



# SAFETY DATA SHEET

## 1. Identification

|   |   |
|---|---|
| <b>Product identifier</b>                                     | <b>Perma-Mend™ Repair Patch</b>                   |
| <b>Other means of identification</b>                          |   |
| <b>Product code</b>   | 14089, 14094, 14096                               |
| <b>Recommended use</b>  | Self-adhesive repair patch                        |
| <b>Recommended restrictions</b>                               | None known.                                       |
| <b>Manufacturer/Importer/Supplier/Distributor information</b> |   |
| <b>Manufactured or sold by:</b>                               |   |
| <b>Company name</b>   | CRC Industries, Inc.                              |
| <b>Address</b>  | 885 Louis Dr.<br>Warminster, PA 18974 US          |
| <b>Telephone</b>  |   |
| <b>General Information</b>                                    | 215-674-4300                                      |
| <b>Technical Assistance</b>                                   | 800-521-3168                                      |
| <b>Customer Service</b>                                       | 800-272-4620                                      |
| <b>24-Hour Emergency (CHEMTREC)</b>                           | 800-424-9300 (US)<br>703-527-3887 (International) |
| <b>Website</b>  | www.crcindustries.com                             |

## 2. Hazard(s) identification

|                              |                                   |             |
|------------------------------|-----------------------------------|-------------|
| <b>Physical hazards</b>      | Not classified.                   |             |
| <b>Health hazards</b>        | Serious eye damage/eye irritation | Category 2B |
|                              | Sensitization, respiratory        | Category 1B |
|                              | Sensitization, skin               | Category 1B |
|                              | Carcinogenicity                   | Category 2  |
| <b>Environmental hazards</b> | Not classified.                   |             |
| <b>OSHA defined hazards</b>  | Not classified.                   |             |
| <b>Label elements</b>        |                                   |             |



|                                |  |
|--------------------------------|--|
| <b>Signal word</b>             | Danger   |
| <b>Hazard statement</b>        | May cause an allergic skin reaction. Causes eye irritation. May cause allergy or asthma symptoms or breathing difficulties if inhaled. Suspected of causing cancer.  |
| <b>Precautionary statement</b> |  |
| <b>Prevention</b>              | Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use with adequate ventilation. Open doors and windows or use other means to ensure a fresh air supply during use and while product is drying. If you experience any symptoms listed on this label, increase ventilation or leave the area. Avoid breathing mist or vapor. Wash thoroughly after handling. Contaminated work clothing must not be allowed out of the workplace. Wear protective gloves/protective clothing/eye protection/face protection. In case of inadequate ventilation wear respiratory protection. |
| <b>Response</b>                | If on skin: Wash with plenty of water. If skin irritation or rash occurs: Get medical attention. Wash contaminated clothing before reuse. If inhaled: If breathing is difficult, remove person to fresh air and keep comfortable for breathing. If experiencing respiratory symptoms: Call a poison center/doctor. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical attention. If exposed or concerned: Get medical attention.   |
| <b>Storage</b>                 | Store locked up.   |

|  |   |
|--|---|
| <b>Disposal</b>                                  | Dispose of contents/container in accordance with local/regional/national regulations. |
| <b>Hazard(s) not otherwise classified (HNOC)</b> | None known.   |

### 3. Composition/information on ingredients

#### Mixtures

| Chemical name   | Common name and synonyms | CAS number     | %       |
|-----------------|--------------------------|----------------|---------|
| Mineral fillers |                          | Not Applicable | 40 - 50 |
| Fiberglass      |                          | Not Applicable | 20 - 30 |
| Polyester resin |                          | Not Applicable | 20 - 30 |
| Styrene         |                          | 100-42-5       | < 1     |

Specific chemical identity and/or percentage of composition has been withheld as a trade secret.

