**SECTION 1  IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING**

1.1 PRODUCT IDENTIFIER/TRADE NAME:
STAR-SEAL SUPREME

1.2 RELIVANT IDENTIFIED USES OF THE SUBSTANCE OR MIXTURE AND USES ADVISED AGAINST:
No further relevant information available.
Application of the Substance / the Mixture: Sealcoating for Pavements

1.3 DETAILS OF THE SUPPLIER OF THE SAFETY DATA SHEET:
Manufacturer/Supplier: Specialty Technology And Research, Incorporated (S.T.A.R., Inc.)
1150 Milepost Drive, Columbus, Ohio 43228
Tel: +1-614-870-0744 • Fax: +1-614-870-0598 • Toll Free +1-800-759-1912
Web Site: www.starseal.com

1.4 EMERGENCY TELEPHONE NUMBER:
ChemTel, Inc.
(800)255-3924, +1(813)248-0585

---

**SECTION 2  HAZARDS IDENTIFICATION**

2.1 CLASSIFICATION OF THE SUBSTANCE OR MIXTURE:

CLASSIFICATION ACCORDING TO REGULATION (EC) NO. 1272/2008
The following classifications are applicable only to the general GHS regulations and not the Specific CLP regulation: H360
The following hazard statements are applicable only to the EU regulations and not the US GHS regulation: H360FD, H400, H410
Repr. 1 H360: May damage fertility of the unborn child

Health Hazard
Muta. 1B H340 May cause genetic defects.
Carc. 1B H350 May cause cancer.
Repr. 1B H360FD May damage fertility. May damage the unborn child.

Environment
Aquatic Acute 1 H400 Very toxic to aquatic life.
Aquatic Chronic 1 H410 Very toxic to aquatic life with long lasting effects

Skin Sens. 1 H317 May cause an allergic skin reaction.

(Continued on page 2)
CLASSIFICATION ACCORDING TO DIRECTIVE 67/548/ECC or DIRECTIVE 1999/45/EC

T; Toxic
May cause harm to the unborn child.

Xi; Sensitizing
R43 May cause sensitization by skin contact.

N; Dangerous to the environment
R50/53; Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Information concerning particular hazards for human and environment:
The product has to be labeled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.

Classification system:
The classification is according to the latest editions of the EU-lists, and extended by company and literature data.
The classification is in accordance with the latest editions of international substances lists, and is supplemented by information from technical literature and by information provided by the company.

2.2 Label Elements
Labeling according to Regulation (EC) No 1272/2008
The product is classified and labeled according to the CLP regulation.

Hazard pictograms

This pictogram only applicable for EU regulations. Not for use in the United States (OSHA GHS).

GHS07 GHS08 GHS09

Signal word Danger

Hazard-determining components of labelling:
Pitch, coal tar, high-temp.
benzo[a]pyrene
chrysene
Dibenzo(a,h)pyrene

Hazard statements
The following Hazard Statements are applicable only to the EU regulations and not the US GHS regulation: H360FD, H410.
The following Hazard Statements are applicable only to the general GHS regulations and not the specific CLP regulation: H360.

(Continued on page 3)
H360 May damage fertility or the unborn child.
H317 May cause an allergic skin reaction.
H340 May cause genetic defects.
H350 May cause cancer.
H360FD May damage fertility. May damage the unborn child.
H410 Very toxic to aquatic life with long lasting effects.

**Precautionary statements**
P261 Avoid breathing mist/vapors/spray.
P281 Use personal protective equipment as required.
P202 Do not handle until all safety precautions have been read and understood.
P308+P313 IF exposed or concerned: Get medical advice/attention.
P333+P313 If skin irritation or rash occurs: Get medical advice/attention.
P302+P352 IF ON SKIN: Wash with plenty of water.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

**Additional information:**
Restricted to professional users.

**Hazard description:**

**WHMIS-symbols:**
D2A - Very toxic material causing other toxic effects

**NFPA ratings (Scale 0-4)**

- Health: 2
- Fire: 0
- Reactivity: 0

**HMIS ratings (Scale 0-4)**

- Health: *2
- Fire: 0
- Reactivity: 0

* - Indicates a long term health hazard from repeated or prolonged exposures.

