



Revision Number: 002.1

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1. PRODUCT AND COMPANY IDENTIFICATION

Product name: BONDERITE S-FN T-502 GRAPHITE LUBRICANT ACHESON known as DAGT-502
Product type: Coating
Restriction of Use: None identified
Company address: Henkel Corporation
 One Henkel Way
 Rocky Hill, Connecticut 06067

IDH number: 1224804

Region: United States

Contact information:
 Telephone: +1 (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 affected area 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 victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or physician if you feel unwell. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. 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.

Storage: Store in a well-ventilated place. Keep container tightly closed. Store in a well-ventilated place. Keep cool. Store locked up.

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

Classification complies with OSHA Hazard Communication Standard (29 CFR 1910.1200) and is consistent with the provisions of the United Nations Globally Harmonized System of Classification and Labeling of Chemicals (GHS).

See Section 11 for additional toxicological information.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Hazardous Component(s)	CAS Number	Percentage*
Methyl ethyl ketone	78-93-3	80 - 90
1,1-Difluoroethylene, polymer with hexafluoropropylene and tetrafluoroethylene	25190-89-0	5 - 10
Carbon black	1333-86-4	1 - 5
Graphite	7782-42-5	1 - 5

* Exact percentages may vary or are 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. Eliminate ignition sources including sources of electrical, static or frictional sparks.
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. Ground and bond all equipment as required (when transferring products). 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.

Hazardous Component(s)	ACGIH TLV	OSHA PEL	AIHA WEEL	OTHER
Methyl ethyl ketone	200 ppm TWA 300 ppm STEL	200 ppm (590 mg/m3) PEL	None	None
1,1-Difluoroethylene, polymer with hexafluoropropylene and tetrafluoroethylene	None	None	None	None
Carbon black	3 mg/m3 TWA Inhalable fraction.	3.5 mg/m3 PEL	None	None
Graphite	2 mg/m3 TWA Respirable fraction.	5 mg/m3 PEL Respirable fraction. 15 mg/m3 PEL Total dust. 15 MPPCF TWA	None	None

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: -86.1 °C (-123°F)
Specific gravity: 0.869
Vapor density: Not available.
Flash point: -5 °C (23°F) Tagliabue closed cup
Flammable/Explosive limits - lower: Not available.
Flammable/Explosive limits - upper: 10 %
Autoignition temperature: Not available.
Flammability: Not applicable

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.

Hazardous Component(s)	LD50s and LC50s	Immediate and Delayed Health Effects
Methyl ethyl ketone	Oral LD50 (Mouse) = 670 mg/kg Oral LD50 (Rat) = 2,300 - 3,500 mg/kg Oral LD50 (Rat) = 4,500 - 6,800 mg/kg Dermal LD50 (Rabbit) = > 8,000 mg/kg Inhalation LC50 (Rat, 4 h) = 11700 ppm	Irritant, Central nervous system
1,1-Difluoroethylene, polymer with hexafluoropropylene and tetrafluoroethylene	None	No Records
Carbon black	Oral LD50 (Rat) = > 8,000 mg/kg	Respiratory, Some evidence of carcinogenicity
Graphite	None	Lung

Hazardous Component(s)	NTP Carcinogen	IARC Carcinogen	OSHA Carcinogen (Specifically Regulated)
Methyl ethyl ketone	No	No	No
1,1-Difluoroethylene, polymer with hexafluoropropylene and tetrafluoroethylene	No	No	No
Carbon black	No	Group 2B	No
Graphite	No	No	No

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).

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/NDL 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: This Safety Data Sheet contains changes from the previous version in Section(s): 3

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