SECTION 1 PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: **STAR STA-FLEX, CRACK FILLER –COLD POUR**

PRODUCT USE: Asphalt Emulsion Based Crack Filler. (Refer to Product Bulletin for details).

MANUFACTURER: Specialty Technology And Research, Incorporated (S.T.A.R. Inc.)
Address: 1150 Milepost Drive, Columbus, Ohio 43228
Web Site: 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: **C A U T I O N**
MAY CAUSE IRRITATION TO EYES, SKIN.

APPEARANCE: Chocolate Brown

PHYSICAL STATE: Liquid

ODOR: No characteristic odor.

POTENTIAL FOR HEALTH RISKS: Refer to section 11 for detailed information.
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.

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

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

This product is a “hazardous chemical” as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200

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

INGREDIENT	CAS #	WT. %

WATER	7732-18-5	35-40%
ASPHALT	8052-42-4	4-45%
CRYSTALINE SILICA,QUARTZ	14808-60-7	2-4%
KAOLIN CLAY	1332-58-7	8-10%
TITANIUM DIOXIDE	13463-67-7	<0.5%
RUBBER POLYMERS	PROPRIETARY	0-3%
Hexahydro-1,3,5-tris (2-hydroxyethyl)-s-triazine	4719-04-4	<0.2%

SECTION 4 FIRST AID MEASURES

Eye Contact : 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.

Skin Contact: 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).

Inhalation: 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.

Ingestion: DO NOT INDUCE VOMITING if swallowed, unless directed to do so by emergency medical personnel. Call a physician or poison control immediately. Never give anything to an unconscious person by mouth. May cause nausea, cramps, vomiting, diarrhea or acute effects.

General Advice: 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.

Note to Physician: Symptoms may not appear immediately. Treat symptomatically.

Protection to first Responders/aiders: 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

Flammability Properties: Not Flammable by OSHA criteria.

Hazardous Combustion Products: Carbon Monoxide (CO), Carbon Dioxide (CO2), Hydrogen Sulfide, Sulfur Oxides, polycyclic aromatic hydrocarbons (PAHs).

Methods of Extinguishing:

Suitable Extinguishing Media: Foam, Dry Chemical, CO_2, and water spray.

Unsuitable Extinguishing Media: Do not spread spilled material with *high-pressure* water spray.

Explosion Data,

Sensitivity to Mechanical Impact: Not Available.

Sensitivity to Electrical Discharge: Not Available.

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Protective Equipment and Precautions for Fire Fighters. 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

Personal Precautions: 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.

Environmental Precautions: 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.

Methods of Containment: 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.

Methods for Clean Up: 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.

Other Information: None specific.

SECTION 7 HANDLING AND STORAGE

Handling: 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.

Storage: 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. Do not store in temperatures exceeding 120°F (49°C).

SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

	EXPOSURE LIMITS	
INGREDIENT	**OSHA-PEL**	**ACGIH-TLV**
Water	-	-
Asphalt	5mg/m3	0.5mg/m3
Crystalline Silica, Quartz	((10mg/m^3)/ (%SiO_2+2), TWA(resp)); ((30mg/m^3) / (%SiO_2+2), TWA(total)) ((250 / %SiO_2+5) mppcf TWA(resp))	0.025 mg/m^3
Kaolin Clay	15mg/m^3	2mg/m
Titanium Dioxide	10 mg/m3	10 mg.m3
Rubber Polymers	Not Available	Not Available

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Monoethanolamine	TWA: 3 ppm, STEL: 6 ppm (ACGIH)

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

APPEARANCE	Chocolate Brown liquid.	ODOR	None characteristic.
ODOR THRESHOLD	Not Available	PHYSICAL STATE	Liquid
pH	7.00 - 8.00	AUTOIGNITION TEMP	Not Available
FLASH POINT	>200°F/>93.3°C	BOILING POINT (C/F)	100°C/212 °F
DECOMPOSITION TEMP	N/A	EXPLOSION LIMITS	1 (Water = 1)
MELTING POINT/RANGE	N/A	WATER SOLUBILITY	Partly Soluble
FLAMMABILITY LIMITS	N/A	EVAPORATION RATE	Not Available
SPECIFIC GRAVITY	1.1-1.2	VAPOR DENSITY	1 (Air = 1)
SOLUBILITY	N/A	FREEZING POINT	32°F / 0°C
VAPOR PRESSURE	N/A	MISCIBILITY	Dilutable with water

Abbreviations: N/A= Not Available. N.AP= Not Applicable

SECTION 10 STABILITY AND REACTIVITY

Stability: Stable under normal conditions.