**HMIS Long Term Health Hazard Substances**

<table>
<thead>
<tr>
<th>Substance ID</th>
<th>Substance Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>14808-60-7</td>
<td>quartz</td>
</tr>
<tr>
<td>91-20-3</td>
<td>naphthalene</td>
</tr>
<tr>
<td>50-32-8</td>
<td>benzo[a]pyrene</td>
</tr>
<tr>
<td>65996-93-2</td>
<td>Pitch, coal tar, high-temp</td>
</tr>
</tbody>
</table>

(Continued on page 4)
2.3 Other Hazards

Results of PBT and vPvB assessment

<table>
<thead>
<tr>
<th>PBT</th>
<th>vPvB: Not applicable.</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAS: 65996-93-2 Pitch, coal tar, high-temp.</td>
<td></td>
</tr>
</tbody>
</table>

**SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS**

3.2 Mixtures

**Description:** Mixture of substances listed below with nonhazardous additions

**Dangerous components:**

<table>
<thead>
<tr>
<th>CAS: 65996-93-2</th>
<th>Pitch, coal tar, high-temp.</th>
<th>20-30%</th>
</tr>
</thead>
<tbody>
<tr>
<td>EINECS: 266-028-2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Index number: 648-055-00-5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PBT</td>
<td>T Carc. Cat. 2 R45</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Carc. 1B, H350</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CAS: 1332-58-7</th>
<th>Kaolin substance with a Community workplace exposure limit</th>
<th>15-20%</th>
</tr>
</thead>
<tbody>
<tr>
<td>EC number: 310-194-1</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CAS: 14808-60-7</th>
<th>quartz substance with a Community workplace exposure limit</th>
<th>3-7%</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>CAS: 206-44-0</th>
<th>fluoranthene</th>
<th>0.5-1.5%</th>
</tr>
</thead>
<tbody>
<tr>
<td>EINECS: 205-912-4</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CAS: 91-20-3</th>
<th>naphthalene</th>
<th>0.5-1.5%</th>
</tr>
</thead>
<tbody>
<tr>
<td>EINECS: 202-049-5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Index number: 601-052-00-2</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CAS: 56-55-3</th>
<th>benz[a]anthracene</th>
<th>0.1-1%</th>
</tr>
</thead>
<tbody>
<tr>
<td>EINECS: 200-280-6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Index number: 601-033-00-9</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CAS: 218-01-9</th>
<th>chrysene</th>
<th>0.1-1%</th>
</tr>
</thead>
<tbody>
<tr>
<td>EINECS: 205-923-4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Index number: 601-048-00-0</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(Continued on page 5)
**SECTION 4  FIRST AID MEASURES**

### 4.1 Description of first aid measures

**General information:** Immediately remove any clothing soiled by the product.

**After inhalation:**
Supply fresh air; consult doctor in case of complaints.
Provide oxygen treatment if affected person has difficulty breathing.

**After skin contact:**
Do not pull solidified product off the skin.
Immediately wash with water and soap and rinse thoroughly.
Remove any clothing soiled by the product.
If skin irritation continues, consult a doctor.
After eye contact:
Remove contact lenses if worn.
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

After swallowing:
Rinse out mouth and then drink plenty of water.
Do not induce vomiting; call for medical help immediately.

4.2 Most important symptoms and effects, both acute and delayed
Allergic reactions
Slight irritant effect on skin and mucous membranes.
Slight irritant effect on eyes.
Gastric or intestinal disorders.

Hazards
Carcinogenic.
May damage fertility or the unborn child.
Possible risk of irreversible effects.

4.3 Indication of any immediate medical attention and special treatment needed
If swallowed, gastric irrigation with added, activated carbon.
May produce a nephrotoxic / hepatotoxic effect.
Contains benzo[a]pyrene. May produce an allergic reaction.

SECTION 5  FIRE FIGHTING MEASURES

5.1 Extinguishing media
Suitable extinguishing agents: CO2, sand, extinguishing powder. Do not use water.

For safety reasons unsuitable extinguishing agents: Water

5.2 Special hazards arising from the substance or mixture
Formation of toxic gases is possible during heating or in case of fire.

5.3 Advice for firefighters
Protective equipment:
Wear self-contained respiratory protective device.
Wear fully protective suit.

Additional information No further relevant information available

SECTION 6  ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures
Wear protective equipment. Keep unprotected persons away.
Ensure adequate ventilation.
Particular danger of slipping on leaked/spilled product.
For large spills, use respiratory protective device against the effects of fumes/dust/aerosol.

6.2 Environmental precautions:
Do not allow to enter sewers/ surface or ground water.
Inform respective authorities in case of seepage into water course or sewage system.

