



Revision Number: 002.0

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1. PRODUCT AND COMPANY IDENTIFICATION

Product name: BONDERITE S-FN 213 DRYFILM COATING ACHESON known as DAG213
Product type: Lubricant
Restriction of Use: None identified
Company address: Henkel Corporation
 One Henkel Way
 Rocky Hill, Connecticut 06067

IDH number: 1224762

Region: United States

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.
 MAY BE FATAL IF SWALLOWED AND ENTERS AIRWAYS.
 CAUSES SKIN IRRITATION.
 MAY CAUSE AN ALLERGIC SKIN REACTION.
 CAUSES SERIOUS EYE IRRITATION.
 HARMFUL IF INHALED.
 MAY CAUSE ALLERGY OR ASTHMA SYMPTOMS OR BREATHING DIFFICULTIES IF INHALED.
 MAY CAUSE DROWSINESS OR DIZZINESS.
 MAY CAUSE CANCER.

HAZARD CLASS	HAZARD CATEGORY
FLAMMABLE LIQUID	2
ACUTE TOXICITY INHALATION	4
SKIN IRRITATION	2
EYE IRRITATION	2A
RESPIRATORY SENSITIZATION	1
SKIN SENSITIZATION	1
CARCINOGENICITY	1A
SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE	3
ASPIRATION HAZARD	1

PICTOGRAM(S)



Precautionary Statements

Prevention: Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. 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. Contaminated work clothing should not be allowed out of the workplace. Wear protective gloves, eye protection, and face protection. Use personal protective equipment as required. In case of inadequate ventilation wear respiratory protection.

Response: IF SWALLOWED: Immediately call a physician or poison control center. 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. IF exposed or concerned: Get medical attention. Do NOT induce vomiting. If skin irritation or rash 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*
Toluene	108-88-3	10 - 30
Methoxypropyl acetate 2-	108-65-6	10 - 30
n-Butyl alcohol	71-36-3	10 - 30
CP Bisphenol A Diglycidylether	25036-25-3	10 - 30
Graphite	7782-42-5	5 - 10
Urea, polymer with formaldehyde, butylated	68002-19-7	5 - 10
Xylenes	1330-20-7	1 - 5
2-Butoxyethanol	111-76-2	1 - 5
Ethylbenzene	100-41-4	0.1 - 1
Formaldehyde	50-00-0	0.1 - 1

* 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 not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

Skin contact: Immediately flush skin with plenty of water (using soap, if available). Remove contaminated clothing and footwear. Wash clothing before reuse. Get medical attention.

Eye contact: Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention.

Ingestion: Get medical attention. DO NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person.

Symptoms: See Section 11.

5. FIRE FIGHTING MEASURES

Extinguishing media: Water spray (fog), foam, dry chemical or carbon dioxide.

Special firefighting procedures:	Wear self-contained breathing apparatus and full protective clothing, such as turn-out gear. In case of fire, keep containers cool with water spray.
Unusual fire or explosion hazards:	Closed containers may rupture (due to build up of pressure) when exposed to extreme heat.
Hazardous combustion products:	Carbon dioxide. Carbon monoxide. Oxides of nitrogen. Hydrogen chloride. Hazardous decomposition products include chlorine compounds.

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:	Do not allow product to enter sewer or waterways.
Clean-up methods:	Evacuate and ventilate spill area; dike spill to prevent entry into water system; wear full protective equipment during clean-up. Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Scrape up as much material as possible. Store in a partly filled, closed container until disposal. Wash spillage site thoroughly with soap and water or detergent solution.

7. HANDLING AND STORAGE

Handling:	Use only with adequate ventilation. Prevent contact with eyes, skin and clothing. Do not breathe vapor and mist. Wash thoroughly after handling. Refer to Section 8.
Storage:	For safe storage, store between 5.0 °C (41°F) and 30.0 °C (86°F) Keep container closed. Store in a cool, dry, well-ventilated area. Storage within given temperature limit Outside temperature limits, the properties of the product will change. Store in original container until ready to use. Keep out of reach of children and away from food and drink. 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.

