1. PRODUCT AND COMPANY IDENTIFICATION

Product name: BONDERITE S-FN T-502 GRAPHITE LUBRICANT ACHESON known as DAGT-502
IDH number: 1224804

Product type: Coating
Restriction of Use: None identified
Region: United States
Company address: Henkel Corporation
One Henkel Way
Rocky Hill, Connecticut 06067

Contact information:
Telephone: (860) 571-5100
MEDICAL EMERGENCY Phone: Poison Control Center 1-877-671-4608 (toll free) or 1-303-592-1711
TRANSPORT EMERGENCY Phone: CHEMTREC 1-800-424-9300 (toll free) or 1-703-527-3887
Internet: www.henkelna.com

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW
DANGER: HIGHLY FLAMMABLE LIQUID AND VAPOR. CAUSES SKIN IRRITATION. CAUSES SERIOUS EYE IRRITATION. MAY CAUSE DROWSINESS OR DIZZINESS.

HAZARD CLASS | HAZARD CATEGORY
--- | ---
FLAMMABLE LIQUID | 2
SKIN IRRITATION | 2
EYE IRRITATION | 2A
SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE | 3

PICTOGRAM(S)

Precautionary Statements

Prevention: Keep away from heat, sparks, open flames, hot surfaces - no smoking. Keep container tightly closed. No release into water. Use explosion-proof equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Avoid breathing vapors, mist, or spray. Wash thoroughly after handling. Use only outdoors or in a well-ventilated area. Wear protective gloves, eye protection, and face protection.

Response: If on skin (or hair): Take off immediately all contaminated clothing. IF INHALED: Remove person to fresh air and keep comfortable for breathing. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to remove. Continue rinsing. Call a poison control center or physician if you feel unwell. If skin irritation occurs: Get medical attention. If eye irritation persists: Get medical attention. Take off contaminated clothing. In case of fire: Use foam, dry chemical or carbon dioxide to extinguish.


Disposal: Dispose of contents and/or container according to Federal, State/Provincial and local governmental regulations.

See Section 11 for additional toxicological information.

### 3. COMPOSITION / INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Hazardous Component(s)</th>
<th>CAS Number</th>
<th>Percentage*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methyl ethyl ketone</td>
<td>78-93-3</td>
<td>60 - 100</td>
</tr>
<tr>
<td>Carbon black</td>
<td>1333-86-4</td>
<td>1 - 5</td>
</tr>
<tr>
<td>Graphite</td>
<td>7782-42-5</td>
<td>1 - 5</td>
</tr>
</tbody>
</table>

* Exact percentage is a trade secret. Concentration range is provided to assist users in providing appropriate protections.

### 4. FIRST AID MEASURES

**Inhalation:**
Move to fresh air. If symptoms persist, seek medical advice.

**Skin contact:**
Immediately flush with large quantities of water for at least 15 minutes. Remove contaminated clothing. GET MEDICAL ATTENTION.

**Eye contact:**
Immediately flush eyes with water for at least 15 minutes, while holding eyelids open. Seek medical attention at once.

**Ingestion:**
Immediate medical treatment necessary. DO NOT induce vomiting unless directed to do so by medical personnel. If vomiting occurs, prevent aspiration by keeping the patient’s head below the knees.

**Symptoms:**
See Section 11.

### 5. FIRE FIGHTING MEASURES

**Extinguishing media:**
Water spray (fog), foam, dry chemical or carbon dioxide. Avoid using a direct stream of water.

**Special firefighting procedures:**
Wear self-contained breathing apparatus and full protective clothing, such as turn-out gear.

**Unusual fire or explosion hazards:**
DANGEROUS when exposed to heat or flame. This material can be ignited by flame or spark under all normal atmospheric conditions. Formation of toxic gases is possible during heating or in fires.

**Hazardous combustion products:**
Oxides of carbon. Irritating and toxic gases or fumes may be released during a fire.

### 6. ACCIDENTAL RELEASE MEASURES

Use personal protection recommended in Section 8, isolate the hazard area and deny entry to unnecessary and unprotected personnel.

**Environmental precautions:**
Prevent further leakage or spillage if safe to do so. Block any potential routes to water systems. Remove all sources of ignition.