(Continued on page 7)
6.3 Methods and material for containment and cleaning up:
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Pick up mechanically.
Dispose contaminated material as waste according to item 13.
Send for recovery or disposal in suitable receptacles.

6.4 Reference to other sections
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

SECTION 7 HANDLING AND STORAGE

7.1 Precautions for safe handling
Use only in well ventilated areas.
Open and handle receptacle with care.
Prevent formation of aerosols.

Information about fire - and explosion protection: Keep respiratory protective device available.

7.2 Conditions for safe storage, including any incompatibilities

Storage:
Requirements to be met by storerooms and receptacles: No special requirements.

Information about storage in one common storage facility:
Store away from foodstuffs.
Store away from oxidizing agents.
Do not store together with acids.

Further information about storage conditions:
Store in cool, dry conditions in well sealed receptacles.
Protect from frost.

7.3 Specific end use(s) No further relevant information available.

SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

Additional information about design of technical facilities: No further data; see item 7.

8.1 Control parameters

Ingredients with limit values that require monitoring at the workplace:

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Limit Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>65996-93-2 Pitch, coal tar, high-temp.</td>
<td></td>
</tr>
<tr>
<td>PEL (USA)</td>
<td>Long-term value: 0.2 mg/m³</td>
</tr>
</tbody>
</table>
| REL (USA)  | Long-term value: 0.1* mg/m³ *
| TLV (USA)  | Long-term value: 0.2 mg/m³ |
| BEIp       |                         |
| EL (Canada)| Long-term value: 0.2 mg/m³ |
|            | soluble aerosol; ACGIH A1; IARC 1 |
| EV (Canada)| Long-term value: 0.2 mg/m³ |
|            | as total benzene-soluble compounds |

(Continued on page 8)
### 1332-58-7 Kaolin

<table>
<thead>
<tr>
<th>Source</th>
<th>Value</th>
</tr>
</thead>
</table>
| PEL (USA) | Long-term: 15* 5** mg/m³  
*total dust **respirable fraction |
| REL (USA) | Long-term: 10* 5** mg/m³  
*total dust **respirable fraction |
| TLV (USA) | Long-term: 2* mg/m³  
E; as respirable fraction |
| EL (Canada) | Long-term: 2 mg/m³ |
| EV (Canada) | Long-term: 2(D) mg/m³  
respirable |

### 14808-60-7 quartz

<table>
<thead>
<tr>
<th>Source</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>PEL (USA)</td>
<td>see Quartz listing</td>
</tr>
</tbody>
</table>
| REL (USA) | Long-term: 0.05* mg/m³  
*respirable dust; See Pocket Guide App. A |
| TLV (USA) | Long-term: 0.025* mg/m³  
*as respirable fraction |
| EL (Canada) | Long-term: 0.025 mg/m³  
ACGIH A2; IARC 1 |
| EV (Canada) | Long-term: 0.10* mg/m³  
*respirable fraction |

### 91-20-3 naphthalene

<table>
<thead>
<tr>
<th>Source</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>IOELV (EU)</td>
<td>Long-term: 30 mg/m³, 10 ppm</td>
</tr>
<tr>
<td>PEL (USA)</td>
<td>Long-term: 50 mg/m³, 10 ppm</td>
</tr>
</tbody>
</table>
| REL (USA) | Short-term: 75 mg/m³, 15 ppm  
Long-term: 50 mg/m³, 10 ppm |
| TLV (USA) | Long-term: 52 mg/m³, 10 ppm  
Skin; BEI |
| EL (Canada) | Short-term: 15 ppm  
Long-term: 10 ppm  
Skin; IARC 2B |
| EV (Canada) | Short-term: 78 mg/m³, 15 ppm  
Long-term: 52 mg/m³, 10 ppm |

### 56-55-3 benz[a]anthracene

<table>
<thead>
<tr>
<th>Source</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>TLV (USA)</td>
<td>L; BEIp</td>
</tr>
<tr>
<td>EL (Canada)</td>
<td>ACGIH A2; IARC 2B</td>
</tr>
</tbody>
</table>

### 218-01-9 chrysene

<table>
<thead>
<tr>
<th>Source</th>
<th>Value</th>
</tr>
</thead>
</table>
| PEL (USA) | Long-term: 0.2 mg/m³  
see Coal Tar Pitch Volatiles |
| REL (USA) | Long-term: 0.1* mg/m³  
*Cyclohexane-extractible. fraction; Pocket Guide Apps. A+C |
| TLV (USA) | L, BEIp |
| EL (Canada) | IARC 2B |
### 50-32-8 benzo[a]pyrene

| PEL (USA) | Long-term value: 0.2 mg/m³  
| REL (USA) | Long-term value: 0.1 mg/m³  
| TLV (USA) | L; BEIp  
| EL (Canada) | ACGIH A2; IARC 1  

DNELs: No further relevant information available.  
PNECs: No further relevant information available.

