

**SECTION 1**

**PRODUCT AND COMPANY IDENTIFICATION**

**PRODUCT NAME:** STAR-SEAL  
**PRODUCT USE:** Asphalt Pavement Sealer (Refer to the Product Bulletin for More Information)  
**MANUFACTURER:** Specialty Technology And Research, Incorporated (S.T.A.R., Inc.)  
Address: 1150 Milepost Drive, Columbus, Ohio 43228  
Web Site: [www.starseal.com](http://www.starseal.com)  
Tel: +1-614-870-0744 • Fax: +1-614-870-0598 • Toll Free +1-800-759-1912  
**EMERGENCY:** Chem-Tel Toll Free +1-888-255-3924

**SECTION 2**

**HAZARDS IDENTIFICATION**

**EMERGENCY OVERVIEW:** **CAUTION**  
MAY CAUSE IRRITATION TO EYES, SKIN AND RESPIRATORY SYSTEM. May Cause the Depression of the Central Nervous System. Contains A Known or Suspended Carcinogen.  
WARNING! This product contains a chemical known in the State of California to cause cancer.

**APPEARANCE:** Brownish Black  
**PHYSICAL STATE:** Liquid  
**ODOR:** Rubberized Tar-Like Smell

---

**POTENTIAL FOR HEALTH RISKS:** **PRINCIPAL ROUTES OR EXPOSURE**  
Skin Contact, Inhalation, Ingestion, Eye Contact.

**POTENTIAL ROUTES FOR EXPOSURE:** **ACUTE TOXICITY**

**Eye:** May cause eye irritation.

**Skin:** May cause skin irritation.

**Inhalation:** May cause reparatory tract irritation.

**Ingestion:** May cause stomach distress, nausea or vomiting.

**Chronic Effects:** Prolonged or repeated contact may dry skin and cause irritation.

IARC classified coal tar pitch as a Class I Human Carcinogen. There is sufficient evidence in humans for the carcinogenicity of occupational exposures during paving and roofing using coal tar pitch. There is sufficient evidence in experimental animals for the carcinogenicity of coal tar pitch.

**Aggravated Medical Conditions:** May aggravate pre-existing eye disorders, skin disorders, Central Nervous System, and respiratory disorders.

**Target Organs:** Skin, Eyes, Gastrointestinal Tract, and Respiratory System.

**Potential Environmental Effects:** May cause long-term adverse effects in the aquatic environment. See Section 12 for more information.

**SECTION 3**

**COMPOSITION / INFORMATION ON INGREDIENTS**

<u>INGREDIENT</u>	<u>CAS #</u>	<u>WT. %</u>
WATER	7732-18-5	40 - 50%
REFINED TAR PITCH	65996-93-2	20 - 30%
CLAY (KAOLIN)	1332-58-7	15 - 20%
SILICA, CRYSTALLINE, QUARTZ	14808-60-7	3 - 7%
FLUORANTHENE	206-44-0	0.5 - 1.5%
NAPHTHALENE	91-20-3	0.5 - 1.5%
BENZ[A]ANTHRACENE	56-55-3	0.1 - 1%
CHRYSENE	218-01-9	0.1 - 1%
BENZO[A]PYRENE	50-32-8	0.1 - 1%
INDENO[1,2,3-CD]PYRENE	193-39-5	0.1 - 1%
BENZO[J]FLUORANTHENE	205-82-3	0.1 - 1%
DIBENZO[A,H]FLUORANTHENE	189-64-0	0.1 - 1%
BENZO[K]FLUORANTHENE	207-08-9	0.1 - 1%
DIBENZO[A,I]PYRENE	189-55-9	0.1 - 1%