### 4. First-aid measures

|   |  |
|---|--|
| <b>Inhalation</b>   | If breathing is difficult, remove to fresh air and keep at rest in a position comfortable for breathing. Oxygen or artificial respiration if needed. Do not use mouth-to-mouth method if victim inhaled the substance. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician. |
| <b>Skin contact</b>   | Remove contaminated clothing immediately and wash skin with soap and water. In case of eczema or other skin disorders: Seek medical attention and take along these instructions.   |
| <b>Eye contact</b>  | Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists.  |
| <b>Ingestion</b>  | Not likely, due to the form of the product. If ingestion of a large amount does occur, call a poison control center immediately.   |
| <b>Most important symptoms/effects, acute and delayed</b>                     | Irritation of eyes. Exposed individuals may experience eye tearing, redness, and discomfort. Difficulty in breathing. May cause an allergic skin reaction. Dermatitis. Rash.   |
| <b>Indication of immediate medical attention and special treatment needed</b> | Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.   |
| <b>General information</b>  | IF exposed or concerned: Get medical advice/attention. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Wash contaminated clothing before reuse.   |

### 5. Fire-fighting measures

|  |   |
|--|---|
| <b>Suitable extinguishing media</b>                                  | Water fog. Foam. Dry chemical powder. Carbon dioxide (CO <sub>2</sub> ).                      |
| <b>Unsuitable extinguishing media</b>                                | None known.   |
| <b>Specific hazards arising from the chemical</b>                    | During fire, gases hazardous to health may be formed.   |
| <b>Special protective equipment and precautions for firefighters</b> | Self-contained breathing apparatus and full protective clothing must be worn in case of fire. |
| <b>Fire-fighting equipment/instructions</b>                          | Move containers from fire area if you can do so without risk.                                 |
| <b>General fire hazards</b>  | No unusual fire or explosion hazards noted.   |

### 6. Accidental release measures

|  |   |
|--|---|
| <b>Personal precautions, protective equipment and emergency procedures</b> | Wear appropriate protective equipment and clothing during clean-up. Avoid contact with skin and eyes. Avoid breathing mist or vapor. Ensure adequate ventilation. For personal protection, see section 8 of the SDS.  |
| <b>Methods and materials for containment and cleaning up</b>               | This product is a flexible solid and cannot leak or spill. In case of accidental release, source of ignition should be removed and the product placed in containers such as covered steel drums to await disposal. For waste disposal, see section 13 of the SDS. |
| <b>Environmental precautions</b>   | Avoid discharge into drains, water courses or onto the ground.  |

## 7. Handling and storage

|   |  |
|---|--|
| <b>Precautions for safe handling</b>                                | Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use only in well-ventilated areas. Provide adequate ventilation. Avoid breathing mist or vapor. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. Keep away from heat and sources of ignition. Wear appropriate personal protective equipment. Observe good industrial hygiene practices. For product usage instructions, please see the product label. |
| <b>Conditions for safe storage, including any incompatibilities</b> | Store in original tightly closed container. Store in a cool, dry place out of direct sunlight. Store in a well-ventilated place. Store away from incompatible materials (see Section 10 of the SDS). For maximum storage life and to maintain material workability, store below 72 °F/22 °C. Material is packaged in special bags impermeable to styrene. Do not puncture bag. Reseal after partial use.   |

## 8. Exposure controls/personal protection

### Occupational exposure limits

#### US. OSHA Table Z-2 (29 CFR 1910.1000)

| Components             | Type    | Value   |
|------------------------|---------|---------|
| Styrene (CAS 100-42-5) | Ceiling | 200 ppm |
|                        | TWA     | 100 ppm |

#### US. ACGIH Threshold Limit Values

| Components             | Type | Value  |
|------------------------|------|--------|
| Styrene (CAS 100-42-5) | STEL | 40 ppm |
|                        | TWA  | 20 ppm |

#### US. NIOSH: Pocket Guide to Chemical Hazards

| Components             | Type | Value                 |
|------------------------|------|-----------------------|
| Styrene (CAS 100-42-5) | STEL | 425 mg/m <sup>3</sup> |
|                        |      | 100 ppm               |
|                        | TWA  | 215 mg/m <sup>3</sup> |
|                        |      | 50 ppm                |

### Biological limit values

#### ACGIH Biological Exposure Indices

| Components             | Value    | Determinant                             | Specimen            | Sampling Time |
|------------------------|----------|---|---------------------|---------------|
| Styrene (CAS 100-42-5) | 400 mg/g | Mandelic acid plus phenylglyoxylic acid | Creatinine in urine | *             |
|                        | 0.2 mg/l | Styrene                                 | Venous blood        | *             |

\* - For sampling details, please see the source document.

