According to 190/2006/EC (REACH), 1272/2008/EC (CLP) and GHS

Printing Date 07.17.2018

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

1.1 PRODUCT IDENTIFIER/TRADE NAME: TRITON ROAD-GUARD

1.2 RELEVANT IDENTIFIED USES OF THE SUBSTANCE OR MIXTURE AND USES ADVISED AGAINST:
No further relevant information available.
Application of the Substance / the Mixture: Specialty Resurfacing Product 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
Website: 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:
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 Chronic 1 H411 Toxic to aquatic life with long lasting effects.

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

CLASSIFICATION ACCORDING TO DIRECTIVE 67/548/ECC or DIRECTIVE 1999/45/EC

⚠️ T; Toxic
Xi; Sensitizing
R43 Irritating to skin. May cause sensitization by skin contact.

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

Classification system:
The classification is according to the latest editions of the EU-lists, and extended by company and literature data.

2.2 Label Elements
Labeling according to Regulation (EC) No 1272/2008
The product is classified and labeled according to the Globally Harmonized System (GHS).

GHS07 GHS08 GHS09
Signal word Danger

Hazard-determining components of labeling:
Residues (Petroleum steam-cracked).
benzo[a]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.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H340 May cause genetic defects.
H350 May cause cancer.
H360 May damage fertility or the unborn child.
H360FD May damage fertility. May damage the unborn child.
H411 Toxic to aquatic life with long-lasting effects.

Precautionary statements
P273 Avoid release to environment.
P281 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.
P303+P330+P353 IF ON SKIN (or hair): Remove/take off immediately all contaminated clothing. Rinse skin well with water/shower.
P305+P351+P33 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P370+P378 In case of fire: Use for extinction: CO2, Powder. Do not use water.
P403+P233 Store in a well-ventilated place. Keep containers tightly closed.
P501 Dispose of contents/container in accordance with local/regional/national/international
### Additional information:
Restricted to professional users.

### Hazard description:
WHMIS-symbols:
- D2A - Very toxic material causing other toxic effects.

#### 2.3 Other Hazards
**Results of PBT and vPvB assessment**
- PBT-Not Applicable
- vPvB: Not applicable.

### SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS

#### 3.1 Substance - Not applicable

#### 3.2 Mixtures

**Description:** Mixture of substances (quartz sand) including listed below with non-hazardous additions.

**Dangerous components:**

<table>
<thead>
<tr>
<th>CAS: 64742-90-1</th>
<th>Residue, Petroleum, Steam-cracked</th>
<th>10-17%</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>PBT</td>
<td></td>
</tr>
<tr>
<td></td>
<td>T Carc. Cat. 2 R45</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Carc. 1B, H350</td>
<td></td>
</tr>
</tbody>
</table>

| CAS: 1332-58-7   | Kaolin substance with a Community workplace exposure limit | 8-12%  |
| EC number: 310-194-1 |

| CAS: 14808-60-7 | quartz substance with a Community workplace exposure limit | 35-40% |

| CAS: 91-20-3     | naphthalene Less than 0.1% |
| EINECS: 202-049-5| Xn R22-40; N R50/53 |
| Index number: 601-052-00-2 |

| CAS: 50-32-8     | benzo[a]pyrene Less than 0.1% |
| EINECS: 200-028-5| T Carc. Cat. 2, Muta. Cat. 2, Repr. Cat. 2 R45-46-60-61; Xi R43; N R50/53 |
| Index number: 601-032-00-3 |

**Additional information:** For the wording of the listed risk phrases refer to section 16.
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.

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: Keep out of the reach of children. Keep in tightly closed containers.

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>PEL (USA)</th>
<th>REL (USA)</th>
<th>TLV (USA)</th>
<th>EL (Canada)</th>
<th>EV (Canada)</th>
</tr>
</thead>
<tbody>
<tr>
<td>50-32-8 benzo[a]pyrene</td>
<td>Long-term value: 0.2 mg/m³ see Coal tar pitch volatiles</td>
<td>Long-term value: 0.1 mg/m³ Coal tar pitch volatile; Pocket Guide Apps. A+C</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1332-58-7 Kaolin</td>
<td>Long-term value: 15* 5** mg/m³ *total dust **respirable fraction</td>
<td>Long-term value: 10* 5** mg/m³ *total dust **respirable fraction</td>
<td>Long-term value: 2* mg/m³ E; as respirable fraction</td>
<td>Long-term value: 2 mg/m³</td>
<td>Long-term value: 2(D) mg/m³ respirable</td>
</tr>
<tr>
<td>14808-60-7 quartz</td>
<td>see Quartz listing</td>
<td>Long-term value: 0.05* mg/m³ *respirable dust; See Pocket Guide App. A</td>
<td>Long-term value: 0.025* mg/m³ *as respirable fraction</td>
<td>Long-term value: 0.025 mg/m³ ACGIH A2; IARC 1</td>
<td>Long-term value: 0.10* mg/m³ *respirable fraction</td>
</tr>
<tr>
<td>91-20-3 naphthalene</td>
<td>Long-term value: 30 mg/m³, 10 ppm</td>
<td>Long-term value: 50 mg/m³, 10 ppm</td>
<td>Long-term value: 75 mg/m³, 15 ppm Long-term value: 50 mg/m³, 10 ppm</td>
<td>Long-term value: 52 mg/m³, 10 ppm Skin; BEI</td>
<td>Short-term value: 15 ppm Long-term value: 10 ppm Skin; IARC 2B</td>
</tr>
</tbody>
</table>

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

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 ........................................ Slight resins odor
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 and heat.
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: Not Classified.

<table>
<thead>
<tr>
<th>LD/LC50 values relevant for classification:</th>
</tr>
</thead>
<tbody>
<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>

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.

SECTION 12  ECOLOGICAL INFORMATION

12.1 Toxicity

Aquatic toxicity: Toxic for aquatic organisms.

12.2 Persistence and degradability - No further relevant information available.

12.3 Bio-accumulative potential - No further relevant information available.

12.4 Mobility in soil - No further relevant information available.

12.5 Results of PBT and vPvB assessment - None available.

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

In accordance with DOT.

<table>
<thead>
<tr>
<th>14.1 UN-Number</th>
<th>Not Applicable.</th>
</tr>
</thead>
<tbody>
<tr>
<td>14.2 UN proper shipping name</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>14.3 Additional Information</td>
<td>None available</td>
</tr>
<tr>
<td>Special Transport Precaution -</td>
<td>Read all safety precautions before handling the product.</td>
</tr>
</tbody>
</table>

### 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 313 (Specific toxic chemical listings):</th>
</tr>
</thead>
<tbody>
<tr>
<td>91-20-3 naphthalene</td>
</tr>
<tr>
<td>50-32-8 benzo[a]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.

<table>
<thead>
<tr>
<th>14808-60-7 quartz</th>
</tr>
</thead>
<tbody>
<tr>
<td>91-20-3 naphthalene</td>
</tr>
<tr>
<td>218-01-9 chrysene</td>
</tr>
<tr>
<td>50-32-8 benzo[a]pyrene</td>
</tr>
</tbody>
</table>

**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.

**EPA (Environmental Protection Agency)**
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.
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: STAR, INC., 1150 Milepost Drive, Columbus, OH 43026
Tel. no. 614-870-0744, fax 614-870-0598
Website: www.starseal.com

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Date of Issue: July 17, 2018

- END OF SDS -