**SECTION 4**

**FIRST AID MEASURES**

<b>Eye Contact :</b>	In case of eye contact, immediately flush eye(s) with water for at least 15-20 minutes. If worn, remove any contact lenses. Call or visit a physician immediately. Overexposure of vapors can cause eye irritation, burning, redness and/or corneal changes.
<b>Skin Contact:</b>	In case of contact with skin, immediately flush/wash off skin with plenty of water. If symptoms or irritation persists consult a physician. Contact with skin can result in irritation which when accentuated by sunlight may result in photo toxic skin reaction (similar to sunburn).
<b>Inhalation:</b>	Get to fresh air as soon as safely possible. If a person is found not breathing, then give artificial respiration, if breathing is labored, give oxygen. The product has very low vapor pressure, therefore, harmful effects are not anticipated. Repeated and/or prolonged contact to high levels of vapor concentration may result in respiratory problems, central nervous system (CNS) effects, cardiovascular collapse.
<b>Ingestion:</b>	DO NOT INDUCE VOMITING if swallowed, unless directed to do so by emergency medical personnel. Call a physician or poison control center immediately. Never give anything to an unconscious person by mouth. May cause nausea, cramps, vomiting, diarrhea or acute effects.
<b>General Advice:</b>	In case of injury, accident or if you feel ill while in close contact with this material, seek medical advise immediately. Show the label or SDS to the physician.
<b>Note to Physician:</b>	Symptoms may not appear immediately. Treat symptomatically.
<b>Protection to first Responders/aiders:</b>	Ensure that medical personnel are aware of the materials involved, take precautions to protect physicians from harm and from the spread of contamination.



## SECTION 5

## FIRE FIGHTING MEASURES

<b>Flammability Properties:</b>	Not Flammable by WHMIS or OSHA criteria.
<b>Flash Point:</b>	>200°F / 93.3°C
<b>Hazardous Combustion Products:</b>	Carbon Monoxide (CO), Carbon Dioxide (CO <sub>2</sub> ), Hydrocarbon compounds, Nitrogen Oxides (NO <sub>x</sub> ).
<b>Methods of Extinguishing:</b>	
<b>Suitable Extinguishing Media:</b>	Foam, Dry Chemical, CO <sub>2</sub> , and water spray.
<b>Unsuitable Extinguishing Media:</b>	Do not spread spilled material with <i>high-pressure</i> water spray.
<b>Explosion Data.</b>	
<b>Sensitivity to Mechanical Impact:</b>	None
<b>Sensitivity to Electrical Discharge:</b>	None
<b>Protective Equipment and Precautions for Fire Fighters:</b>	Avoid inhalation of vapors and combustion by-products. Wear full fire fighting turn-out gear with self-contained breathing apparatus pressure demand, MSHA/NIOSH approved (or equivalent). Keep upwind of fire.

## SECTION 6

## ACCIDENTAL RELEASE MEASURES

<b>Personal Precautions:</b>	Evacuate and get personnel to safe areas upwind from spill/leak. Isolate the hazard area and do not allow the entry of the unnecessary and unprotected personnel. Wear personal protection recommended in section 8. Avoid contact with skin, eyes and clothing.
<b>Environmental Precautions:</b>	Keep product from being released into the environment. Keep out of drains, waterways, sewers and ditches. Contain and pick up waste material. Minimize use of water to clean up contamination. Put waste in a sealed approved container. Dispose of in accordance with federal, state, and local regulations.
<b>Methods of Containment:</b>	For smaller spills, absorb with an inert material and place in containers. For large spills, contain material with a dike and pump into tanks or other suitable containers.
<b>Methods for Clean Up:</b>	For smaller spills, place contaminated inert material in containers. For large spills, pump dammed material into tanks or soak up material and place in suitable containers

## SECTION 7

## HANDLING AND STORAGE

<b>Handling:</b>	Wear suitable protective equipment; clothing, gloves and eye / face protection and avoid contact with skin, eyes and clothing. Do not breath gas/fumes/spray. Handle and open containers with care and in a well ventilated area. Do not eat drink or smoke while working with this material. Wash hands before eating, drinking or smoking after working with this material. To reduce sun sensitivity while working with this material a sun blocking lotion (SPF +15 or higher) can be applied to exposed skin. Do not apply blocker lotions once exposure has occurred.
<b>Storage:</b>	Do not allow the product to freeze. Keep product containers tightly closed. Keep out of the reach of children. Keep products in locked storage areas if possible. Store in cool well ventilated place. Keep away from open flames, hot surfaces and sources of ignition. Do not store in temperatures exceeding 120°F (49°C).



