

**SECTION 1 - PRODUCT AND COMPANY IDENTIFICATION**

**1.1 Product identifier**

**Product Name:** Bio-Strip  
**Product Codes(s):** Bio-Strip  
**Synonym(s):** Bio-solvent based stripper  
**REACH Registration:** No data available

**1.2 Relevant identified uses of the substance or mixture and uses advised against**

**General use:** Paint, coating and film stripper; graffiti remover  
**Uses advised against:** None known

**1.3 Details of the supplier and of the safety data sheet**

**Manufacturer/Distributor**  
 Seal 'n Lock System Corp.  
 13215 N. Nebraska Avenue, Bldg. A  
 Tampa, FL 33612 USA  
 813-852-1500

**1.4 Emergency telephone number:** INFOTRAC: 800-535-5053; Outside the USA or Canada: +1-352-323-3500

**SECTION 2 - HAZARDS IDENTIFICATION**

**2.1 Classification of substance or mixture**

**Product definition:** Mixture  
**Classification in accordance with 29 CFR 1910 (OSHA HCS) and Regulation (EC) No 1272/2008**  
 Flammable Liquid - Category 4 [H227]  
 Skin Irritation - Category 2 [H315]  
 Eye Irritation - Category 2A [H319]

**2.2 Label Elements**

**Hazard Symbol(s):**



GHS07

**Signal Word:**

Warning

**Hazard Statement(s):**

H227 - Combustible liquid  
 H315 - Causes skin irritation  
 H319 - Causes serious eye irritation

**Precautionary Statements:**

**[Prevention]**

P210 - Keep away from heat, sparks, open flames, and hot surfaces. - No smoking.  
 P261 - Avoid breathing mists or spray.  
 P280 - Wear protective gloves, protective clothing, and eye protection.  
 P264 - Wash hands thoroughly after handling.

**[Response]**

P370 + P378 - In case of fire: Use water fog, foam, dry chemical or carbon dioxide for extinction.  
 P302 + P352 - IF ON SKIN: Wash with plenty of soap and water.  
 P332 + P337 + P313 - If skin irritation occurs or eye irritation persists: Get medical attention.  
 P362 - Take off contaminated clothing and wash before reuse.  
 P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

**[Storage]**

P403 + P235 - Store in well-ventilated place. Keep cool.

**[Disposal]**

P501 - Dispose of contents and containers in accordance with national and local regulations.

**SECTION 3 - COMPOSITION/INFORMATION ON INGREDIENTS**

**3.1 Substances**

Not applicable

**3.2 Mixtures**

| % by Weight | Ingredient         | CAS Number | EC Number | Index Number | GHS Classification |
|-------------|--------------------|------------|-----------|--------------|--------------------|
| <30         | Dimethyl Sulfoxide | 67-68-5    | 200-664-3 | -----        | -----              |
| <5          | Formic Acid        | 64-18-6    | 200-579-1 | 607-001-00-0 | H314               |

Product contains proprietary ingredients that are non-toxic. The identities of the components are available to the attending physician or paramedical personnel in case of emergency.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

## SECTION 4 - FIRST AID MEASURES

### 4.1 Description of first aid measures

**Inhalation:** If product vapor or mist causes respiratory irritation or distress, move the exposed person to fresh air immediately. If breathing is difficult or irregular, administer oxygen; if respiratory arrest occurs, start artificial respiration by trained personnel. Loosen tight clothing such as a collar, tie, belt or waistband. If symptoms persist, seek medical attention immediately.

**Eyes:** Immediately flush eyes with large amounts of water for 15 minutes, occasionally lifting the upper and lower lids. Remove contact lenses, if present and easy to do, after the first 2 minutes and continue rinsing. Seek immediate medical attention, preferably from an ophthalmologist.

**Skin:** Flush skin with large amounts of water while removing contaminated clothing. Wash affected area with soap and water. Wash contaminated clothing and shoes thoroughly before reuse. Seek medical attention if irritation persists or rash develops.

**Ingestion:** Rinse mouth with water if the victim is conscious. Remove dentures, if present. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious or convulsing person. Get medical attention.

