATION

IMO/ADR/RID/IATA:	
Proper Shipping Name:	None
Hazard Class:	None
UN/NA Number:	None
Required Marking:	None

15. REGULATORY INFORMATION

Labeling according to Council Directive 67/548/EEC

R&S Phrases	Symbol
R36/38 Irritating to Eyes and Skin	Xn; St. Andrews Cross for Harmful
S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.	

Labeling according to GHS EC No 1272/2008

Signal Word	Hazard Class Statement	Pictogram
Warning	H303 May be Harmful if Swallowed	None
Warning	H313 May be Harmful in Contact with Skin	None
	Warning H316 Causes Skin Irritation	GHS07 Exclamation Mark
Warning	H319 Causes Serious Eye Irritation	GHS07 Exclamation Mark
None	H401 Toxic to Aquatic Life	None
P264; P273; P280; P312; P363;	Precautionary Statement	
	Call a physician if you feel unwell. Wear eye/face protection. If in eyes, rinse cautiously with water for	

P302 + P352
P305 + P351 + P338;
P337 + P313;
P332 + P313

several minutes. Remove contact lenses, if present and easy to do so. Continue rinsing. If eye irritation persists get medical attention. Wash thoroughly after handling. If on skin wash with plenty of soap and water. If skin irritation occurs get medical attention. Take off contaminated clothing and wash before use. Avoid release to the environment.

16. OTHER INFORMATION

Disclaimer

Chemical analysis indicates that <0.1% free formaldehyde is present in product. No known ingredients which occur at greater than 0.1% are listed as a carcinogen in the IARC Monographs on the Evaluation of the Carcinogenic Risk of Chemicals to Humans, the NTP Annual Report on Carcinogens or OSHA 29 CFR 1910 Subpart Z Toxic and Hazardous Substances (specifically regulated substances).
SKIN PROTECTION (protective material):
Permeation/degradation values of chemical mixtures cannot be predicted from pure components or chemical classes. Thus, these materials are normally best estimates based on available pure component data. A significant difference in chemical breakthrough time has been reported for generically similar gloves from different manufacturers (AIHJ., 48, 941-947 1987).
Do not use until manufacturer's precautions have been read/understood. Wash exposed areas promptly and thoroughly after skin contact from working with this product and before eating, drinking, using tobacco products or restrooms. Do not wear contact lenses without proper eye protection when using this product.

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