1 Identification

- Product identifier
  - Trade name: 4194 Vinyl Ester Resin Fiberglass Repair Patch and Putty (NSN# 8040-01-346-1339)
  - Other product identifiers: No other identifiers

- Recommended use and restriction on use
  - Recommended use: Resin
  - Restrictions on use: No relevant information available.

Details of the supplier of the Safety Data Sheet

- Manufacturer/Supplier:
  Sunrez Corporation
  392 Coogan Way
  El Cajon, CA, 92020
  619-442-3353

- Emergency telephone number:
  ChemTel Inc.
  (800)255-3924 (North America)
  +1 (813)248-0585 (International)

2 Hazard(s) identification

- Classification of the substance or mixture
  - Flam. Liq. 3 H226 Flammable liquid and vapor.
  - Skin Irrit. 2 H315 Causes skin irritation.
  - Eye Irrit. 2A H319 Causes serious eye irritation.
  - Skin Sens. 1 H317 May cause an allergic skin reaction.
  - Muta. 1B H340 May cause genetic defects.
  - Carc. 1B H350 May cause cancer.
  - Repr. 2 H361 Suspected of damaging fertility or the unborn child.
  - STOT SE 3 H335 May cause respiratory irritation.
  - STOT RE 1 H372 Causes damage to the hearing organs through prolonged or repeated exposure.

- Route of exposure: Inhalation.

- Label elements
  - GHS label elements
    - The product is classified and labeled according to the Globally Harmonized System (GHS).
  - Hazard pictograms:
    - GHS02 GHS07 GHS08

- Signal word: Danger

- Hazard statements:
  - H226 Flammable liquid and vapor.
  - H315 Causes skin irritation.
  - H319 Causes serious eye irritation.
  - H317 May cause an allergic skin reaction.
Trade name: 4194 Vinyl Ester Resin Fiberglass Repair Patch and Putty (NSN# 8040-01-346-1339)

H340 May cause genetic defects.
H350 May cause cancer.
H361 Suspected of damaging fertility or the unborn child.
H335 May cause respiratory irritation.
H372 Causes damage to the hearing organs through prolonged or repeated exposure. Route of exposure: Inhalation.

- Precautionary statements:
  P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.
P241 Use explosion-proof electrical/ventilating/lighting/equipment.
P260 Do not breathe dust/fume/gas/mist/vapors/spray.
P264 Wash thoroughly after handling.
P280 Wear protective gloves/protective clothing/eye protection.
P240 Ground/bond container and receiving equipment.
P233 Keep container tightly closed.
P242 Use only non-sparking tools.
P243 Take precautionary measures against static discharge.
P270 Do not eat, drink or smoke when using this product.
P271 Use only outdoors or in a well-ventilated area.
P303+P361+P353 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P333+P313 If skin irritation or rash occurs: Get medical advice/attention.
P337+P313 If eye irritation persists: Get medical advice/attention. P308+P313 IF exposed or concerned: Get medical advice/attention.
P362+P364 Take off contaminated clothing and wash it before reuse.
P370+P378 In case of fire: Use foam, powder, or carbon dioxide for extinction.
P405 Store locked up.
P403+P235 Store in a well-ventilated place. Keep cool.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

- Other hazards
  There are no other hazards not otherwise classified that have been identified.

3 Composition/information on ingredients

- Chemical characterization: Mixtures

  - Components:

    100-42-5 styrene 25-60%

    Flam. Liq. 3, H226
    Carc. 2, H351; Repr. 2, H361; STOT RE 1, H372; Asp. Tox. 1, H304
    Acute Tox. 4, H332; Skin Irrit. 2, H315; Eye Irrit. 2A, H319; STOT SE 3, H335

(Cont'd. on page 3)
Trade name: 4194 Vinyl Ester Resin Fiberglass Repair Patch and Putty (NSN# 8040-01-346-1339)

| 75980-60-8 | diphenyl(2,4,6- trimethylbenzoyl)phosphine oxide | ≤10% |
| 64742-95-6 | light aromatic solvent naphtha (petroleum) | <1% |

- **Additional information:**
  For the listed ingredient(s), the identity and/or exact percentage(s) are being withheld as a trade secret. For the wording of the listed Hazard Statements refer to section 16.