### 4.2 Most important symptoms and effects, both acute and delayed

#### Potential health symptoms and effects

**Eyes:** Causes serious eye irritation. Symptoms include redness, swelling, burning sensation and tearing.

**Skin:** Cause skin irritation with redness, itching and discomfort.

**Inhalation:** Inhalation of mist or vapor may cause irritation of the respiratory system.

**Chronic:** No information available.

### 4.3 Indication of any immediate medical attention and special treatment needed

**Advice to Doctor and Hospital Personnel:** Treat symptomatically and supportively.

## SECTION 5 - FIRE FIGHTING MEASURES

### 5.1 Extinguishable media

**Suitable methods of extinction:** Use media such as water fog, water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

**Unsuitable methods of extinction:** Using water jets or streams may spread the fire.

### 5.2 Special hazards arising from the substance or mixture

Combustible material. Closed containers may explode due to the buildup of pressure when exposed to extreme heat. During emergency conditions overexposure to decomposition products may cause a health hazard. Symptoms may not be immediately apparent or may be delayed. Obtain medical attention.

**Explosion hazards:** None known

### 5.3 Advice for firefighters

Full protective equipment including self-contained breathing apparatus should be used. Water may be used to cool closed containers to prevent pressure buildup and possible autoignition or explosion when exposed to extreme heat. If possible, firefighters should control runoff water to prevent environmental contamination.

## SECTION 6 - ACCIDENTAL RELEASE MEASURES

### 6.1 Personal precautions, protective equipment and emergency procedures

Wear appropriate protective clothing designated in Section 8. Remove all sources of ignition. Ventilate the area.

### 6.2 Environmental precautions

Avoid dispersal of spilled material or runoff and prevent contact with soil and entry into drains, sewers or waterways.

### 6.3 Methods and materials for containment and cleaning up

Cover drains and contain spill. Cover with a large quantity of inert absorbent. Do not use combustible material such as saw dust. Collect product using non-sparking tools and place into approved container for proper disposal. Observe possible material restrictions (Sections 7.2 and 10.5).

Clean contaminated area with soap and water.

### 6.4 Reference to other sections

For indications about waste treatment, see Section 13.

## SECTION 7 - HANDLING AND STORAGE

### 7.1 Precautions for safe handling

Wear all appropriate personal protective equipment specified in Section 8. Do not get in eyes or on skin or clothing. Do not inhale mist or vapor. If normal use of material presents a respiratory hazard, use only adequate ventilation or wear an appropriate respirator.

#### Advice on protection against fire and explosion

Keep away from heat, sparks and flame. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material.

### 7.2 Conditions for safe storage, including any incompatibilities

Store in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10.5), food and drink. Transfer only to approved containers having correct labeling. Keep container tightly closed. Protect container against physical damage. Keep from freezing. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Containers of this material may be hazardous when empty as they contain product residues. Use appropriate containment to avoid environmental contamination. Ventilate closed areas. Do not take internally. Keep out of reach of children.

### 7.3 Specific end uses

Apart from the uses mentioned in Section 1.2, no other specific uses are stipulated.

## SECTION 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

### 8.1 Control parameters

#### Occupational exposure limits

| CAS Number | Ingredient  | OSHA PEL                       | ACGIH TLV              | NIOSH                                       |
|------------|-------------|--------------------------------|------------------------|---|
| 64-18-6    | Formic Acid | 5 ppm; 9 mg/m <sup>3</sup> TWA | 5 ppm TWA; 10 ppm STEL | 5 ppm; 9 mg/m <sup>3</sup> TWA; 30 ppm IDLH |

### 8.2 Exposure controls

**Engineering Measures:** Technical measures and appropriate working operations should be given priority over the use of personal protective equipment. Use adequate ventilation. Local exhaust is preferable. Refer to Section 7.

**Individual protection measures:** Wear protective clothing to prevent repeated or prolonged contact with product. Protective clothing needs to be selected specifically for the workplace, depending on concentrations and quantities of hazardous substances handled. The chemical resistance of the protective equipment should be enquired at the representative supplier.

**Hygiene measures:** Facilities storing or using this material should be equipped with an eyewash station and safety shower. Change contaminated clothing. Preventive skin protection is recommended. Wash hands thoroughly after use, before eating, drinking or using the lavatory.

