



MATERIAL SAFETY DATA SHEET

Manufacturer: STAR, INC.
1400 Walcutt Road.
Columbus, OH 43228

Emergency Phone No. CHEM-TEL 800-255-3924
Information Phone No. 800-759-1912
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SECTION I- IDENTIFICATION

Product Name: STAR SEAL - ASPHALT PAVEMENT SEALER

Chemical Family - Refined Coal Tar Pitch Emulsion
Chemical Name - Proprietary.
Prepared by - G.C. Dubey

H.M.I.S
Health = 1
Fire = 1
Reactivity = 1

SECTION II- INGREDIENTS

<u>Ingredients</u>	<u>CAS NO.</u>	<u>WT%</u>	<u>Exposure Limits</u>	
			<u>OSHA PEL</u>	<u>ACGIH TLV</u>
<u>Hazardous Ingredients</u>				
Coal Tar Pitch	65996-93-2	29-32	0.2 mg/m3 (Volatiles)	0.2 mg/m3 (Volatiles)
Listed in SARA Title III, Section 313- No.				
STEL	- N/A*			
LC 50	- N/A			
LD 50	- N/A			
<u>Other Ingredients</u>				
Clay	1332-58-7	18-20	N/A	10mg/m3 (dust)
STEL	- 5 MG/M3 (DUST)			
LC 50	- N/A			
LD 50	- N/A			
Water	7732-18-5	48-50	N/A	N/A
Listed in SARA Title III, Section 313 - No.				
STEL	- N/A			
LC 50	- N/A			
LD 50	- CTI OVER 320,000			

* N/A = NOT AVAILABLE OR APPLICABLE

Total weight percentage of all the listed ingredients could be below 100, indicating other unlisted ingredients that are not considered hazardous by any federal (OSHA, WHMIS, SARA), any state or province or local Right-To-Know Regulations.

SECTION III, PHYSICAL DATA

<u>Boiling Point</u>	<u>Vapor Pressure</u>	<u>Vapor Density</u>	<u>Appearance</u>
Over 212 F	(mm Hg) approx. 25	(Air=1) 1	Brownish or Black Liquid coal tar odor.
<u>Evaporation Rate (Water=1)</u>	<u>Specific Gravity</u>	<u>pH</u>	<u>Freezing Point</u>
1	1.10 - 1.30	7.00-8.00	32 Deg F/ 0 Deg C
<u>Miscibility</u>	<u>Threshold Odor</u>	<u>Water/Oil Dist Coeff</u>	<u>V.O.C.</u>
Dilutable with water	ppm- N/A	1/1	Lb./gal- 0.12 . Gms/liter-15

SECTION IV- FIRE AND EXPLOSION HAZARD DATA

<u>Flammability Classification</u>	<u>Flash Point</u>	<u>Flammable Limits</u>	
N/A	(method used) N/A	LEL	UEL
		N/A	N/A
<u>Combustion Products</u>	<u>Extinguishing Media</u>		
CO, CO2, Hydrocarbon compounds	Foam, dry chemical, CO2		

Special Fire Fighting Procedures: Cool exposed containers to prevent steam pressure build up. Wear self-contained breathing equipment.

Unusual Fire and Explosion Hazards: Containers may rupture due to steam pressure build-up.

<u>Explosive Power</u>	<u>Burning Rate</u>		
N/A	N/A		
<u>UN/NA/PIN#</u>	<u>Static Sensitive</u>	<u>Impact Sensitive</u>	
N/A	NO	NO	

SECTION V- HEALTH HAZARD DATA

Threshold Limit Value - 0.2 mg/ m3, coal tar pitch volatiles.

Routes Of Entry - Skin, eyes, inhalation, ingestion.

Effects Of Overexposure - Acute: YES Chronic: YES

Eyes - Overexposure to vapors can cause eye irritation, burning, redness and /or corneal changes, which in absence of recommended first aid may result in severe burns.

Skin - Contact with skin can result in irritation which when accentuated by sunlight may result in photo toxic skin reaction (similar to sunburn). Prolonged and /or repeated contact with the product or volatiles may result in more serious skin disorders including cancer.

Inhalation- The product has very low vapor pressure, therefore, harmful effects are not anticipated Chronic inhalation overexposure to vapors. Repeated and /or prolonged contact to high levels of vapor concentration, may result in respiratory problems, central nervous system (CNS) effects and possible cardiovascular collapse.

Ingestion- May cause nausea, cramps, vomiting, diarrhea or acute effects. May be fatal in large amounts.