**Clean-up methods:**
Soak up with inert absorbent. Store in a closed container until ready for disposal. Remove all sources of ignition. Ventilate area.
### 7. HANDLING AND STORAGE

Handling:

Use only in well-ventilated areas. Do not inhale vapors and fumes. Wear suitable protective clothing, safety glasses and gloves. Remove all sources of ignition. Do not pressurize, cut, heat or weld containers. Empty product containers may contain product residue. Do not reuse empty containers. Make sure containers are properly grounded before use or transfer of material. Open bung slowly to relieve any internal pressure.

Storage:

For safe storage, store between 0 °C (32°F) and 32 °C (89.6 °F) Protect from direct sunlight. Keep in a cool, well ventilated area away from heat, sparks and open flame. Keep container tightly closed until ready for use. Ground and bond metal containers for liquid transfer to avoid static sparks.

For information on product shelf life, please review labels on container or check the Technical Data Sheet.

### 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Employers should complete an assessment of all workplaces to determine the need for, and selection of, proper exposure controls and protective equipment for each task performed.

<table>
<thead>
<tr>
<th>Hazardous Component(s)</th>
<th>ACGIH TLV</th>
<th>OSHA PEL</th>
<th>AIHA WEEL</th>
<th>OTHER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methyl ethyl ketone</td>
<td>200 ppm TWA 300 ppm STEL</td>
<td>200 ppm (590 mg/m3) PEL</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Carbon black</td>
<td>3 mg/m3 TWA Inhalable fraction.</td>
<td>3.5 mg/m3 PEL</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Graphite</td>
<td>2 mg/m3 TWA Respirable fraction.</td>
<td>5 mg/m3 PEL Respirable fraction. 15 mg/m3 PEL Total dust. 15 MPPCF TWA</td>
<td>None</td>
<td>None</td>
</tr>
</tbody>
</table>

**Engineering controls:**

Use explosion-proof mechanical ventilation and local exhaust to control contaminants to within their occupational exposure limits during the use of this product.

**Respiratory protection:**

If airborne concentrations are above the applicable exposure limits, use NIOSH approved respiratory protection.

**Eye/face protection:**

Wear safety glasses; chemical goggles (if splashing is possible).

**Skin protection:**

Chemical resistant, impermeable gloves. The use of butyl rubber gloves is recommended. Use of impervious apron and boots are recommended.

### 9. PHYSICAL AND CHEMICAL PROPERTIES

- **Physical state:** Liquid
- **Color:** Black
- **Odor:** Ketone
- **Odor threshold:** Not available.
- **pH:** Not applicable
- **Vapor pressure:** 70 mm hg
- **Boiling point/ range:** 80 °C (176°F)
- **Melting point/ range:** -61.1 °C (-124°F)
- **Specific gravity:** 0.869
- **Vapor density:** Not available.
- **Flash point:** -6 °C (23°F) Tagliabue closed cup
- **Flammable/Explosive limits - lower:** Not available.
- **Flammable/Explosive limits - upper:** 10 %
- **Autoignition temperature:** Not available.
- **Evaporation rate:** Not available.
- **Solubility in water:** Insoluble
- **Partition coefficient (n-octanol/water):** Not available.
- **VOC content:** 755 g/l
Viscosity: 400 - 800 mPa.s
Decomposition temperature: Not available.

10. STABILITY AND REACTIVITY

Stability: Stable at normal conditions.
Hazardous reactions: None under normal processing.
Hazardous decomposition products: Oxides of carbon. Irritating and/or toxic fumes and gases may be emitted upon the product's decomposition.
Incompatible materials: Oxidizers.
Reactivity: Not available.
Conditions to avoid: High temperatures. Avoid strong oxidizing agents.

11. TOXICOLOGICAL INFORMATION

Relevant routes of exposure: Skin, Inhalation, Eyes

Potential Health Effects/Symptoms

Inhalation: This product is irritating to the respiratory system. High vapor concentrations may cause central nervous system depression (headache, nausea, dizziness).
Skin contact: Irritating to skin. Prolonged or repeated contact may worsen irritation. A component in this product may be absorbed through the skin, especially if skin is damaged.
Eye contact: This product may be severely irritating to the eyes.
Ingestion: Harmful if swallowed. Ingestion can cause gastrointestinal irritation, nausea, vomiting and diarrhea. Small amounts of this product, if aspirated into the lungs, may cause mild to severe pulmonary injury. This product may cause nervous system damage if swallowed.