### Exposure guidelines

#### US - California OELs: Skin designation

Styrene (CAS 100-42-5) Can be absorbed through the skin.

#### US - Minnesota Haz Subs: Skin designation applies

Styrene (CAS 100-42-5) Skin designation applies.

### Appropriate engineering controls

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. General ventilation normally adequate. Provide eyewash station.

### Individual protection measures, such as personal protective equipment

**Eye/face protection** Wear safety glasses with side shields (or goggles).

#### Skin protection

**Hand protection** Wear protective gloves such as: Impervious gloves.

**Other** Wear appropriate chemical resistant clothing.

**Respiratory protection** If engineering controls are not feasible or if exposure exceeds the applicable exposure limits, use a NIOSH-approved cartridge respirator with an organic vapor cartridge. Use a self-contained breathing apparatus in confined spaces and for emergencies. Air monitoring is needed to determine actual employee exposure levels.

|                                       |  |
|---------------------------------------|--|
| <b>Thermal hazards</b>                | Wear appropriate thermal protective clothing, when necessary.  |
| <b>General hygiene considerations</b> | Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Contaminated work clothing should not be allowed out of the workplace. |

## 9. Physical and chemical properties

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### Appearance

|   |                   |
|---|-------------------|
| <b>Physical state</b>                               | Solid.            |
| <b>Form</b>   | Patch.            |
| <b>Color</b>  | Gray.             |
| <b>Odor</b>   | Styrene.          |
| <b>Odor threshold</b>                               | Not available.    |
| <b>pH</b>   | Not available.    |
| <b>Melting point/freezing point</b>                 | Not available.    |
| <b>Initial boiling point and boiling range</b>      | Not available.    |
| <b>Flash point</b>                                  | 840 °F (448.9 °C) |
| <b>Evaporation rate</b>                             | None.             |
| <b>Flammability (solid, gas)</b>                    | Not available.    |
| <b>Upper/lower flammability or explosive limits</b> |                   |
| <b>Flammability limit - lower (%)</b>               | 0.9 %             |
| <b>Flammability limit - upper (%)</b>               | 6.6 %             |
| <b>Vapor pressure</b>                               | 8.5 hPa estimated |
| <b>Vapor density</b>                                | 3.6 (air = 1)     |
| <b>Relative density</b>                             | Not available.    |
| <b>Solubility (water)</b>                           | Insoluble.        |
| <b>Partition coefficient (n-octanol/water)</b>      | Not available.    |
| <b>Auto-ignition temperature</b>                    | Not available.    |
| <b>Decomposition temperature</b>                    | Not available.    |
| <b>Viscosity (kinematic)</b>                        | Not available.    |
| <b>Percent volatile</b>                             | 0 % estimated     |

## 10. Stability and reactivity

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|   |   |
|---|---|
| <b>Reactivity</b>                         | The product is stable and non-reactive under normal conditions of use, storage and transport. |
| <b>Chemical stability</b>                 | Material is stable under normal conditions.   |
| <b>Possibility of hazardous reactions</b> | No dangerous reaction known under conditions of normal use.                                   |
| <b>Conditions to avoid</b>                | Contact with incompatible materials. High temperatures and direct UV light in uncured state.  |
| <b>Incompatible materials</b>             | Strong oxidizing agents.  |
| <b>Hazardous decomposition products</b>   | No hazardous decomposition products are known.  |

## 11. Toxicological information

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### Information on likely routes of exposure

|                     |   |
|---------------------|---|
| <b>Inhalation</b>   | May cause allergy or asthma symptoms or breathing difficulties if inhaled. Prolonged inhalation may be harmful. |
| <b>Skin contact</b> | May cause an allergic skin reaction.  |
| <b>Eye contact</b>  | Causes eye irritation.  |
| <b>Ingestion</b>    | Expected to be a low ingestion hazard.  |

**Symptoms related to the physical, chemical and toxicological characteristics**

Irritation of eyes. Exposed individuals may experience eye tearing, redness, and discomfort. Difficulty in breathing. May cause an allergic skin reaction. Dermatitis. Rash.