**Ingredients with biological limit values:**

**65996-93-2 Pitch, coal tar, high-temp.**

| BEI (USA) | Medium: urine  
| Time: end of shift at end of workweek  
| Parameter: 1-Hydroxypyrene with hydrolysis (nonquantitative)  

**56-55-3 benz[a]anthracene**

| BEI (USA) | Medium: urine  
| Time: end of shift at end of workweek  
| Parameter: 1-Hydroxypyrene with hydrolysis (nonquantitative)  

**218-01-9 chrysene**

| BEI (USA) | Medium: urine  
| Time: end of shift at end of workweek  
| Parameter: 1-Hydroxypyrene with hydrolysis (nonquantitative)  

**50-32-8 benzo[a]pyrene**

| BEI (USA) | Medium: urine  
| Time: end of shift at end of workweek  
| Parameter: 1-Hydroxypyrene with hydrolysis (nonquantitative)  

**Additional information:** The lists valid during the making were used as basis.

### 8.2 Exposure controls

**Personal protective equipment:**

**General protective and hygienic measures:**
- The usual precautionary measures are to be adhered to when handling chemicals.  
- Keep away from foodstuffs, beverages and feed.  
- Immediately remove all soiled and contaminated clothing.  
- Wash hands before breaks and at the end of work.  
- Store protective clothing separately.  
- Do not inhale gases / fumes / aerosols.  
- Avoid contact with the eyes and skin.  
- Pregnant women should strictly avoid inhalation or skin contact.

**Respiratory protection:**
- Not required under normal conditions of use.  
- Use suitable respiratory protective device when aerosol or mist is formed.  
- Use suitable respiratory protective device in case of insufficient ventilation.  
- For spills, respiratory protection may be advisable.
Protection of hands:
Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation.

Material of gloves
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material cannot be calculated in advance and has therefore to be checked prior to the application.

Penetration time of glove material
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

Eye protection:
Safety glasses

Body protection:
Protective work clothing

Limitation and supervision of exposure into the environment
No further relevant information available.

Risk management measures
See Section 7 for additional information.

8.3 Other Information: No further relevant information available.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

General Information:
Appearance:
Form .......................................................Heavy Bodied Semi-Fluid Liquid
Color .....................................................Dark Chocolate Brown
Odor ......................................................Neutral, Slightly of Refined Tar
Odor Threshold ........................................Not determined
Ph Value ...............................................Not determined

Change in Condition:
Melting point/Melting Range ..................Not Determined
Boiling point/Boiling range ......................Undetermined
Flash Point .............................................Not Applicable
Flammability (Solid Gaseous) ...............Not Applicable
Auto/Self-Ignition Temperature ...............Not determined
Decomposition Temperature ...................Not determined
Self-Igniting ........................................... Product is not self-igniting.

Danger of Explosion .............................. Product does not present an explosion Hazard.

Explosion Limits:
  Lower ........................................... Not determined
  Upper ........................................... Not determined

Vapor Pressure .................................. Not determined

Density at 20° C .................................. 1.20 – 1.25 g/cm³

Relative Density .............................. Not Determined

Vapor Density .............................. Not Determined

Evaporation Rate .............................. Not Determined

Solubility in/Miscibility with Water ...... Dilutable with water

Partition Coefficient (n-octanol/water) Not Determined

Viscosity:
  Dynamic ...................................... Not Determined
  Kinematic .................................... Not Determined

9.2 Other Information: No further relevant information available

SECTION 10  STABILITY AND REACTIVITY

10.1 Reactivity

10.2 Chemical stability
  Thermal decomposition/conditions to be avoided:
  No decomposition if used and stored according to specifications.

10.3 Possibility of hazardous reactions
  Toxic fumes may be released if heated above the decomposition point.
  Reacts with strong oxidizing agents.
  Reacts with strong acids.

