1. PRODUCT & COMPANY IDENTIFICATION

1.1 Product Name: DEOXIT® Shield S-SERIES Pen, (P/N S100P), 6 mL, 100% Solution, 0% VOC

1.2 Chemical Name: NA

1.3 Synonyms: DeoxIT® Shield S-Series; PN S100P

1.4 Trade Names: DeoxIT® Shield S100L

1.5 Product Uses & Restrictions: Lubricant and Protectant for electronic contacts & connectors

1.6 Distributor’s Name: CAIG Laboratories, Inc.

1.7 Distributor’s Address: 12200 Thatcher Court, Poway, CA 92064-6876 USA

1.8 Emergency Phone: CHEMTREC: +1 (703) 527-3887 / +1 (800) 424-9300 (CCN XXXXX)

1.9 Business Phone / Fax: +1 (800) 224-4123

2. HAZARDS IDENTIFICATION

2.1 Hazard Identification: This product is classified as a HAZARDOUS SUBSTANCE but NOT as DANGEROUS GOODS according to the classification criteria of NOHSC: 1088 (2004) and ADG Code (Australia). DeoxIT®, 100% solution is non-volatile, non-hazardous and non-flammable. WARNING! CAUSES EYE IRRITATION.

Classification: Eye Irritant 2;

Hazard Statements (H): H220 – Causes eye irritation.


3. COMPOSITION & INGREDIENT INFORMATION

<table>
<thead>
<tr>
<th>CHEMICAL NAME(S)</th>
<th>CAS No.</th>
<th>RTECS No.</th>
<th>EINECS No.</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>PROPRIETARY MIXTURE</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
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</table>

<table>
<thead>
<tr>
<th>EXPOSURE LIMITS IN AIR (mg/m³)</th>
<th>ACGIH</th>
<th>NOHSC</th>
<th>OSHA</th>
</tr>
</thead>
<tbody>
<tr>
<td>ppm</td>
<td>ppm</td>
<td>ppm</td>
<td>ppm</td>
</tr>
<tr>
<td>TLV</td>
<td>STEL</td>
<td>ES-TWA</td>
<td>ES-STEL</td>
</tr>
<tr>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
</tr>
</tbody>
</table>

4. FIRST AID MEASURES

4.1 First Aid:

Ingestion: If ingested, do not induce vomiting. If product has been swallowed, drink plenty of water or milk IMMEDIATELY. If the patient is vomiting, continue to offer water or milk. Never give water or milk to an unconscious person. Contact the nearest Poison Control Center or local emergency number. Provide an estimate of the time at which the material was ingested and the amount of the substance that was swallowed.

Eyes: Splashes are not likely; however, if product gets in the eyes, flush with copious amounts of lukewarm water for at least 15 minutes lifting upper and lower lids, occasionally.

Skin: Wash thoroughly with soap and water. In case of contact, immediately flush skin with plenty of water for at least 15 minutes.

Inhalation: Remove victim to fresh air at once. If breathing difficult, administer oxygen. If breathing stops give artificial respiration. Keep person warm, quiet and get medical attention.

4.2 Effects of Exposure:

Ingestion: If product is swallowed, may cause nausea, vomiting and/or diarrhea.

Eyes: Moderately irritating to the eyes. Symptoms of overexposure may include redness, itching, irritation and watering.

Skin: May be irritating to skin. The product can cause allergic skin reactions (e.g., rashes, welts, dermatitis) in some sensitive individuals.

Inhalation: None expected.

4.3 Symptoms of Overexposure:

Ingestion: Nausea, intestinal discomfort, vomiting and/or diarrhea.

Eyes: Overexposure in eyes may cause redness, itching and watering.

Skin: Symptoms of skin overexposure may include redness, itching, and irritation of affected areas. Frostbite like symptoms. The product can cause allergic skin reactions (e.g., rashes, welts, dermatitis) in some individuals.

4.4 Acute Health Effects: Non-irritating when used as directed. Moderate irritation to eyes and skin near affected areas. Additionally, high concentrations of vapors can cause drowsiness, dizziness, headaches and nausea.

4.5 Chronic Health Effects: Non-irritating when used as directed. Overexposure may trigger asthma-like symptoms in some sensitive individuals. May also induce skin sensitization and respiratory hypersensitivity. Possible allergic dermatitis.