**Information on toxicological effects**

**Acute toxicity** May cause an allergic skin reaction.

| Product                  | Species | Test Results       |
|--------------------------|---------|--------------------|
| Perma-Mend™ Repair Patch |         |                    |
| <b>Acute</b>             |         |                    |
| <b>Dermal</b>            |         |                    |
| LD50                     | Rabbit  | > 2000 mg/kg       |
| <b>Inhalation</b>        |         |                    |
| LC50                     | Rat     | > 20 mg/l, 4 hours |
| <b>Oral</b>              |         |                    |
| LD50                     | Rat     | > 5000 mg/kg       |

\* Estimates for product may be based on additional component data not shown.

**Skin corrosion/irritation** Prolonged skin contact may cause temporary irritation.

**Serious eye damage/eye irritation** Causes eye irritation.

**Respiratory sensitization** May cause allergy or asthma symptoms or breathing difficulties if inhaled.

**Skin sensitization** May cause an allergic skin reaction.

**Germ cell mutagenicity** No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

**Carcinogenicity** Suspected of causing cancer.

**IARC Monographs. Overall Evaluation of Carcinogenicity**

Styrene (CAS 100-42-5) 2B Possibly carcinogenic to humans.

**US. National Toxicology Program (NTP) Report on Carcinogens**

Styrene (CAS 100-42-5) Reasonably Anticipated to be a Human Carcinogen.

**Reproductive toxicity** This product is not expected to cause reproductive or developmental effects.

**Specific target organ toxicity - single exposure** Not classified.

**Specific target organ toxicity - repeated exposure** Not classified.

**Aspiration hazard** Not an aspiration hazard.

**Chronic effects** Prolonged inhalation may be harmful. Prolonged exposure may cause chronic effects.

**12. Ecological information**

**Ecotoxicity** The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

| Product                  | Species | Test Results                              |                                    |
|--------------------------|---------|---|------------------------------------|
| Perma-Mend™ Repair Patch |         |   |                                    |
| <b>Aquatic</b>           |         |   |                                    |
| Crustacea                | EC50    | Daphnia                                   | 550 mg/l, 48 hours estimated       |
| Fish                     | LC50    | Fish                                      | 5079.6665 mg/l, 96 hours estimated |
| <b>Components</b>        |         |   |                                    |
| Styrene (CAS 100-42-5)   |         |   |                                    |
| <b>Aquatic</b>           |         |   |                                    |
| Crustacea                | EC50    | Water flea (Daphnia magna)                | 3.3 - 7.4 mg/l, 48 hours           |
| Fish                     | LC50    | Sheepshead minnow (Cyprinodon variegatus) | 5.1 - 16 mg/l, 96 hours            |

\* Estimates for product may be based on additional component data not shown.

**Persistence and degradability** No data is available on the degradability of this product.

## Bioaccumulative potential

### Partition coefficient n-octanol / water (log Kow)

Styrene 2.95

**Mobility in soil** No data available.

**Other adverse effects** No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

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## 13. Disposal considerations

**Disposal of waste from residues / unused products** Cure waste material by exposing to UV light (sunlight or artificial) and dispose of as non-hazardous solid waste as per local regulations. Dispose in accordance with all applicable regulations.

**Hazardous waste code** Not regulated.

**Contaminated packaging** Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

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## 14. Transport information

### DOT

Not regulated as dangerous goods.

### IATA

Not regulated as dangerous goods.

### IMDG

Not regulated as dangerous goods.

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## 15. Regulatory information

**US federal regulations** This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

### TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

### US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

### SARA 304 Emergency release notification

Not regulated.