**SECTION 8**

**EXPOSURE CONTROLS / PERSONAL PROTECTION**

<u>INGREDIENT</u>	<u>CAS #</u>	<u>EXPOSURE LIMITS</u>	
		<u>OSHA-PEL</u>	<u>ACGIH-TLV</u>
WATER	7732-18-5	TWA: 0.2mg/m <sup>3</sup> Benzene	TWA: 0.2mg/m <sup>3</sup> Benzene
REFINED TAR PITCH	65996-93-2	Soluble fraction	Soluble fraction
CLAY(KAOLIN)	1332-58-7	15mg/m <sup>3</sup>	2mg/m <sup>3</sup>
SILICA, CRYSTALLINE, QUARTZ	14808-60-7	10mg/m <sup>3</sup> / %SiO <sub>2</sub> +2, TWA(resp); 30mg/m <sup>3</sup> / %SiO <sub>2</sub> +2, TWA(total) 250 / %SiO <sub>2</sub> +5, mppcf TWA(resp)	0.025 mg/m <sup>3</sup>
FLUORANTHENE	206-44-0	Not Available	Not Available
NAPHTHALENE	91-20-3	Not Available	Not Available
BENZO[A]ANTHRACENE	56-55-3	Not Available	Not Available
CHRYSENE	218-01-9	0.2 mg/m <sup>3</sup>	0.2 mg/m <sup>3</sup>
BENZO[A]PYRENE	50-32-8	Not Available	Not Available
INDENO[1,2,3-CD]PYRENE	193-39-5	Not Available	Not Available
BENZO[J]FLUORANTHENE	205-82-3	Not Available	Not Available
DIBENZO[A,H]FLUORANTHENE	189-64-0	Not Available	Not Available
BENZO[K]FLUORANTHENE	207-08-9	Not Available	Not Available
DIBENZO[A,I]PYRENE	189-55-9	Not Available	Not Available

**Engineering Measures:** Use proper ventilation to keep exposures (airborne vapors, fumes, dust levels) below exposure limits. Showers, eye wash stations should be available.

**PERSONAL PROTECTIVE EQUIPMENT**

- Eye/Face Protection:** Tightly fitting safety goggles, with side shields.
- Skin and Body Protection:** Impervious butyl rubber gloves, chemical resistant apron, boots.
- Respiratory Protection:** If irritation is experienced or ventilation is limited, NIOSH/MSHA approved respiratory protection should be worn. Respiratory protection must be provided according to local current regulations.
- Hygiene Measures:** Do not eat drink or smoke while working with this material. Wash hands before eating, drinking or smoking after working with this material. Regular cleaning of equipment, work area and clothing is required.

**SECTION 9**

**PHYSICAL AND CHEMICAL PROPERTIES**

<b>APPEARANCE</b> ..... Heavy Bodied Chocolate Brown Liquid	<b>ODOR</b> ..... Rubberized Tar-Like
<b>ODOR THRESHOLD</b> ..... Not Available	<b>PHYSICAL STATE</b> ..... Liquid
<b>Ph LEVELS</b> ..... 7.00 - 8.00	<b>AUTOIGNITION TEMP</b> .... Not Available
<b>FLASH POINT</b> ..... >200°F/>93.3°C	<b>BOILING POINT (F/C)</b> ..... 212°F/100°C
<b>DECOMPOSITION TEMP</b> ... N/A	<b>EXPLOSION LIMITS</b> ..... 1 (Water = 1)
<b>MELTING POINT/RANGE</b> .. N/A	<b>WATER SOLUBILITY</b> ..... Partly Soluble
<b>FLAMMABILITY LIMITS</b> ..... N/A	<b>EVAPORATION RATE</b> ..... Not Available
<b>SPECIFIC GRAVITY</b> ..... 1.20 - 1.25	<b>VAPOR DENSITY</b> ..... 1 (Air = 1)
<b>SOLUBILITY</b> ..... N/A	<b>FREEZING POINT</b> ..... 32°F / 0°C
<b>VAPOR PRESSURE</b> ..... N/A	<b>MISCIBILITY</b> ..... Dilutable with water
<b>EPA VOC (g/l)</b> ..... 49	