10.4 Conditions to avoid: Store away from oxidizing agents.

10.5 Incompatible materials: No further relevant information available.

10.6 Hazardous decomposition products: Carbon monoxide and carbon dioxide

SECTION 11  TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity:

<table>
<thead>
<tr>
<th>LD/LC50 values relevant for classification:</th>
</tr>
</thead>
<tbody>
<tr>
<td>206-44-0 fluoranthene</td>
</tr>
<tr>
<td>Oral LD50 2000 mg/kg (rat)</td>
</tr>
<tr>
<td>Dermal LD50 3180 mg/kg (rabbit)</td>
</tr>
<tr>
<td>91-20-3 naphthalene</td>
</tr>
<tr>
<td>Oral LD50 490 mg/kg (rat)</td>
</tr>
<tr>
<td>Dermal LD50 5000 mg/kg (rat)</td>
</tr>
</tbody>
</table>

(Continued on page 12)
Primary irritant effect:
- **On the skin:** Slight irritant effect on skin and mucous membranes.
- **On the eye:** Slight irritant effect on eyes.

**Sensitization:** Sensitization possible through skin contact.

**Additional toxicological information:**
- The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:
  - **Irritant**
  - Danger through skin adsorption.
  - The product can cause inheritable damage.
  - Toxic and/or corrosive effects may be delayed up to 24 hours.
  - May cause genetic defects.
  - May cause cancer.
  - May damage fertility or the unborn child.

**Sensitization:** Sensitization possible by skin contact.

**Repeated dose toxicity:**
- May cause damage to organs through prolonged or repeated exposure.
- Repeated exposures may result in skin and/or respiratory sensitivity.

**CMR effects (carcinogenity, mutagenicity and toxicity for reproduction):**
- Muta. 1B, Carc. 1B, Repr. 1B

---

**SECTION 12 ECOLOGICAL INFORMATION**

**12.1 Toxicity**
- **Aquatic toxicity:**
  - Toxic for aquatic organisms

<table>
<thead>
<tr>
<th>206-44-0 fluoranthene</th>
</tr>
</thead>
<tbody>
<tr>
<td>LC50 0.0077 mg/l (Oncorhynchus mykiss) (96h)</td>
</tr>
</tbody>
</table>

**12.2 Persistence and degradability**  No further relevant information available.

**12.3 Bioaccumulative potential**  No further relevant information available.

**12.4 Mobility in soil**  No further relevant information available.

**Ecotoxic effects:**
- **Remark:**
  - Very toxic for fish
  - The product is oxygen-consuming. The declared action may be partly caused by lack of oxygen.
  - Due to mechanical actions of the product (e.g. agglutinations) damages may occur.

**Additional ecological information:**
- **General notes:**
  - Water hazard class 3 (German Regulation) (Self-assessment): extremely hazardous for water
  - Do not allow product to reach ground water, water course or sewage system, even in small quantities.
  - Danger to drinking water if even extremely small quantities leak into the ground.
  - Also poisonous for fish and plankton in water bodies.
  - Very toxic for aquatic organisms
  - Due to available data on eliminability/decomposition and bioaccumulation potential prolonged term damage of the environment can not be excluded.

**12.5 Results of PBT and vPvB assessment**
- **PBT:**
  - 65996-93-2 Pitch, coal tar, high-temp.
vPvB: Not applicable.

12.6 Other adverse effects: No further relevant information available.

### SECTION 13 DISPOSAL CONSIDERATION

13.1 Waste treatment methods

**Recommendation:**

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

Can be burned with household garbage after consulting with the waste disposal facility operator and the pertinent authorities and adhering to the necessary technical regulations.

Can be disposed of with household garbage after solidification following consultation with the waste disposal facility operator and the pertinent authorities and adhering to the necessary technical regulations.

The user of this material has the responsibility to dispose of unused material, residues and containers in compliance with all relevant local, state and federal laws and regulations regarding treatment, storage and disposal for hazardous and nonhazardous wastes. Residual materials should be treated as hazardous.

**Uncleaned packaging:**

**Recommendation:**

Disposal must be made according to official regulations.

### SECTION 14 TRANSPORTATION INFORMATION

14.1 UN-Number

**DOT**

UN3082

Classification as a MARINE POLLUTANT is based on MARPOL and DOT rules. Labeling as a MARINE POLLUTANT is not required for non-bulk single package shipments by motor vehicle, rail car or aircraft. Bulk packaging consists of a maximum capacity of greater than 450L (119 gallons) for a liquid and a maximum net mass greater than 400kg (882 pounds) for a solid.