**Eye/face protection:** Wear protective goggles or safety glasses with unperforated side shields during use. Refer to 29 CFR 1910.133, ANSI Z87.1 or European Standard EN 166.

**Hand Protection:** Wear gloves recommended by glove supplier for protection against materials in section 3. Gloves should be impermeable to chemicals and oil. Breakthrough time of selected gloves must be greater than the intended use period.

**Other protective equipment:** Protective clothing. Wear protective boots if the situation requires.

**Respiratory Protection:** Always use an approved respirator when vapor/aerosols are generated. Where risk assessment shows air-purifying respirators are appropriate use a full-faced respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

**Environmental exposure controls:** Do not empty into drains.

## SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

### 9.1 Information on basic physical and chemical properties

|   |                                  |
|---|----------------------------------|
| <b>Appearance</b>                             | Clear, orange colored liquid     |
| <b>Odor</b>                                   | Sweet                            |
| <b>Odor Threshold</b>                         | No data available                |
| <b>Molecular Weight</b>                       | Not applicable                   |
| <b>Chemical Formula</b>                       | Not applicable                   |
| <b>pH</b>                                     | 3.8 - 4.2 (10% aqueous solution) |
| <b>Freezing/Melting Point</b>                 | No data available                |
| <b>Initial Boiling Point</b>                  | 101°C (213°F)                    |
| <b>Evaporation Rate</b>                       | No data available                |
| <b>Flammability (solid, gas)</b>              | Not applicable                   |
| <b>Flash Point</b>                            | 87.8 °C (190 °F)                 |
| <b>Autoignition Temperature</b>               | No data available                |
| <b>Decomposition Temperature</b>              | No data available                |
| <b>Lower Explosive Limit (LEL)</b>            | No data available                |
| <b>Upper Explosive Limit (UEL)</b>            | No data available                |
| <b>Vapor Pressure</b>                         | No data available                |
| <b>Vapor Density</b>                          | No data available                |
| <b>Specific Gravity</b>                       | 1.04 - 1.06                      |
| <b>Viscosity</b>                              | No data available                |
| <b>Solubility in Water</b>                    | Slight                           |
| <b>Partition Coefficient: n-octanol/water</b> | No data available                |
| <b>Volatiles by Volume @ 21 °C</b>            | <40%                             |

### 9.2 Other data

No data available

## SECTION 10 - STABILITY AND REACTIVITY

### 10.1 Reactivity

No special reactivity has been reported.

### 10.2 Chemical stability

Stable under recommended storage conditions.

### 10.3 Possibility of hazardous reactions

Reacts with strong oxidizing agents, strong acids, strong bases. Avoid excessive heat and sources of ignition. Hazardous polymerization will not occur.

### 10.4 Conditions to avoid

Heat, sparks, open flames. Extreme temperatures. Contact with incompatible materials.

### 10.5 Incompatible materials

Strong oxidizing agents, strong acids, organic and inorganic acid chlorides, alkali metals

### 10.6 Hazardous decomposition products

Thermal decomposition products may include carbon oxides, sulfur oxides, formaldehyde, methyl mercaptan and dimethylsulfide. Dimethyl sulfone is produced via hydrolysis.

## SECTION 11 - TOXICOLOGICAL INFORMATION

### 11.1 Information on toxicological effects

**Acute Oral Toxicity**

This product is expected to have low acute oral toxicity.

**Acute inhalation toxicity**

This product is expected to have low acute inhalation toxicity.

**Acute dermal toxicity**

No data available

**Skin irritation**

Causes skin irritation

**Eye irritation**

May cause serious eye irritation

**Sensitization**

No data available

**Genotoxicity in vitro**

No data available

**Mutagenicity**

No data available

**Specific organ toxicity - single exposure**

No data available

**Specific organ toxicity - repeated exposure**

No data available

**Aspiration hazard**

No data available

### 11.2 Further information

None of the components of this product are listed as carcinogens by OSHA, NTP or ACGIH. No data is available regarding the mutagenicity or teratogenicity of this product, nor is there any available data that indicates that it causes adverse developmental or fertility effects.

Handle in accordance with good industrial hygiene and safety practice.