Abbreviations: N/A= Not Available

N.AP= Not Applicable



**SECTION 10**

**STABILITY AND REACTIVITY**

<b>Stability:</b>	Stable under normal conditions.
<b>Incompatibility Materials:</b>	Strong Oxidizing Agents.
<b>Conditions to avoid:</b>	Protect from Freezing.
<b>Hazardous Decomposition Products:</b>	May include, and are not limited to: Carbon monoxide (CO), carbon dioxide (CO <sub>2</sub> ), nitrogen oxides (NO <sub>x</sub> ), polynuclear aromatic hydrocarbons (PNA's)
<b>Hazardous Polymerization:</b>	Does not occur.

**SECTION 11**

**TOXICOLOGICAL INFORMATION**

**ACUTE TOXICITY**

**Component Analysis**

**INGREDIENT**

**CAS #**

**Effects of Acute Exposure**

**LD<sub>50</sub> (ORAL)**

**LC<sub>50</sub>**

WATER	7732-18-5	Not Available	Not Available
REFINED TAR PITCH	65996-93-2	Not Available	Not Available
CLAY(KAOLIN)	1332-58-7	Not Available	Not Available
SILICA, CRYSTALLINE, QUARTZ	14808-60-7	500 mg/kg, rat	Not Available
FLUORANTHENE	206-44-0	2000 mg/kg, rat	Not Available
NAPHTHALENE	91-20-3	490 mg/kg, rat	>340 mg/m <sup>3</sup> 1hr, rat
BENZ[A]ANTHRACENE	56-55-3	Not Available	Not Available
CHRYSENE	218-01-9	Not Available	Not Available
BENZO[A]PYRENE	50-32-8	Not Available	Not Available
INDENO[1,2,3-CD]PYRENE	193-39-5	Not Available	Not Available
BENZO[J]FLUORANTHENE	205-82-3	Not Available	Not Available
DIBENZO[A,H]FLUORANTHENE	189-64-0	Not Available	Not Available
BENZO[K]FLUORANTHENE	207-08-9	Not Available	Not Available
DIBENZO[A,I]PYRENE	189-55-9	Not Available	Not Available

<b>Eyes:</b>	May cause eye irritation. Symptoms may include discomfort and pain, excess blinking and tears, redness and swelling
<b>Skin:</b>	May cause skin irritation. Symptoms may include redness, edema, drying, defatting and cracking of the skin.
<b>Inhalation:</b>	May cause respiratory tract irritation.
<b>Ingestion:</b>	May be harmful if swallowed and cause stomach distress, nausea or vomiting.



**CHRONIC TOXICITY**

<b><u>INGREDIENT</u></b>	<b><u>CAS #</u></b>	<b>Chemical Listed as a Carcinogen or Potential Carcinogen</b>
WATER	7732-18-5	Not Available
REFINED TAR PITCH	65996-93-2	I-1, N-1
CLAY(KAOLIN)	1332-58-7	Not Available
SILICA, CRYSTALLINE, QUARTZ	14808-60-7	G-A2, I-1, N-1, CP65
FLUORANTHENE	206-44-0	I-3
NAPHTHALENE	91-20-3	G-A4, I-2B, N-2, CP65
BENZ[A]ANTHRACENE	56-55-3	G-A2, I-2B, N-2, CP65
CHRYSENE	218-01-9	G-A3, I-2B, CP65
BENZO[A]PYRENE	50-32-8	G-A2, I-1, N-2, CP65
INDENO[1,2,3-CD]PYRENE	193-39-5	I-2B, N-2, CP65
BENZO[J]FLUORANTHENE	205-82-3	I-2B, N-2, CP65
DIBENZO[A,H]FLUORANTHENE	189-64-0	I-2B, N-2, CP65
BENZO[K]FLUORANTHENE	207-08-9	I-2B, N-2, CP65
DIBENZO[A,I]PYRENE	189-55-9	I-2B, N-2, CP65
<b>Chronic Effects:</b>	Hazardous by WHMIS/OSHA Criteria.	
<b>Carcinogenicity:</b>	Hazardous by WHMIS/OSHA Criteria.	
<b>Target Organs:</b>	Respiratory System, Central Nervous System (CNS).	
<b>Chronic Effects:</b>	IARC classified coal tar pitch as a Class I Human Carcinogen. There is sufficient evidence in humans for the carcinogenicity of occupational exposures during paving and roofing using coal tar pitch. There is sufficient evidence in experimental animals for the carcinogenicity of coal tar pitch.	
<b>Mutagenicity:</b>	Hazardous by WHMIS/OSHA Criteria.	
<b>Reproductive Effects:</b>	Hazardous by WHMIS/OSHA Criteria.	
<b>Developmental Effects:</b>	Hazardous by WHMIS/OSHA Criteria.	
<b>Teratogenicity:</b>	Hazardous by WHMIS/OSHA Criteria.	
<b>Embryo toxicity:</b>	Hazardous by WHMIS/OSHA Criteria.	
<b>Respiratory Sensitization:</b>	Not hazardous by WHMIS/OSHA Criteria.	
<b>Skin Sensitization:</b>	Not hazardous by WHMIS/OSHA Criteria.	
<b>Toxicologically Synergistic Materials:</b>	Not Available	