4.6 Target Organs: Eyes, Skin.
### 4. FIRST AID MEASURES – cont’d

**Eye Protection:** Avoid eye contact. None required under normal conditions of use. Safety glasses could be used when handling or using large quantities of this product.

### 5. FIREFIGHTING MEASURES

**Fire & Explosion Hazards:**

- This product is not flammable. However, if involved in a fire, this product may decompose at high temperatures to form toxic gases (e.g., CO, CO₂).

**Extinguishing Methods:**

- Water. Foam. CO₂. Dry Chemical. Use water spray to cool unopened containers.

**Firefighting Procedures:**

- Fight fires as for surrounding materials. As in any fire, wear MSHA/NIOSH approved self-contained breathing apparatus (pressure-demand) and full protective gear. Keep containers cool until well after the fire is out. Use water spray to cool fire-exposed surfaces and to protect personal. Fight fire upwind. Avoid spraying water directly into storage containers because of danger of boil-over. Prevent runoff from fire control or dilution from entering sewers, drains, drinking water supply, or any natural waterway. Firefighters must use full bunker gear including NIOSH-approved positive pressure self-contained breathing apparatus to protect against potential hazardous combustion or decomposition products and oxygen deficiencies.

### 6. ACCIDENTAL RELEASE MEASURES

**Spills:**

- Before cleaning any spill or leak, individuals involved in spill cleanup must wear appropriate Personal Protective Equipment. Plastic or rubber gloves, respirator, eye protection and apron may be required for clean-up of large spills. Small Spills: Wear appropriate protective equipment including gloves and protective eyewear. Use a non-combustible material such as vermiculite or sand to soak up the product and place into a container for later disposal. Do not use water or a material such as “speedy dry” to soak up material. Sweep up material using non-sparking materials (e.g., plastic brooms, shovels, dustpans) and place into a plastic container or plastic liner within another container. Large Spills: Keep incompatible materials (e.g., organics such as oil) away from spill. Stay upwind and away from spill or release. Isolate immediate hazard area and keep unauthorized personnel out of area. Stop spill or release if it can be done with minimal risk. Wear appropriate protective equipment including respiratory protection as conditions warrant.

**Work & Hygiene Practices:**

- Do not eat, drink or smoke when handling this product. Contents under pressure. Handle as to avoid puncturing container(s). When used as intended, no additional protective equipment is necessary. Use chemical goggles if eye contact is possible. Wash unintentional residues with soap and warm water.

**Storage & Handling:**

- Use and store in a cool, dry, well-ventilated location (e.g., local exhaust ventilation, fans) away from heat and direct sunlight. Avoid temperatures above 120 °F. Keep away from incompatible substances. Protect containers from physical damage. To avoid unintentional spraying keep cap in place when not in use.

**Special Precautions:**

- Clean all spills promptly. Spilled material may present a slipping hazard.

### 7. HANDLING & STORAGE INFORMATION

**Ventilation & Engineering Controls:**

- General mechanical (e.g., fans) or natural ventilation is sufficient when this product is in use. Use local or general exhaust ventilation to effectively remove and prevent buildup of vapors or mist generated from the handling of this product. Ensure appropriate decontamination equipment is available (e.g., sink, safety shower, eye-wash station).

**Respiratory Protection:**

- No special respiratory protection is required under typical circumstances of use or handling. In instances where dusts of this product are generated, and respiratory protection is needed, use only protection authorized by 29 CFR §1910.134, applicable U.S. State regulations, or the Canadian CAS Standard Z94.4-93 and applicable standards of Canadian Provinces, EC member States, or Australia.

**Eye Protection:**

- Avoid eye contact. None required under normal conditions of use. Safety glasses could be used when handling or using large quantities of this product.

**Hand Protection:**

- None required under normal conditions of use. However, may cause skin irritation in some sensitive individuals. When handling large quantities (e.g., ≥ 1 gallon (3.8 L)), wear rubber, nitrile or impervious plastic gloves.

**Body Protection:**

- No apron required when handling small quantities. When handling large quantities (e.g., ≥ 5 lbs), eye wash stations and deluge showers should be available. Upon completion of work activities involving large quantities of this product, wash any exposed areas thoroughly with soap and water.