### 4 First-aid measures

- **Description of first aid measures**
- **After inhalation:**
  Supply fresh air; consult doctor in case of complaints.
  In case of irregular breathing or respiratory arrest provide artificial respiration.
- **After skin contact:**
  Immediately wash with water and soap and rinse thoroughly.
  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; immediately call for medical help.
- **Most important symptoms and effects, both acute and delayed:**
  Breathing difficulty
  Allergic reactions
  Irritant to skin and mucous membranes.
  Causes eye irritation.
  May cause respiratory irritation.
  Gastric or intestinal disorders when ingested.
  Nausea in case of ingestion.
  Unconsciousness
- **Indication of any immediate medical attention and special treatment needed:**
  Medical supervision for at least 48 hours.
  If necessary oxygen respiration treatment.
  Contains diphenyl(2,4,6- trimethylbenzoyl)phosphine oxide. May produce an allergic reaction.
  Treat skin and mucous membrane with antihistamine and corticoid preparations.

### 5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**
  Water fog / haze
  Foam
  Carbon dioxide

(Cont’d. on page 4)
Trade name: 4194 Vinyl Ester Resin Fiberglass Repair Patch and Putty (NSN# 8040-01-346-1339)

- Fire-extinguishing powder
  - For safety reasons unsuitable extinguishing agents: Water stream.
- Special hazards arising from the substance or mixture
  - Formation of toxic gases is possible during heating or in case of fire.
- Advice for firefighters
  - Protective equipment:
    - Wear self-contained respiratory protective device.
    - Wear fully protective suit.
- Additional information:
  - Eliminate all ignition sources if safe to do so.
  - Cool endangered containers with water fog.

6 Accidental release measures

- Personal precautions, protective equipment and emergency procedures
  - Use respiratory protective device against the effects of fumes/dust/aerosol.
  - Wear protective equipment. Keep unprotected persons away.
  - Ensure adequate ventilation.
  - Keep away from ignition sources.
  - Protect from heat.
- Environmental precautions
  - Avoid release to the environment.

Methods and material for containment and cleaning up

- Absorb liquid components with non-combustible liquid-binding material.
- Pick up mechanically.
- Send for recovery or disposal in suitable receptacles.

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.

7 Handling and storage

- Handling
  - Precautions for safe handling:
    - Open and handle receptacle with care.
    - Use only in well ventilated areas.
    - Prevent formation of dust.
    - Avoid breathing dust.
    - Avoid contact with the eyes and skin.
    - Keep out of reach of children.
  - Information about protection against explosions and fires:
    - Protect against electrostatic charges.
    - Flammable gas-air mixtures may be formed in empty containers/receptacles.
    - Flammable liquid and vapor.
    - Avoid dust cloud formation. Keep ignition sources away. No smoking.
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· Conditions for safe storage, including any incompatibilities
  · Storage
    · Requirements to be met by storerooms and receptacles:
      Use only receptacles specifically permitted for this substance/product.
      Avoid storage near extreme heat, ignition sources or open flame.
    · Information about storage in one common storage facility:
      Store away from foodstuffs.
      Store away from oxidizers, strong acids, strong bases.
    · Further information about storage conditions:
      Store in cool, dry conditions in well sealed receptacles.
      Protect from heat and direct sunlight.
    · Specific end use(s) No relevant information available.