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
Toluene	20 ppm TWA	200 ppm TWA 300 ppm Ceiling 500 ppm MAX. CONC 10 minutes	None	None
Methoxypropyl acetate 2-	None	None	50 ppm TWA	None
n-Butyl alcohol	20 ppm TWA	100 ppm (300 mg/m3) PEL	None	None
CP Bisphenol A Diglycidylether	None	None	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
Urea, polymer with formaldehyde, butylated	None	None	None	None
Xylenes	100 ppm TWA 150 ppm STEL	100 ppm (435 mg/m3) PEL	None	None
2-Butoxyethanol	20 ppm TWA	50 ppm (240 mg/m3) PEL (SKIN)	None	None
Ethylbenzene	20 ppm TWA	100 ppm (435 mg/m3) PEL	None	None
Formaldehyde	0.3 ppm Ceiling (Sensitizer.)	2 ppm STEL 0.5 ppm OSHA_ACT 0.75 ppm TWA	None	None

Engineering controls:

Provide adequate local exhaust ventilation to maintain worker exposure below exposure limits.

Respiratory protection:

Use NIOSH approved respirator if there is potential to exceed exposure limit(s).

Eye/face protection:

Safety goggles or safety glasses with side shields. Full face protection should be used if the potential for splashing or spraying of product exists. Safety showers and eye wash stations should be available.

Skin protection:

Use impermeable gloves and protective clothing as necessary to prevent skin contact.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state:	Liquid
Color:	Black
Odor:	Solvent
Odor threshold:	Not available.
pH:	Not applicable
Vapor pressure:	25.33 mbar calculated
Boiling point/range:	110 °C (230°F)
Melting point/ range:	Not determined
Specific gravity:	0.972 - 0.996
Vapor density:	Not available.
Flash point:	7.22 °C (45°F) Pensky Martens closed cup
Flammable/Explosive limits - lower:	Not available.
Flammable/Explosive limits - upper:	Not available.
Autoignition temperature:	> 272 °C (> 521.6 °F)
Evaporation rate:	Not determined
Solubility in water:	Insoluble

Partition coefficient (n-octanol/water):	Not determined
VOC content:	708 g/l
Viscosity:	2,000 - 3,500 cp
Decomposition temperature:	Not available.

10. STABILITY AND REACTIVITY

Stability:	Stable under normal conditions of storage and use.
Hazardous reactions:	None under normal processing.
Hazardous decomposition products:	Carbon dioxide. Carbon monoxide. Hydrocarbons. Oxides of nitrogen. Hydrogen chloride. Hazardous decomposition products include chlorine compounds.
Incompatible materials:	Strong oxidizing agents.
Reactivity:	Not available.
Conditions to avoid:	Excessive heat.

11. TOXICOLOGICAL INFORMATION

Relevant routes of exposure:	Skin, Inhalation, Eyes, Ingestion
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Potential Health Effects/Symptoms

Inhalation: Inhalation of vapors or mists of the product may be irritating to the respiratory system. May cause central nervous system effects with nausea, dizziness and headache.

Skin contact: Contact may dry the skin; prolonged contact may cause moderate irritation. A component in this product may be absorbed through the skin, especially if skin is damaged. May cause skin sensitization. Repeated exposure may cause skin dryness or cracking. Defatting.

Eye contact: Severe eye irritation. Liquid or vapors may irritate the eyes.

Ingestion: May irritate mouth, throat, and stomach if swallowed. May cause dizziness, incoordination, headache, nausea, and vomiting. Principal hazard of ingestion is aspiration into the lungs and subsequent pneumonitis.