Incompatibility Materials: Strong Oxidizing Agents, Acids and bases.

Conditions to avoid: Protect from Freezing.

Hazardous Decomposition Products: May include, but not limited to: Carbon monoxide (CO), carbon dioxide (CO_2), Sulfur Oxides (SOx), Hydrogen Sulfide (H2S), polycyclic aromatic hydrocarbons (PAHs)

Hazardous Polymerization and Reaction: Under normal use conditions no hazardous reaction or polymerization is known to occur.

SECTION 11 TOXICOLOGICAL INFORMATION

Effects of Acute Exposure

Component Analysis

INGREDIENT	LD_{50} (ORAL)	LC_{50}
Asphalt	>5000 mg/kg, rat	Not Available

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Crystalline Silica, Quartz	500 mg/kg, rat	Not Available
Kaolin Clay	Not Available	Not Available
Titanium Dioxide	>10000 mg/kg, rat	Not Available
Rubber Polymers	Not Available	Not Available
Hexahydro-1,3,5-tris (2-hydroxyethyl)-s-triazine	763 mg/kg, rat female	Not Available
	1250 mg/kg, rat male	Not Available

ACUTE TOXICOLOGY

Eyes: May cause eye irritation. Symptoms may include discomfort and pain, excess blinking and tears, redness and swelling

Skin: May cause skin irritation. Symptoms may include redness, edema, drying, defatting and cracking of the skin.

Inhalation: May cause reparatory tract irritation.

Ingestion: May be harmful if swallowed and cause stomach distress, nausea or vomiting.

EFFECTS OF CHRONIC EXPOSURE

Target Organs: Not Available.

Chronic Effects: Hazardous by OSHA Criteria.

Carcinogenicity: Hazardous by OSHA Criteria.

Ingredients	**Chemicals Listed as a Carcinogen or Potential Carcinogen**
ASPHALT	G-A4, I-2B,I-3,CP65
Crystalline Silica, Quartz	G-A2,I-1,N-1,CP65
Kaolinite Clay	Not Listed
Titanium Dioxide	G-A4,I-2B,
Cellulosic Fibers	Not Listed
Rubber Polymers	Not Listed

* See section 15 for further details.

Mutagenicity: Hazardous by OSHA Criteria.

Reproductive Effects: Not Hazardous by OSHA Criteria.

Developmental Effects: Not Hazardous by OSHA Criteria.

Teratogenicity: Not Hazardous by OSHA Criteria.

Embryo toxicity: Not Hazardous by OSHA Criteria.

Respiratory Sensitization: Not Hazardous by OSHA Criteria.

Skin Sensitization: Not Hazardous by OSHA Criteria.

Toxicologically Synergistic Materials: Not Available

SECTION 12 ECOLOGICAL INFORMATION

Ecotoxicity: May cause long term effects in the aquatic environment.

Persistence/Degradability: Not Available.

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Bioaccumulation/Accumulation: Not Available.

Mobility in the Environment: 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).

SECTION 14 TRANSPORTATION INFORMATION

DOT: Not regulated

SECTION 15 REGULATORY INFORMATION

FERERAL REGULATIONS

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

SARA TITLE III INGREDIENT	SECTION 302 (EHS) TPQ (lbs.)	SECTION 304 EHS RQ (lbs.)	CERCLA RQ (lbs.)	SECTION 313
Asphalt	Not Listed	Not Listed	Not Listed	Not Listed
Crystalline Silica, Quartz.	Not Listed	Not Listed	Not Listed	Not Listed
Kaolin Clay	Not Listed	Not Listed	Not Listed	Not Listed
Titanium Dioxide	Not Listed	Not Listed	Not Listed	Not Listed
Rubber Polymer	Not Listed	Not Listed	Not Listed	Not Listed
Hexahydro-1,3,5-tris (2-hydroxyethyl)-s-triazine	Not Listed	Not Listed	Not Listed	Not Listed

STATE/PROVINCIAL REGULATIONS

CALIFORNIA PROPOSITION 65: This product contains chemicals known to the state of California to cause Cancer.

GLOBAL INVENTORIES INGREDIENT	USA TSCA
Asphalt	Yes
Crystalline Silica Quartz	Yes
Kaolin Clay	Yes
Titanium Dioxide	Yes
Rubber Polymers	Yes
Hexahydro-1,3,5-tris (2-hydroxyethyl)-s-triazine	Yes

HMIS- Hazardous Materials Identification System

Health= 2 **Flammability=0** **Physical Hazards=0**

NFPA-National Fire Protection Association

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Health= 2 **Fire=0** **Reactivity=0**

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

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 carcinogenicity 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 carcinogens.

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 and 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.

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