Unusual Chronic Toxicity: May cause cancer of the skin, lungs, kidney and bladder. Prolonged or repeated contact over many years in the absence of good hygiene and personal protection may lead to changes in skin pigmentation and skin tumors.

Conditions aggravated by exposure and additional health hazards: The test results reported in Koppers Industries, Inc. publication "Using refined Coal tar Emulsion safely-1991" conclusively established that emissions during the manufacturing as well as application of sealcoatings based on refined coal tar are well below the OSHA exposure limits. Refined coal tar is a complex mixture of thousands of chemical compounds, majority being closed ring, polynuclear aromatic compounds (PNAs) which range from single ring structure to multiple (30-40) rings in their molecular structure. According to NTP, IARC or OSHA, some of these PNAs have been found to induce cancer in animals under laboratory conditions.

Cancer warning statements for materials derived from coke oven tar-which includes refined coal tar (RT-12)-are based primarily on crude (unrefined tars). No data has been established on refined coal tars or sealcoatings based on refined coal tars as potential carcinogens. The cancer warnings are, therefore, affixed on all the coal tar derived products due to the lack of specific data on these products.

Respirable crystalline silica, also used in conjunction with this product is a suspected carcinogen, however, no exposure is expected through the use of this material. This product and sealcoatings, in general, have not been tested for chronic exposure effects.

Carcinogenic: IARC- YES

ACGIH- YES

EMERGENCY FIRST AID PROCEDURES

Eyes- Immediately flush with plenty of water for 15 minutes, call a physician, if condition persists.

Skin- Wash thoroughly with plenty of water and soap. If irritation persists, seek medical help.

Inhalation- Move to fresh air. If breathing has stopped or is difficult, administer artificial respiration oxygen as needed. Seek medical help.

Ingestion- Do not induce vomiting. Give 1-2 glasses of milk. Do not attempt to give anything by mouth to an unconscious person. Seek medical help immediately and show M.S.D.S. or label.

SECTION VI- REACTIVITY DATA

<u>Stability</u>	<u>Conditions to Avoid</u>	<u>Incompatibility</u>
Stable	Keep from freezing.	(Materials to avoid) Strong oxidizing agents.
Hazardous Decomposition Products -	N/A	
Hazardous Polymerization -	Will not occur.	
Conditions to Avoid -	N/A	

SECTION VII- SPILL OR LEAK PROCEDURES

SARA Title III
302 - No

304 -No

313 - No.

RCRA-No.

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

Ventilate the area. Wear approved respiratory protection. Wear suitable protective clothing, gloves and eye / face protection. Contain and pick up waste material. Put in a sealed approved container. Dispose of in accordance with federal, state, and local regulations.

For Small Spills: Absorb with an inert material and place in containers.

For Large Spills: Contain material and pump into tanks or other suitable containers. Spills over 45 gallons should be reported to national, state and local emergency response agencies. The telephone number for the National Response Center is 800-424-8802.

Do not flush into sewers or bodies of water. The material will suffocate fish until it settles to bottom.

WASTE DISPOSAL

This material is not a hazardous waste in either liquid (emulsion) form or as dried material, according to TCLP (Toxic Characteristic Leaching Procedure) results (EPA method 1311) . Recommended disposal by land filling (dry) or incineration shall be selected in accordance with the local, state and federal regulations.

Reportable Quantity - N/A
Regulations - WHMIS, SARA, State and province.
Hazardous Waste - N/A
TPQ (lb.) - N/A

SECTION VIII- SAFE HANDLING AND PROTECTION INFORMATION

Ventilation: Use local exhaust ventilation to control mists or vapors generated when using this product.

Special - N/A Other - N/A

Respiratory Protection: Use only with adequate ventilation. If ventilation is inadequate, wear approved respiratory equipment.

Protective Gloves: Rubber Gloves, chemically resistant.

Eye Protection: Wear safety glasses, goggles or face shield.

Other Protective Equipment: Wear suitable protective clothing.

Estimated LD50, MG/KG: N/A
Estimated LC50, PPM: N/A
Sensitization: N/A
Irritants: YES

SECTION IX- SPECIAL PRECAUTIONS

1. Keep out of reach of children.
2. For professional and industrial use only.
3. Do not handle until manufacturer's safety precautions have been read and understood.
4. Use only with adequate ventilation.
5. Do not take internally.
6. Avoid contact with eyes and skin.
7. Wash thoroughly after using. Practice safe hygiene principles.
8. Additional Technical Data Sheets and/or M.S.D.S.'s are available upon request.

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