## SECTION 12 - ECOLOGICAL INFORMATION

### 12.1 Toxicity

Product is expected to have low toxicity to aquatic organisms.

### 12.2 Persistence and degradability

Material is expected to be biodegradable.

### 12.3 Bioaccumulation potential

This product is not expected to bioaccumulate.

### 12.4 Mobility in soil

No information available.

### 12.5 Results of PBT and vPvB assessment

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted.

### 12.6 Other adverse effects

**Additional ecological information**

Do not allow material to run into surface waters, wastewater or soil.

## SECTION 13 - DISPOSAL CONSIDERATIONS

### 13.1 Waste treatment methods

**Methods of disposal:** The generation of waste should be avoided or minimized whenever possible. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe way. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

**Hazardous waste:** The classification of this product may meet the criteria for a hazardous waste.

**RCRA U-Series:** U132 - Formic Acid

## SECTION 14 - TRANSPORT INFORMATION

**Note:** Transportation information provided is for reference only. Customer is urged to consult 49 CFR 100 - 177, IMDG, IATA, EC, United Nations TDG and WHMIS (Canada) TDG information manuals for detailed regulations and exceptions covering specific container sizes, packaging materials and methods of shipping.

**U.S. DOT (Non-bulk)**

\*Non-bulk packages for domestic ground transportation may be reclassified as non-regulated in accordance to 49 CFR 173.150, Exemptions for Class 3 (flammable and combustible liquids).

**U.S.A DOT (Bulk)**

**Proper Shipping Name:** Flammable liquid, n.o.s. (Dimethyl Sulfoxide)  
**Hazard Class:** 3  
**UN/NA:** 1993  
**Packing Group:** III  
**NAERG:** Guide #128  
**Packaging Authorization:** Non-Bulk: 49 CFR 173.203; Bulk: 173.242  
**Packaging Exceptions:** 49 CFR 173.150

**IMO/IMDG**

**Proper Shipping Name:** Flammable liquid, n.o.s. (Dimethyl Sulfoxide)  
**Hazard Class:** 3  
**UN/NA:** 1993  
**Packing Group:** III  
**Marine Pollutant:** No  
**EMS Number:** F-E, S-E

**ICAO/IATA**

**Proper Shipping Name:** Flammable liquid, n.o.s. (Dimethyl Sulfoxide)  
**Hazard Class:** 3  
**UN/NA:** 1993  
**Packing Group:** III

**RID/ADR**

**Proper Shipping Name:** Flammable liquid, n.o.s. (Dimethyl Sulfoxide)  
**Hazard Class:** 3  
**UN/NA:** 1993  
**Packing Group:** III

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| <b>SECTION 15 - REGULATORY INFORMATION</b> |
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**15.1 Safety, health and environmental regulations/legislation specific for substance or mixture****U. S. Federal Regulations**

**OSHA Hazard Communication Standard:** This material is classified as hazardous in accordance with OSHA 29 CFR 1910-1200.

**TSCA Status:** The components of this product are listed on the TSCA Inventory. It is not subject to TSCA 12(b) Export Notification.

**Superfund Amendments and Reauthorization Act (SARA)**

**SARA Section 311/312 Hazard Categories:** Acute Health Hazard, Fire Hazard

**SARA 313 Information:** None of the components in this product are subject to reporting requirements of Section 313 of the Emergency Planning and Community Right-to Know Act of 1986.

**SARA 302/304 Extremely Hazardous Substance:** None of the components of the product exceed the threshold (de minimis) reporting levels established by of these sections of Title III of SARA.

**SARA 302/304 Emergency Planning & Notification:** None of the components of the product exceed the threshold (de minimis) reporting levels established by of these sections of Title III of SARA.

**Comprehensive Response Compensation and Liability Act (CERCLA):** This product contains the following CERCLA reportable chemical(s): Formic Acid (CAS #64-18-6), RQ - 2,268 kg (5,000 lbs)

**Clean Air Act (CAA)**

This product does not contain any chemicals that are listed as Hazardous Air Pollutants (HAPs) designated in CAA Section 112 (b).

This product does not contain any Class 1 Ozone depleters.

This product does not contain any Class 2 Ozone depleters.