### 8. EXPOSURE CONTROLS & PERSONAL PROTECTION

<table>
<thead>
<tr>
<th>CHEMICAL NAME(S)</th>
<th>ACGIH</th>
<th>NIOSH</th>
<th>OSHA</th>
<th>OTHER</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>TLV</td>
<td>STEL</td>
<td>ES-TWA</td>
<td>ES-STEL</td>
</tr>
<tr>
<td></td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
</tr>
</tbody>
</table>

**Exposure Limits:**

- ppm (mg/m³)

<table>
<thead>
<tr>
<th>Exposure Limits</th>
<th>ppm (mg/m³)</th>
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</table>

**Ventilation & Engineering Controls:**

- General mechanical (e.g., fans) or natural ventilation is sufficient when this product is in use. Use local or general exhaust ventilation to effectively remove and prevent buildup of vapors or mist generated from the handling of this product. Ensure appropriate decontamination equipment is available (e.g., sink, safety shower, eye-wash station).
9. PHYSICAL & CHEMICAL PROPERTIES

9.1 Appearance: Light blue
9.2 Odor: Ethereal / hydrocarbon odor
9.3 Odor Threshold: NA
9.4 pH: NA
9.5 Melting Point/Freezing Point: NA
9.6 Initial Boiling Point/Boiling Range: >220 ºC (428 ºF)
9.7 Flashpoint: >250 ºC (482 ºF)
9.8 Upper/Lower Flammability Limits: NA
9.9 Vapor Pressure: < 0.1 mm Hg @ 20 ºC (68 ºF)
9.10 Vapor Density: NA
9.11 Relative Density: 0.72
9.12 Solubility: Soluble
9.13 Partition Coefficient (log P): NA
9.14 Autoignition Temperature: NA
9.15 Decomposition Temperature: NA
9.16 Viscosity: 5.4-7.5 cSt @ 104 ºF
9.17 Other Information: NA

10. STABILITY & REACTIVITY

10.1 Stability: Stable under normal conditions; unstable with heat or contamination.
10.2 Hazardous Decomposition Products: Oxides of carbon (CO, CO2).
10.3 Hazardous Polymerization: Will not occur.
10.4 Conditions to Avoid: Open flames, sparks, high heat, incompatible substances and direct sunlight.
10.5 Incompatible Substances: Avoid extreme heat and ignition sources. Store away from oxidizers.

11. TOXICOLOGICAL INFORMATION

11.1 Routes of Entry: Inhalation: YES Absorption: YES Ingestion: YES
11.2 Toxicity Data: This product has NOT been tested on animals to obtain toxicity data. Toxicology data, found in scientific literature, is available for some of the components of the product and is not presented in this document.
11.3 Acute Toxicity: Moderate irritation to eyes and skin near affected areas.
11.4 Chronic Toxicity: This material may aggravate any pre-existing skin condition (e.g., dermatitis).
11.5 Suspected Carcinogen: No.
11.6 Reproductive Toxicity: This product is not reported to produce reproductive toxicity in humans.
11.7 Mutagenicity: This product is not reported to produce mutagenic effects in humans.
11.8 Embryotoxicity: This product is not reported to produce embryotoxic effects in humans.
11.9 Teratogenicity: This product is not reported to cause teratogenic effects in humans.
11.10 Reproductive Toxicity: This product is not reported to cause reproductive effects in humans.
11.11 Irritancy of Product: The product can cause allergic skin reactions (e.g., rashes, welts, dermatitis) upon prolonged or repeated exposure.
11.12 Biological Exposure Indices: NE
11.13 Physician Recommendations: Treat symptomatically.

12. ECOLOGICAL INFORMATION

12.1 Environmental Stability: There is no specific data available for this product.
12.2 Effects on Plants & Animals: There are no specific data available for this product.
12.3 Effects on Aquatic Life: There are no specific data available for this product; however, very large releases of this product may be harmful or fatal to overexposed aquatic life.

13. DISPOSAL CONSIDERATIONS

13.1 Waste Disposal: Products covered by this MSDS, in their original form, when disposed as waste, are considered non hazardous waste according to Federal RCRA regulations (40 CFR 261). Disposal should be in accordance with local, state and federal regulations. Dispose of in accordance with federal, state and local regulations.
13.2 Special Considerations: NA
## 14. TRANSPORTATION INFORMATION

The basic description (ID Number, proper shipping name, hazard class & division, packing group) is shown for each mode of transportation. Additional descriptive information may be required by 49 CFR, IATA/ICAO, IMDG and the CTDGR.