**ADR, IMDG, IATA**

UN3082

14.2 UN proper shipping name

**DOT**

Environmentally hazardous substances, liquid, n.o.s. (Naphthalene, crude, fluoranthene)

**ADR**

3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (NAPHTHALENE, CRUDE, fluoranthene)

**IMDG**

ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (NAPHTHALENE, CRUDE, fluoranthene), MARINE POLLUTANT

**IATA**

ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (NAPHTHALENE, CRUDE, fluoranthene)

(Continued on page 14)
14.3 Transport hazard class(es)

DOT, IMDG, IATA

Class 9 Miscellaneous dangerous substances and articles.
Label 9

ADR

Class 9 (M6) Miscellaneous dangerous substances and articles.
Label 9

14.4 Packing group

DOT, ADR, IMDG, IATA III

14.5 Environmental hazards:

Product contains environmentally hazardous substances: benz[a]anthracene

Marine pollutant:
Yes

Special marking (ADR):
Symbol (fish and tree)

Special marking (IATA):
Symbol (fish and tree)

14.6 Special precautions for user:

Warning: Miscellaneous dangerous substances and articles.

Danger code (Kemler):
90

EMS Number:
F-A,S-F

14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code:

Not applicable.

Transport/Additional information:

ADR

Limited quantities (LQ) 5L

Excepted quantities (EQ) Code: E1
Maximum net quantity per inner packaging: 30 ml
Maximum net quantity per outer packaging: 1000 ml

Transport category 3

Tunnel restriction code E

IMDG

Limited quantities (LQ) 5L

Excepted quantities (EQ) Code: E1
Maximum net quantity per inner packaging: 30 ml
Maximum net quantity per outer packaging: 1000 ml

UN “Model Regulation”:

UN 3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (NAPHTHALENE, CRUDE, fluoranthene), 9, III

(Continued on page 15)
**SECTION 15 REGULATORY INFORMATION**

**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

**United States (USA)**

**SARA**

<table>
<thead>
<tr>
<th>Section 355 (extremely hazardous substances):</th>
</tr>
</thead>
<tbody>
<tr>
<td>None of the ingredients is listed.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Section 313 (Specific toxic chemical listings):</th>
</tr>
</thead>
<tbody>
<tr>
<td>206-44-0 fluoranthene</td>
</tr>
<tr>
<td>91-20-3 naphthalene</td>
</tr>
<tr>
<td>56-55-3 benz[a]anthracene</td>
</tr>
<tr>
<td>218-01-9 chrysene</td>
</tr>
<tr>
<td>50-32-8 benzo[a]pyrene</td>
</tr>
<tr>
<td>193-39-5 indeno[1,2,3-cd]pyrene</td>
</tr>
<tr>
<td>205-82-3 benzo[j]fluoranthene</td>
</tr>
<tr>
<td>189-64-0 Dibenzo(a,h)pyrene</td>
</tr>
<tr>
<td>207-08-9 benzo[k]fluoranthene</td>
</tr>
<tr>
<td>189-55-9 Dibenzo(a,i)pyrene</td>
</tr>
</tbody>
</table>

**TSCA (Toxic Substances Control Act):**

All ingredients are listed.

**Proposition 65 (California):**

**Chemicals known to cause cancer:**

Reference to Crystalline Silica and/or Quartz is based on unbound respirable particles and is not generally applicable to product as supplied.

| 14808-60-7 quartz                           |
| 91-20-3 naphthalene                         |
| 56-55-3 benz[a]anthracene                   |
| 218-01-9 chrysene                           |
| 50-32-8 benzo[a]pyrene                      |
| 193-39-5 indeno[1,2,3-cd]pyrene             |
| 205-82-3 benzo[j]fluoranthene                |
| 189-64-0 Dibenzo(a,h)pyrene                 |
| 207-08-9 benzo[k]fluoranthene                |
| 189-55-9 Dibenzo(a,i)pyrene                 |

**Chemicals known to cause reproductive toxicity for females:**

None of the ingredients are listed.
Chemicals known to cause reproductive toxicity for males:
None of the ingredients is listed.

Chemicals known to cause developmental toxicity:
None of the ingredients is listed.