8 Exposure controls/personal protection

· Control parameters
  · Components with limit values that require monitoring at the workplace:
    100-42-5 styrene

    | Component   | Long-term value | Short-term value |
    |-------------|-----------------|------------------|
    | PEL (USA)   | 100 ppm         | 425 mg/m³, 100 ppm |
    | REL (USA)   | Ceiling limit: 200 ppm | 170 mg/m³, 40 ppm |
    |             | *5-min peak in any 3 hrs | Long-term value: 85 mg/m³, 20 ppm |
    | TLV (USA)   | 215 mg/m³, 50 ppm | 100 ppm |
    |             | Short-term value: 170 mg/m³, 40 ppm |
    |             |                | Long-term value: 85 mg/m³, 20 ppm |
    | EL (Canada) | 75 ppm          | BEI |
    | EV (Canada) | 50 ppm          | IARC 2B |
    |             | 100 ppm         | 100 ppm |
    |             | 35 ppm          | |
    | LMPE (Mexico)| 40 ppm         | 40 ppm |
    |             | 20 ppm          | A4, IBE |

· Ingredients with biological limit values:
  100-42-5 styrene

(Cont’d. of page 6)
**Trade name: 4194 Vinyl Ester Resin Fiberglass Repair Patch and Putty (NSN# 8040-01-346-1339)**

<table>
<thead>
<tr>
<th>BET (USA)</th>
<th>400 mg/g creatinine</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medium: urine</td>
<td>Time: end of shift</td>
</tr>
<tr>
<td>Parameter: Mandelic acid plus phenylglyoxylic acid (nonspecific)</td>
<td></td>
</tr>
</tbody>
</table>

| 0.2 mg/L |
| Medium: venous blood |
| Time: end of shift |
| Parameter: Styrene (semi-quantitative) |

- **Exposure controls**
  - **Personal protective equipment:**
    - **General protective and hygienic measures:**
      - The usual precautionary measures for handling chemicals should be followed.
      - Keep away from foodstuffs, beverages and feed.
      - Immediately remove all soiled and contaminated clothing.
      - Wash hands before breaks and at the end of work.
      - Do not inhale gases / fumes / aerosols.
      - Avoid contact with the eyes and skin.
      - Pregnant women should strictly avoid inhalation or skin contact.
  
| Engineering controls | No relevant information available. |
| Breathing equipment | Use suitable respiratory protective device in case of insufficient ventilation. |
| Protection of hands | Use respiratory protection when grinding or cutting material. |

- **Protection of hands:**
  - Protective gloves

  - The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

- **Eye protection:**
  - Safety glasses

- **Body protection:** Protective work clothing

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

### 9 Physical and chemical properties

- **Information on basic physical and chemical properties**

  - **Appearance:**
    - Form: Viscous liquid.
    - Color: Red-brown
    - Odor: Sweet
    - Odor threshold: Not determined.
### 10 Stability and reactivity

- **Reactivity**: No relevant information available.
- **Chemical stability**: Stable under normal temperatures and pressures.
- **Thermal decomposition / conditions to be avoided**:
  - No decomposition if used and stored according to specifications.
  - Keep away from heat/sparks/open flames/hot surfaces. No smoking.
- **Possibility of hazardous reactions**
  - Flammable.
  - Reacts with strong oxidizing agents.
- **Conditions to avoid**
  - Light, excess heat, dust generation, incompatible materials.
  - Keep ignition sources away - Do not smoke.
- **Incompatible materials**
  - Oxidizers
Safety Data Sheet
acc. to OSHA HCS (29CFR 1910.1200) and WHMIS 2015 regulations

Printing date: 01/31/2017
Revision: 01/31/2017

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11 Toxicological information