<table>
<thead>
<tr>
<th>Mode</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>49 CFR (GND)</td>
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<tr>
<td>IATA (AIR)</td>
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</tr>
<tr>
<td>IMDG (OCN)</td>
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<tr>
<td>TDGR (Canadian GND)</td>
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<tr>
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<tr>
<td>SCT (MEXICO)</td>
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</tr>
<tr>
<td>ADGR (AUS)</td>
<td>NOT REGULATED</td>
</tr>
</tbody>
</table>

## 15. REGULATORY INFORMATION

### 15.1 SARA Reporting Requirements:

This product does not contain any substances subject to SARA Title III, section 313 reporting requirements.

### 15.2 SARA Threshold Planning Quantity:

There are no specific Threshold Planning Quantities for the components of this product.

### 15.3 TSCA Inventory Status:

The components of this product are listed on the TSCA Inventory.

### 15.4 CERCLA Reportable Quantity (RQ):

NA

### 15.5 Other Federal Requirements:

This product complies with the appropriate sections of the Food and Drug Administration’s 21 CFR Subchapter G, (Cosmetics).

### 15.6 Other Canadian Regulations:

- This product has been classified according to the hazard criteria of the Controlled Products Regulations (CPR) and the SDS contains all of the information required by the CPR. The components of this product are listed on the DSL/NDSL. None of the components of this product are listed on the Priorities Substances List.

### 15.7 State Regulatory Information:

No ingredients in this product, present in a concentration of 1.0% or greater, are listed on any of the following state criteria lists: California Proposition 65 (CA65), Delaware Air Quality Management List (DE), Florida Toxic Substances List (FL), Massachusetts Hazardous Substances List (MA), Michigan Critical Substances List (MI), Minnesota Hazardous Substances List (MN), New Jersey Right-to-Know List (NJ), New York Hazardous Substances List (NY), Pennsylvania Right-to-Know List (PA), Washington Permissible Exposures List (WA), Wisconsin Hazardous Substances List (WI).

### 15.8 Other Requirements:

The primary components of this product are not listed in Annex I of EU Directive 67/548/EEC:

- **Irritant (Xi)**

  **Risk Phrases:** (R) 36 – Irritating to eyes. **Safety Phrases:** (S) 2-25-45 – Keep out of reach of children. Avoid contact with eyes. In case of accident or if you feel unwell seek medical advice immediately (show the label where possible).

## 16. OTHER INFORMATION

### 16.1 Other Information:

**WARNING! CAUSES EYE IRRITATION.** Use only as directed. Keep out of reach of children. Avoid contact with eyes. In case of accident or if you feel unwell seek medical advice immediately (show the label where possible). If skin irritation occurs: get medical advice/attention. KEEP LOCKED UP AND OUT OF REACH OF CHILDREN.

### 16.2 Terms & Definitions:

See last page of this Safety Data Sheet.

### 16.3 Disclaimer:

This Safety Data Sheet is offered pursuant to OSHA’s Hazard Communication Standard, 29 CFR §1910.1200. Other government regulations must be reviewed for applicability to this product. To the best of ShipMate & CAIG Laboratories, Inc.’s knowledge, the information contained herein is reliable and accurate as of this date; however, accuracy, suitability or completeness is not guaranteed and no warranties of any type, either expressed or implied, are provided. The information contained herein relates only to the specific product(s). If this product(s) is combined with other materials, all component properties must be considered. Data may be changed from time to time. Be sure to consult the latest edition.

### 16.4 Prepared for:

**CAIG Laboratories, Inc.**

12200 Thatcher Court
Powyay, CA 92084-6876
Tel: +1 (800) CAIG-123 (244-4123)
Fax: +1 (858) 486-8398 fax
http://www.caig.com/

### 16.5 Prepared by:

**ShipMate, Inc.**

P.O. Box 787
Sisters, Oregon 97759-0787 USA
Tel: +1 (310) 370-3600
Fax: +1 (310) 370-5700
http://www.shipmate.com
SAFETY DATA SHEET

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SDS-E-S100P

Prepared to OSHA, ACC, ANSI, NOHSC, WHMIS, 2001/58 & 1272/2008/EC Standards

SDS Revision: 4.0
SDS Revision Date: 1/26/2015

DEFINITION OF TERMS

A large number of abbreviations and acronyms appear on a SDS. Some of these that are commonly used include the following:

GENERAL INFORMATION:

CAS No. Chemical Abstract Service Number

EXPOSURE LIMITS IN AIR:

ACGIH American Conference on Governmental Industrial Hygienists
C Ceiling Limit
ES Exposure Standard (Australia)
IDLH Immediately Dangerous to Life and Health
OSHA U.S. Occupational Safety and Health Administration
PEL Permissible Exposure Limit
STEL Short-Term Exposure Limit
TLV Threshold Limit Value
TWA Time Weighted Average

FIRST AID MEASURES:

CPR Cardiopulmonary resuscitation - method in which a person whose heart has stopped receives manual chest compressions and breathing to circulate blood and provide oxygen to the body.

PERSONAL PROTECTION RATINGS:

A Airline Hood/Mask
B Dust Respirator
C Synthetic Apron
D Full Face Respirator
E Dust & Vapor Half-Mask Respirator
F Self-Contained Breathing Apparatus
G Safety Glasses
H Splash Goggles
I Face Shield & Protective Eyewear
J Protective Clothing & Full Suit
K Gloves
L Airline Hood/Mask or SCBA

PERSONAL PROTECTION RATINGS:

A G
B H
C I
D J
E K
F L
X Consult your supervisor or SOPs for special handling directions.

OTHER STANDARD ABBREVIATIONS:

ML Maximum Limit
mg/mL milligrams per cubic meter
NA Not Available
ND Not Determined
NE Not Established
NF Not Found
NR No Results
ppm parts per million
SCBA Self-Contained Breathing Apparatus

FLAMMABILITY LIMITS IN AIR:

Autoignition Temperature Minimum temperature required to initiate combustion in air with no other source of ignition
LEL Lower Explosive Limit - lowest percent of vapor in air, by volume, that will explode or ignite in the presence of an ignition source
UEL Upper Explosive Limit - highest percent of vapor in air, by volume, that will explode or ignite in the presence of an ignition source

HAZARD RATINGS:

0 Minimal Hazard
1 Slight Hazard
2 Moderate Hazard
3 Severe Hazard
4 Extreme Hazard

ACID Acidic
ALK Alkaline
COR Corrosive
I Use No Water
OX Oxidizer
TREFOIL Radioactive

TOXICOLOGICAL INFORMATION:

LD0 Lethal Dose (solids & liquids) which kills 50% of the exposed animals
LC0 Lethal concentration (gases) which kills 50% of the exposed animal
ppm Concentration expressed in parts of material per million parts
TCL0 Lowest concentration to cause a symptom
TCL1 Lowest concentration to cause a toxic effect
CLL Lowest dose (concentration) to cause lethal or toxic effects
IDLH Immediately Dangerous to Life and Health
IARC International Agency for Research on Cancer
NTP National Toxicology Program
RTECS Registry of Toxic Effects of Chemical Substances
BCF Bioconcentration Factor
TDL0 Median threshold limit
log Kow or log Koc Coefficient of Oil/Water Distribution

REGULATORY INFORMATION:

WHMIS Canadian Workplace Hazardous Material Information System
DOT U.S. Department of Transportation
TC Transport Canada
EPA U.S. Environmental Protection Agency
DSL Canadian Domestic Substance List
NOSHC National Occupational Health and Safety Commission (Australia)
NDSEL Canadian Non-Domestic Substance List
PSL Canadian Priority Substances List
TSCA U.S. Toxic Substance Control Act
WGK Wassergängigkeitsklassen (German Water Hazard Class)

WORKPLACE HAZARDOUS MATERIALS IDENTIFICATION (WHMIS) SYSTEM:

Compressed Flammable Oxidizing Toxic Irritation Infectious Corrosive Reactive

EC (67/548/EEC) INFORMATION:

C E F N O T Xi Xo

Concise Explosive Flammable Harmful Oxidizing Toxic Irritant Harmful

CLP/GHS (1272/2008/EC) PICTOGRAMS:

GHS01 GHS02 GHS03 GHS04 GHS05 GHS06 GHS07 GHS08 GHS09

Explosive Flammable Oxidizer Pressurized Corrosive Toxic Harmful Irritating Health Hazard Environment