**SECTION 12**

**ECOLOGICAL INFORMATION**

<b>Ecotoxicity:</b>	May cause long term effects in the aquatic environment.
<b>Persistence/Degradability:</b>	Not Available.
<b>Bioaccumulation/Accumulation:</b>	Not Available.
<b>Mobility in the Environment:</b>	Not Available.

**SECTION 13**

**DISPOSAL CONSIDERATION**

**Disposal Instructions:** This material must be disposed of in accordance with local, state, provincial and federal regulations. This material has not been classified as hazardous waste according to federal regulations (40 CFR 261). This material could become a hazardous waste if chemical additions are made, or if this material is processed or otherwise altered.

**Empty Containers:** Do not re-use empty containers.

**Refined Tar Pitch:** CAS# 65996-93-2, RCRA Basis for Listing K060 Included in waste stream.

**SECTION 14**

**TRANSPORTATION INFORMATION**

**DOT:** Not regulated.

**TDG:** Not regulated.

**MEX:** Not regulated.

**SECTION 15**

**REGULATORY INFORMATION**

**FEDERAL REGULATIONS**

**Canadian:** This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and this MSDS/SDS contains all the information required by the Controlled Products Regulations.

**U.S.:** MSDS/SDS prepared pursuant to the Hazards Communication Standard (CFR29 1910.1200)

<b>SARA TITLE III INGREDIENT</b>	<b>CAS #</b>	<b>SECTION 302 (EHS) TPQ (lbs.)</b>	<b>SECTION 304 EHS RQ (lbs.)</b>	<b>CERCLA RQ (lbs.)</b>	<b>SECTION 313</b>
WATER	7732-18-5	Not Listed	Not Listed	Not Listed	Not Listed
REFINED TAR PITCH	65996-93-2	Not Listed	Not Listed	Not Listed	Not Listed
CLAY(KAOLIN)	1332-58-7	Not Listed	Not Listed	Not Listed	Not Listed
SILICA, CRYSTALLINE, QUARTZ	14808-60-7	Not Listed	Not Listed	Not Listed	Not Listed
FLUORANTHENE	206-44-0	Not Listed	Not Listed	Not Listed	Not Listed
NAPHTHALENE	91-20-3	Not Listed	Not Listed	100	313
BENZ[A]ANTHRACENE	56-55-3	Not Listed	Not Listed	10	313+^
CHRYSENE	218-01-9	Not Listed	Not Listed	100	313
BENZO[A]PYRENE	50-32-8	Not Listed	Not Listed	1	313+^
INDENO[1,2,3-CD]PYRENE	193-39-5	Not Listed	Not Listed	100	313+^
BENZO[J]FLUORANTHENE	205-82-3	Not Listed	Not Listed	Not Listed	313+^
DIBENZO[A,H]FLUORANTHENE	189-64-0	Not Listed	Not Listed	Not Listed	313+^
BENZO[K]FLUORANTHENE	207-08-9	Not Listed	Not Listed	5000	313+^
DIBENZO[A,I]PYRENE	189-55-9	Not Listed	Not Listed	10	313
DIBENZO[A,I]PYRENE	189-55-9	Not Listed	Not Listed	10	313