· Hazardous decomposition products Carbon monoxide and carbon dioxide

<table>
<thead>
<tr>
<th>11 Toxicological information</th>
</tr>
</thead>
<tbody>
<tr>
<td>· Information on toxicological effects</td>
</tr>
<tr>
<td>· Acute toxicity:</td>
</tr>
<tr>
<td>· LD/LC50 values that are relevant for classification:</td>
</tr>
<tr>
<td>100-42-5 styrene</td>
</tr>
<tr>
<td>Oral</td>
</tr>
<tr>
<td>Inhalative</td>
</tr>
<tr>
<td>· Primary irritant effect:</td>
</tr>
<tr>
<td>· On the skin: Irritant to skin and mucous membranes.</td>
</tr>
<tr>
<td>· On the eye: Irritating effect.</td>
</tr>
<tr>
<td>· Sensitization:</td>
</tr>
<tr>
<td>Contains diphenyl(2,4,6- trimethylbenzoyl)phosphine oxide. May produce an allergic reaction.</td>
</tr>
<tr>
<td>· IARC (International Agency for Research on Cancer):</td>
</tr>
<tr>
<td>Present in trace quantities: 98-82-8, 100-41-4.</td>
</tr>
<tr>
<td>100-41-4 ethylbenzene</td>
</tr>
<tr>
<td>98-82-8 cumene</td>
</tr>
<tr>
<td>100-42-5 styrene</td>
</tr>
<tr>
<td>· NTP (National Toxicology Program):</td>
</tr>
<tr>
<td>Present in trace quantities.</td>
</tr>
<tr>
<td>100-42-5 styrene</td>
</tr>
<tr>
<td>98-82-8 cumene</td>
</tr>
<tr>
<td>· OSHA-Ca (Occupational Safety &amp; Health Administration):</td>
</tr>
<tr>
<td>None of the ingredients are listed.</td>
</tr>
<tr>
<td>· Probable route(s) of exposure:</td>
</tr>
<tr>
<td>Eye contact.</td>
</tr>
<tr>
<td>Skin contact.</td>
</tr>
<tr>
<td>· Acute effects (acute toxicity, irritation and corrosivity):</td>
</tr>
<tr>
<td>Irritating to eyes, respiratory system and skin.</td>
</tr>
<tr>
<td>May be harmful if inhaled.</td>
</tr>
<tr>
<td>· CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)</td>
</tr>
<tr>
<td>Muta. 1B, Carc. 1B, Repr. 2</td>
</tr>
<tr>
<td>· Germ cell mutagenicity: May cause genetic defects.</td>
</tr>
<tr>
<td>· Carcinogenicity: May cause cancer.</td>
</tr>
<tr>
<td>· Reproductive toxicity: Suspected of damaging fertility or the unborn child.</td>
</tr>
<tr>
<td>· STOT-single exposure: May cause respiratory irritation.</td>
</tr>
<tr>
<td>· STOT-repeated exposure:</td>
</tr>
<tr>
<td>Causes damage to the hearing organs through prolonged or repeated exposure. Route of exposure: Inhalation.</td>
</tr>
<tr>
<td>· Aspiration hazard: Based on available data, the classification criteria are not met.</td>
</tr>
</tbody>
</table>

(Cont'd. on page 9)
12 Ecological information

- Toxicity
  - Aquatic toxicity
    75980-60-8 diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide
    | LC50 | EC50 |
    | 6.53 mg/l (fish) | 3.53 mg/l (daphnia) |
  - Persistence and degradability: No relevant information available.
  - Bioaccumulative potential: No relevant information available.
  - Mobility in soil: No relevant information available.
  - Ecotoxicological effects:
    - Remark: Harmful to fish
  - Additional ecological information
    - General notes: Avoid release to the environment.
  - Results of PBT and vPvB assessment
    - PBT: Not applicable.
    - vPvB: Not applicable.
  - Other adverse effects: No relevant information available.

13 Disposal considerations

- Waste treatment methods
  - Recommendation:
    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.

- Uncleaned packagings
  - Recommendation: Disposal must be made according to official regulations.

14 Transport information

- UN-Number
  - DOT, ADR, IMDG, IATA: UN1866
- UN proper shipping name
  - DOT, IATA: Resin solution
  - ADR, IMDG: RESIN SOLUTION
### Transport hazard class(es)

- **DOT**
  - Class: 3 Flammable liquids
  - Label: 3

- **ADR**
  - Class: 3 (F1) Flammable liquids
  - Label: 3

- **IMDG, IATA**
  - Class: 3 Flammable liquids
  - Label: 3

- **Packing group**
  - DOT, ADR, IMDG, IATA: III

### Environmental hazards

- Marine pollutant: No

### Special precautions for user

- Warning: Flammable liquids
- Danger code (Kemler): 30
- EMS Number: F-E, S-E

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

- Not applicable.

### Transport/Additional information:

- **DOT**
  - Limited Quantity for packages less than 30 kg gross and inner packagings less than 5 L each.