Carcinogenic Categories

**EPA (Environmental Protection Agency)**

<table>
<thead>
<tr>
<th>CAS Number</th>
<th>Substance</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>206-44-0</td>
<td>fluoranthene</td>
<td>D</td>
</tr>
<tr>
<td>91-20-3</td>
<td>naphthalene</td>
<td>C, CBD</td>
</tr>
<tr>
<td>56-55-3</td>
<td>benz[a]anthracene</td>
<td>B2</td>
</tr>
<tr>
<td>218-01-9</td>
<td>chrysene</td>
<td>B2</td>
</tr>
<tr>
<td>50-32-8</td>
<td>benzo[a]pyrene</td>
<td>B2</td>
</tr>
<tr>
<td>193-39-5</td>
<td>indeno[1,2,3-cd]pyrene</td>
<td>B2</td>
</tr>
<tr>
<td>207-08-9</td>
<td>benzo[k]fluoranthene</td>
<td>B2</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>CAS Number</th>
<th>Substance</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>65996-93-2</td>
<td>Pitch, coal tar, high-temp.</td>
<td>1</td>
</tr>
<tr>
<td>14808-60-7</td>
<td>quartz</td>
<td>1</td>
</tr>
<tr>
<td>206-44-0</td>
<td>fluoranthene</td>
<td>3</td>
</tr>
<tr>
<td>91-20-3</td>
<td>naphthalene</td>
<td>2B</td>
</tr>
<tr>
<td>56-55-3</td>
<td>benz[a]anthracene</td>
<td>2B</td>
</tr>
<tr>
<td>218-01-9</td>
<td>chrysene</td>
<td>2B</td>
</tr>
<tr>
<td>50-32-8</td>
<td>benzo[a]pyrene</td>
<td>1</td>
</tr>
<tr>
<td>193-39-5</td>
<td>indeno[1,2,3-cd]pyrene</td>
<td>2B</td>
</tr>
<tr>
<td>205-82-3</td>
<td>benzo[j]fluoranthene</td>
<td>2B</td>
</tr>
<tr>
<td>189-64-0</td>
<td>Dibenzo(a,h)pyrene</td>
<td>2B</td>
</tr>
<tr>
<td>207-08-9</td>
<td>benzo[k]fluoranthene</td>
<td>2B</td>
</tr>
<tr>
<td>189-55-9</td>
<td>Dibenzo(a,i)pyrene</td>
<td>2B</td>
</tr>
</tbody>
</table>

**TLV (Threshold Limit Value established by ACGIH)**

<table>
<thead>
<tr>
<th>CAS Number</th>
<th>Substance</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>65996-93-2</td>
<td>Pitch, coal tar, high-temp.</td>
<td>A1</td>
</tr>
<tr>
<td>1332-58-7</td>
<td>Kaolin</td>
<td>A4</td>
</tr>
<tr>
<td>14808-60-7</td>
<td>quartz</td>
<td>A2</td>
</tr>
<tr>
<td>91-20-3</td>
<td>naphthalene</td>
<td>A4</td>
</tr>
<tr>
<td>56-55-3</td>
<td>benz[a]anthracene</td>
<td>A2</td>
</tr>
<tr>
<td>218-01-9</td>
<td>chrysene</td>
<td>A3</td>
</tr>
<tr>
<td>50-32-8</td>
<td>benzo[a]pyrene</td>
<td>A2</td>
</tr>
</tbody>
</table>

**NIOSH-Ca (National Institute for Occupational Safety and Health)**

<table>
<thead>
<tr>
<th>CAS Number</th>
<th>Substance</th>
</tr>
</thead>
<tbody>
<tr>
<td>65996-93-2</td>
<td>Pitch, coal tar, high-temp.</td>
</tr>
<tr>
<td>14808-60-7</td>
<td>quartz</td>
</tr>
<tr>
<td>218-01-9</td>
<td>chrysene</td>
</tr>
<tr>
<td>50-32-8</td>
<td>benzo[a]pyrene</td>
</tr>
</tbody>
</table>
Canada

Canadian Domestic Substances List (DSL)
All ingredients are listed.