<table>
<thead>
<tr>
<th>Hazardous Component(s)</th>
<th>LD50s and LC50s</th>
<th>Immediate and Delayed Health Effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methyl ethyl ketone</td>
<td>Oral LD50 (RAT) = 2,300 - 3,500 mg/kg</td>
<td>Irritant, Central nervous system</td>
</tr>
<tr>
<td></td>
<td>Oral LD50 (RAT) = 4,500 - 6,800 mg/kg</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Dermal LD50 (RABBIT) = &gt; 8,000 mg/kg</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Inhalation LC50 (RAT, 4 h) = 11700 ppm</td>
<td></td>
</tr>
<tr>
<td>Carbon black</td>
<td>Oral LD50 (RAT) = &gt; 8,000 mg/kg</td>
<td>Respiratory, Some evidence of carcinogenicity</td>
</tr>
<tr>
<td>Graphite</td>
<td>None</td>
<td>Lung</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Hazardous Component(s)</th>
<th>NTP Carcinogen</th>
<th>IARC Carcinogen</th>
<th>OSHA Carcinogen (Specifically Regulated)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methyl ethyl ketone</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Carbon black</td>
<td>No</td>
<td>Group 2B</td>
<td>No</td>
</tr>
<tr>
<td>Graphite</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

12. ECOLOGICAL INFORMATION

Ecological information: Not available.
13. DISPOSAL CONSIDERATIONS

Information provided is for unused product only.

Recommended method of disposal: Dispose of according to Federal, State and local governmental regulations.

Hazardous waste number: Wastes must be tested using methods described in 40 CFR Part 261 to determine if it meets applicable definitions of hazardous wastes. If discarded, this product is considered a RCRA ignitable waste, D001.

14. TRANSPORT INFORMATION

The transport information provided in this section only applies to the material/formulation itself, and is not specific to any package/configuration.

U.S. Department of Transportation Ground (49 CFR)
- Proper shipping name: Ethyl methyl ketone
- Hazard class or division: 3
- Identification number: UN 1193
- Packing group: II
- DOT Hazardous Substance(s): Methyl ethyl ketone

International Air Transportation (ICAO/IATA)
- Proper shipping name: Ethyl methyl ketone
- Hazard class or division: 3
- Identification number: UN 1193
- Packing group: II

Water Transportation (IMO/IMDG)
- Proper shipping name: ETHYL METHYL KETONE
- Hazard class or division: 3
- Identification number: UN 1193
- Packing group: II

15. REGULATORY INFORMATION

United States Regulatory Information

TSCA 8 (b) Inventory Status: All components are listed or are exempt from listing on the Toxic Substances Control Act Inventory.

TSCA 12 (b) Export Notification: Polymer (CAS# 25190-89-0).

CERCLA/SARA Section 302 EHS: None above reporting de minimis
CERCLA/SARA Section 311/312: Immediate Health, Fire, Delayed Health
CERCLA/SARA Section 313: This product contains the following toxic chemicals subject to the reporting requirements of section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 (40 CFR 372). Methyl ethyl ketone (CAS# 78-93-3), 5,000 lbs. (2,270 kg).

CERCLA Reportable quantity: Methyl ethyl ketone (CAS# 78-93-3) 5,000 lbs. (2,270 kg)

California Proposition 65: This product contains a chemical known in the State of California to cause cancer.

Canada Regulatory Information

CEPA DSL/NDSL Status: All components are listed on or are exempt from listing on the Canadian Domestic Substances List.

16. OTHER INFORMATION

This safety data sheet contains changes from the previous version in sections: New Safety Data Sheet format.

Issue date: 04/15/2020
DISCLAIMER: The data contained herein are furnished for information only and are believed to be reliable. However, Henkel Corporation and its affiliates ("Henkel") does not assume responsibility for any results obtained by persons over whose methods Henkel has no control. It is the user’s responsibility to determine the suitability of Henkel’s products or any production methods mentioned herein for a particular purpose, and to adopt such precautions as may be advisable for the protection of property and persons against any hazards that may be involved in the handling and use of any Henkel’s products. In light of the foregoing, Henkel specifically disclaims all warranties, express or implied, including warranties of merchantability and fitness for a particular purpose, arising from sale or use of Henkel's products. Henkel further disclaims any liability for consequential or incidental damages of any kind, including lost profits.