- **ADR**
  - Limited Quantity for packages less than 30 kg gross and inner packagings less than 5 L each.
Trade name: 4194 Vinyl Ester Resin Fiberglass Repair Patch and Putty (NSN# 8040-01-346-1339)

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- IMDG
  Limited Quantity for packages less than 30 kg gross and inner packagings less than 5 L each.

- IATA
  Limited Quantity for packages less than 30 kg gross and inner packagings less than 5 L each / 10 L net.

15 Regulatory information

- Safety, health and environmental regulations/legislation specific for the substance or mixture
  - United States (USA)
  - SARA

- Section 302 (extremely hazardous substances):
  None of the ingredients are listed.

- Section 355 (extremely hazardous substances):
  None of the ingredients are listed.

- Section 313 (Specific toxic chemical listings):
  - 100-42-5 styrene

- TSCA (Toxic Substances Control Act)
  All ingredients are listed.

- Proposition 65 (California)
  - Chemicals known to cause cancer:
    Present in trace quantities: 98-82-8, 100-41-4.
  - 100-42-5 styrene
  - 98-82-8 cumene
  - 100-41-4 ethylbenzene

- 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 are listed.

- Chemicals known to cause developmental toxicity:
  Present in trace quantities.
  - 108-88-3 toluene

- Carcinogenic categories
  - EPA (Environmental Protection Agency):
    None of the ingredients are listed.
Trade name: 4194 Vinyl Ester Resin Fiberglass Repair Patch and Putty (NSN# 8040-01-346-1339)

- IARC (International Agency for Research on Cancer):
  Present in trace quantities: 98-82-8, 100-41-4.
  100-41-4 ethylbenzene 2B
  98-82-8 cumene 2B
  100-42-5 styrene 2B

- NIOSH-Ca (National Institute for Occupational Safety and Health):
  None of the ingredients are listed.

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

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.

- Date of preparation / last revision 01/31/2017 / -

- Abbreviations and acronyms:
  ADR: 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
  CAS: Chemical Abstracts Service (division of the American Chemical Society)
  DNEL: Derived No-Effect Level (REACH)
  PNEC: Predicted No-Effect Concentration (REACH)
  LC50: Lethal concentration, 50 percent
  LD50: Lethal dose, 50 percent
  PBT: Persistent, Bioaccumulative and Toxic
  vPvB: very Persistent and very Bioaccumulative
  NIOSH: National Institute for Occupational Safety
  OSHA: Occupational Safety & Health
  LDLo: Lowest Lethal Dose Observed
  Flam. Liq. 3: Flammable liquids – Category 3
  Acute Tox. 4: Acute toxicity – Category 4
  Skin Irrit. 2: Skin corrosion/irritation – Category 2
  Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A
  Skin Sens. 1: Skin sensitisation – Category 1
  Skin Sens. 1B: Skin sensitisation – Category 1B
  Mutagen. 1B: Germ cell mutagenicity – Category 1B
  Carc. 1B: Carcinogenicity – Category 1B
  Carc. 2: Carcinogenicity – Category 2
  Repr. 2: Reproductive toxicity – Category 2
  STOT SE 3: Specific target organ toxicity (single exposure) – Category 3
  STOT RE 1: Specific target organ toxicity (repeated exposure) – Category 1
  Asp. Tox. 1: Aspiration hazard – Category 1

- Sources

(Cont'd. on page 13)
Trade name: 4194 Vinyl Ester Resin Fiberglass Repair Patch and Putty (NSN# 8040-01-346-1339)

Website, European Chemicals Agency (echa.europa.eu)
Website, US EPA Substance Registry Services (ofmpub.epa.gov/sor internet/registry/substreg/home/ overview/home.do)
Website, Chemical Abstracts Registry, American Chemical Society (www.cas.org)
Safety Data Sheets, Individual Manufacturers

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Tampa, Florida USA 33602-2902
Toll Free North America 1-888-255-3924 Intl. +01 813-248-0573
Website: www.chemtelinc.com

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