Canadian Ingredient Disclosure list (limit 0.1%)
<table>
<thead>
<tr>
<th>CAS Number</th>
<th>Ingredient</th>
</tr>
</thead>
<tbody>
<tr>
<td>65996-93-2</td>
<td>Pitch, coal tar, high-temp.</td>
</tr>
<tr>
<td>56-55-3</td>
<td>benz[a]anthracene</td>
</tr>
<tr>
<td>218-01-9</td>
<td>chrysene</td>
</tr>
<tr>
<td>50-32-8</td>
<td>benzo[a]pyrene</td>
</tr>
<tr>
<td>193-39-5</td>
<td>indeno[1,2,3-cd]pyrene</td>
</tr>
<tr>
<td>189-64-0</td>
<td>Dibenzo(a,h)pyrene</td>
</tr>
<tr>
<td>189-55-9</td>
<td>Dibenzo(a,i)pyrene</td>
</tr>
</tbody>
</table>

Canadian Ingredient Disclosure list (limit 1%)
<table>
<thead>
<tr>
<th>CAS Number</th>
<th>Ingredient</th>
</tr>
</thead>
<tbody>
<tr>
<td>14808-60-7</td>
<td>quartz</td>
</tr>
<tr>
<td>206-44-0</td>
<td>fluoranthene</td>
</tr>
<tr>
<td>91-20-3</td>
<td>naphthalene</td>
</tr>
</tbody>
</table>

Information about limitation of use:
Workers are not allowed to be exposed to the hazardous carcinogenic materials contained in this preparation. Exceptions can be made by the authorities in certain cases.

Other regulations, limitations and prohibitive regulations
This product has been classified in accordance with hazard criteria of the Controlled Products Regulations and the SDS contains all the information required by the Controlled Products Regulations.

Substances of very high concern (SVHC) according to REACH, Article 57
<table>
<thead>
<tr>
<th>CAS Number</th>
<th>Ingredient</th>
</tr>
</thead>
<tbody>
<tr>
<td>65996-93-2</td>
<td>Pitch, coal tar, high-temp.</td>
</tr>
</tbody>
</table>

15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

SECTION 16 OTHER INFORMATION

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

Relevant phrases
- H302 Harmful if swallowed.
- H314 Causes severe skin burns and eye damage.
- H317 May cause an allergic skin reaction.
- H318 Causes serious eye damage.
- H340 May cause genetic defects.
- H341 Suspected of causing genetic defects.
- H350 May cause cancer.
- H351 Suspected of causing cancer.
- H360FD May damage fertility. May damage the unborn child.
- H373 May cause damage to organs through prolonged or repeated exposure.
- H400 Very toxic to aquatic life.
- H410 Very toxic to aquatic life with long lasting effects.
R20 Harmful by inhalation.
R22 Harmful if swallowed.
R34 Causes burns.
R40 Limited evidence of a carcinogenic effect.
R43 May cause sensitization by skin contact.
R45 May cause cancer.
R46 May cause heritable genetic damage.
R50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R60 May impair fertility.
R61 May cause harm to the unborn child.
R68 Possible risk of irreversible effects.

Abbreviations and acronyms:
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
DOT: US Department of Transportation
IATA: International Air Transport Association
GHS: Globally Harmonized System of Classification and Labeling of Chemicals
ACGIH: American Conference of Governmental Industrial Hygienists
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
NFPA: National Fire Protection Association (USA)
HMIS: Hazardous Materials Identification System (USA)
WHMIS: Workplace Hazardous Materials Information System (Canada)
DNEL: Derived No-Effect Level (REACH)
PNEC: Predicted No-Effect Concentration (REACH)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
Acute Tox. 4: Acute toxicity, Hazard Category 4
Skin Corr. 1B: Skin corrosion/irritation, Hazard Category 1B
Eye Dam. 1: Serious eye damage/eye irritation, Hazard Category 1
Skin Sens. 1: Sensitization - Skin, Hazard Category 1
Muta. 1B: Germ cell mutagenicity, Hazard Category 1B
Muta. 2: Germ cell mutagenicity, Hazard Category 2
Carc. 1B: Carcinogenicity, Hazard Category 1B
Carc. 2: Carcinogenicity, Hazard Category 2
Repr. 1B: Reproductive toxicity, Hazard Category 1B
STOT RE 2: Specific target organ toxicity - Repeated exposure, Hazard Category 2
Aquatic Acute 1: Hazardous to the aquatic environment – Acute Hazard, Category 1
Aquatic Chronic 1: Hazardous to the aquatic environment - Chronic Hazard, Category 1

Sources
SDS Prepared by:
ChemTel Inc.
1305 North Florida Avenue
Tampa, Florida USA 33602-2902
Toll Free North America 1-888-255-3924 Intl. +01 813-248-0573
Website: www.chemtelinc.com

- END OF SDS -