**Clean Water Act (CWA)**

Formic Acid (CAS #64-18-6) is listed as a Hazardous Substance under the CWA.

None of the chemicals in this product are listed as Priority Pollutants under the CWA.

None of the chemicals in this product are listed as Toxic Pollutants under the CWA.

**U.S. State Regulations****California Prop 65, Safe Drinking Water and Toxic Enforcement Act of 1986**

This product contains no chemical(s) known to the State of California to cause cancer, birth defects or other reproductive harm.

**Other U.S. State Inventories**

Dimethyl Sulfoxide (CAS #67-68-5) is listed on the following State Hazardous Substance Inventories, Right-to-Know lists and/or Air Quality/Air Pollutants List(s): NJ.

Formic Acid (CAS #64-18-6) is listed on the following State Hazardous Substance Inventories, Right-to-Know lists and/or Air Quality/Air Pollutants lists: CA, ID, NE, MA, MN, NJ, NY, PA, WA, WI.

**Canada****WHMIS Hazard Symbol and Classification**

B3 - Flammable liquids with flash points greater than 38 °C (100 °F) but inferior to 93 °C (199.4 °F)

**Canadian National Pollutant Release Inventory (NPRI):** None of the ingredients in this product are listed on the NPRI.

**European Economic Community****Labeling (67/548/EEC or 1999/45/EC)**

Xi - Irritant

**Risk Phrases:** R36/38 - Irritating to eyes and skin.

**Safety Phrases:** S2 - Keep out of the reach of children.

S24 - Avoid contact with skin.

S26 - In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S36/37/39 - Wear suitable protective clothing, gloves and eye/face protection.

**WGK, Germany (Water danger/protection):** 1

**GlobalChemical Inventory Lists**

| Country        | Inventory Name   | Inventory Listing* |
|----------------|--|--------------------|
| Canada:        | Domestic Substance List (DSL).                                     | Yes                |
| Canada:        | Non-Domestic Substance List (NDSL).                                | No                 |
| Europe:        | Inventory of New and Existing Chemicals (EINECS)                   | No                 |
| United States: | Toxic Substance Control Act (TSCA)                                 | Yes                |
| Australia:     | Australian Inventory of Chemical Substances (AICS)                 | Yes                |
| New Zealand:   | New Zealand Inventory of Chemicals (NZIoC)                         | Yes                |
| China:         | Inventory of Existing Chemical Substances in China (IECSC)         | Yes                |
| Japan:         | Inventory of Existing and New Chemical Substances (ENCS)           | No                 |
| Korea:         | Existing Chemicals List (ECL)                                      | Yes                |
| Philippines:   | Philippines Inventory of Chemicals and Chemical Substances (PICCS) | No                 |

\*Yes - All components of this product are in compliance with the inventory requirements administered by the governing country.

No - One or more components of this product are not on the inventory and are not exempt from listing.

**SECTION 16 - OTHER INFORMATION**

**Hazardous Material Information System (HMIS)**

|                     |   |
|---------------------|---|
| Health              | 2 |
| Flammability        | 2 |
| Physical Hazard     | 0 |
| Personal Protection | C |

**HMIS and NFPA Hazard Rating Legend**

\* = Chronic Health Hazard

0 = INSIGNIFICANT

1 = SLIGHT

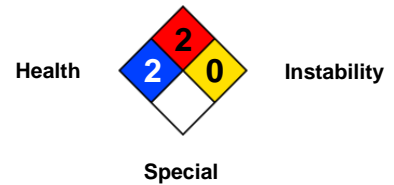
2 = MODERATE

3 = HIGH

4 = EXTREME

**National Fire Protection Association (NFPA)**

**Flammability**



**Full Text of Risk (R) – Phrases Referenced in Section 3.**

H314 - Causes severe skin burns and eye damage

The information herein is given in good faith and is believed to be accurate and correct; however, no warranty, expressed or implied, is made. Seal 'n Lock System Corp. assumes no responsibility for personal injury or property damage that may arise from the use of this material since the conditions of handling and use are beyond our control. It is the responsibility of the user to comply with all Federal, State and local laws and regulations regarding use of this product. Vendees or users assume all risks associated with the use of this material.

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