### US EPCRA (SARA Title III) Section 313 - Toxic Chemical: Listed substance

Styrene (CAS 100-42-5)

### CERCLA Hazardous Substance List (40 CFR 302.4)

Not listed.

### CERCLA Hazardous Substances: Reportable quantity

Not listed.

Spills or releases resulting in the loss of any ingredient at or above its RQ require immediate notification to the National Response Center (800-424-8802) and to your Local Emergency Planning Committee.

### Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not regulated.

### Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

**Safe Drinking Water Act (SDWA)** Not regulated.

**Food and Drug Administration (FDA)** Not regulated.

### Superfund Amendments and Reauthorization Act of 1986 (SARA)

**Section 311/312 Hazard categories**  
Immediate Hazard - Yes  
Delayed Hazard - Yes  
Fire Hazard - No  
Pressure Hazard - No  
Reactivity Hazard - No

**SARA 302 Extremely hazardous substance** No

## US state regulations

**US. California. Candidate Chemicals List. Safer Consumer Products Regulations (Cal. Code Regs, tit. 22, 69502.3, subd. (a))**

Styrene (CAS 100-42-5)

**US. California Controlled Substances. CA Department of Justice (California Health and Safety Code Section 11100)**

Not listed.

**US. New Jersey Worker and Community Right-to-Know Act**

Styrene (CAS 100-42-5)

**US. Massachusetts RTK - Substance List**

None.

**US. Pennsylvania Worker and Community Right-to-Know Law**

Styrene (CAS 100-42-5)

**US. Rhode Island RTK**

None.

**US. California Proposition 65**

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

## Volatile organic compounds (VOC) regulations

### EPA

**VOC content (40 CFR 51.100(s))** 0.6 %

**Consumer products (40 CFR 59, Subpt. C)** Not regulated

### State

**Consumer products** Not regulated

**VOC content (CA)** 0.6 %

**VOC content (OTC)** 0.6 %

## International Inventories

| Country(s) or region        | Inventory name   | On inventory (yes/no)* |
|-----------------------------|--|------------------------|
| Australia                   | Australian Inventory of Chemical Substances (AICS)                     | No                     |
| Canada                      | Domestic Substances List (DSL)   | No                     |
| Canada                      | Non-Domestic Substances List (NDSL)                                    | No                     |
| China                       | Inventory of Existing Chemical Substances in China (IECSC)             | No                     |
| Europe                      | European Inventory of Existing Commercial Chemical Substances (EINECS) | No                     |
| Europe                      | European List of Notified Chemical Substances (ELINCS)                 | No                     |
| Japan                       | Inventory of Existing and New Chemical Substances (ENCS)               | No                     |
| Korea                       | Existing Chemicals List (ECL)  | No                     |
| New Zealand                 | New Zealand Inventory  | No                     |
| Philippines                 | Philippine Inventory of Chemicals and Chemical Substances (PICCS)      | No                     |
| United States & Puerto Rico | Toxic Substances Control Act (TSCA) Inventory                          | Yes                    |

\*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

## 16. Other information, including date of preparation or last revision

|                            |   |
|----------------------------|---|
| <b>Issue date</b>          | 06-16-2015  |
| <b>Prepared by</b>         | Allison Cho   |
| <b>Version #</b>           | 01  |
| <b>Further information</b> | Not available.  |
| <b>HMIS® ratings</b>       | Health: 1*<br>Flammability: 1<br>Physical hazard: 0<br>Personal protection: B |

**NFPA ratings**

Health: 1  
Flammability: 1  
Instability: 0

**NFPA ratings**



**Disclaimer**

CRC cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. The information contained in this document applies to this specific material as supplied. It may not be valid for this material if it is used in combination with any other materials. This information is accurate to the best of CRC Industries' knowledge or obtained from sources believed by CRC to be accurate. Before using any product, read all warnings and directions on the label. For further clarification of any information contained on this (M)SDS consult your supervisor, a health & safety professional, or CRC Industries.