**STATE/PROVINCIAL REGULATIONS**

**California Proposition 65:** This product contains chemicals known to the state of California to cause Cancer.

**GLOBAL INVENTORIES**

<u>INGREDIENT</u>	<u>CAS #</u>	<u>USA TSCA</u>	<u>CANADA DSL/NDSL</u>	<u>AUSTRALIA AICS</u>
WATER	7732-18-5	YES	DSL	YES
REFINED TAR PITCH	65996-93-2	YES	DSL	YES
CLAY(KAOLIN)	1332-58-7	YES	DSL	YES
SILICA, CRYSTALLINE, QUARTZ	14808-60-7	YES	DSL	YES
FLUORANTHENE	206-44-0	YES	NDSL	YES
NAPHTHALENE	91-20-3	YES	DSL	YES
BENZ[A]ANTHRACENE	56-55-3	YES	NDSL	YES
CHRYSENE	218-01-9	YES	DSL	YES
BENZO[A]PYRENE	50-32-8	YES	DSL	NO
INDENO[1,2,3-CD]PYRENE	193-39-5	YES	NDSL	NO
BENZO[J]FLUORANTHENE	205-82-3	NO	NONE	NO
DIBENZO[A,H]FLUORANTHENE	189-64-0	NO	NONE	NO
BENZO[K]FLUORANTHENE	207-08-9	NO	NONE	NO
DIBENZO[A,I]PYRENE	189-55-9	NO	NONE	NO

**HMIS- Hazardous Materials Identification System**

Health = 2      Flammability = 0      Physical Hazards = 0

**NFPA-National Fire Protection Association**

Health = 2      Fire = 0      Reactivity = 0

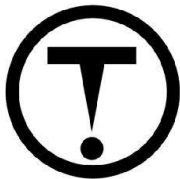
**Hazard Rating:**

0 = Minimal, 1 = Slight, 2 = Moderate, 3 = Severe, 4 = Extreme

**WHMIS Classification (s):**

Class D2A-      **Carcinogenicity**  
 Class D2A-      **Reproductive Toxicity**  
 Class D2A-      **Teratogenicity and Embryo toxicity.**  
 Class D2A-      **Chronic Toxic Effects.**  
 Class D2B-      **Mutagenicity**

**WHMIS Symbols:**





**SOURCE AGENCY CARCINOGEN CLASSIFICATIONS:**

**OSHA (O)** Occupational Safety and Health Administration.

**ACGIH (G)** American Conference on Governmental Industrial Hygienists.

A1 – Confirmed human carcinogen.

A2- Suspected human carcinogen.

A3- Animal carcinogen.

A4-Not classified as a human carcinogen.

A5- Not suspected as a human carcinogen.

**IARC (I)** International Agency for Research on Cancer.

1 - The agent (mixture) is carcinogenic to humans.

2A - The agent (mixture) is probably carcinogenic to humans; there is limited evidence of carcinogenicity in humans and sufficient evidence of carcinogenicity in experimental animals.

2B - The agent (mixture) is possibly carcinogenic to humans; there is limited evidence of carcinogenic in humans in the absence of sufficient evidence of carcinogenicity in experimental animals.

3 - The agent (mixture, exposure circumstances) is not classified as to its carcinogenicity to humans.

4 - The agent (mixture, exposure circumstances) is probably not carcinogenic to humans.

**NTP (N)** National Toxicology Program.

1 – Known to be carcinogenic.

2 – Reasonably anticipated to be carcinogens.

**SECTION 16**

**OTHER INFORMATION**

**Disclaimer:** The recommendations and the information provided herein are believed to be accurate as the date hereof. However, such information and recommendations are provided without warranty of any kind and STAR, INC. and its affiliates disclaim any and all liability or legal responsibility for use and reliance upon the same.

**Date of issue:** January 1, 2022

**Date of Expiry:** December 31, 2026

**Prepared by:** G.C. Dubey, STAR, INC.

- END OF SDS -