Hazardous Component(s)	LD50s and LC50s	Immediate and Delayed Health Effects
Toluene	Oral LD50 (RAT) = 2.6 g/kg Oral LD50 (RAT) = 5,000 mg/kg Dermal LD50 (RABBIT) = 12,124 mg/kg Inhalation LC50 (RAT, 1 h) = 26700 ppm Inhalation LC50 (RAT, 2 h) = 12200 ppm Inhalation LC50 (RAT, 4 h) = 8000 ppm	Behavioral, Cardiac, Central nervous system, Developmental, Ear, Irritant
Methoxypropyl acetate 2-	None	Irritant, Central nervous system
n-Butyl alcohol	Oral LD50 (RAT) = 790 mg/kg Dermal LD50 (RABBIT) = 3,400 mg/kg Inhalation LC50 (RAT, 4 h) = 8000 ppm	Allergen, Central nervous system, Ear, Eyes, Irritant
CP Bisphenol A Diglycidylether	None	Irritant, Allergen
Graphite	None	Lung
Urea, polymer with formaldehyde, butylated	None	Irritant, Allergen
Xylenes	Oral LD50 (RAT) = 6,670 mg/kg Oral LD50 (RAT) = 3,523 - 8,600 mg/kg Oral LD50 (RAT) = 4,300 mg/kg Dermal LD50 (RABBIT) = > 43 g/kg Inhalation LC50 (RAT, 4 h) = 6,350 mg/l	Cardiac, Central nervous system, Irritant, Kidney, Liver
2-Butoxyethanol	Oral LD50 (RAT) = 560 mg/kg Oral LD50 (RABBIT) = 0.32 g/kg Oral LD50 (RAT) = 1.48 g/kg Dermal LD50 (RABBIT) = 400 mg/kg Inhalation LC50 (RAT, 4 h) = 486 ppm Inhalation LC50 (RAT, 4 h) = 450 ppm	Blood, Central nervous system, Irritant, Kidney, Liver
Ethylbenzene	Oral LD50 (RAT) = 5.46 g/kg Oral LD50 (RAT) = 3,500 mg/kg Dermal LD50 (RABBIT) = 17,800 mg/kg	Irritant, Central nervous system
Formaldehyde	Oral LD50 (RAT) = 2,020 mg/kg Oral LD50 (RAT) = 100 mg/kg Oral LD50 (RAT) = 800 mg/kg Inhalation LC50 (RAT, 4 h) = 0.48 mg/l Inhalation LC50 (RAT, 0.5 h) = 0.82 mg/l	Allergen, Behavioral, Central nervous system, Irritant, Liver, Metabolic, Mutagen, Reproductive, Respiratory, Some evidence of carcinogenicity

Hazardous Component(s)	NTP Carcinogen	IARC Carcinogen	OSHA Carcinogen (Specifically Regulated)
Toluene	No	No	No
Methoxypropyl acetate 2-	No	No	No
n-Butyl alcohol	No	No	No
CP Bisphenol A Diglycidylether	No	No	No
Graphite	No	No	No
Urea, polymer with formaldehyde, butylated	No	No	No
Xylenes	No	No	No
2-Butoxyethanol	No	No	No
Ethylbenzene	No	Group 2B	No
Formaldehyde	Known To Be Human Carcinogen.	Group 1	Yes

12. ECOLOGICAL INFORMATION

Ecological information: Do not empty into drains / surface water / ground water.

13. DISPOSAL CONSIDERATIONS

Information provided is for unused product only.

Recommended method of disposal: Follow all local, state, federal and provincial regulations for disposal.

Hazardous waste number: 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: Coating solution
Hazard class or division: 3
Identification number: UN 1139
Packing group: II
DOT Hazardous Substance(s): Xylene (mixed), Toluene

International Air Transportation (ICAO/IATA)

Proper shipping name: Coating solution
Hazard class or division: 3
Identification number: UN 1139
Packing group: II

Water Transportation (IMO/IMDG)

Proper shipping name: COATING SOLUTION
Hazard class or division: 3
Identification number: UN 1139
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: None above reporting de minimis

CERCLA/SARA Section 302 EHS: None above reporting de minimis
Formaldehyde (CAS# 50-00-0).

CERCLA/SARA Section 311/312: Fire, Immediate Health, Delayed Health
Immediate Health, Delayed Health, Fire

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). Toluene (CAS# 108-88-3). n-Butyl alcohol (CAS# 71-36-3). Xylenes (CAS# 1330-20-7). 2-Butoxyethanol (CAS# 111-76-2). Ethylbenzene (CAS# 100-41-4).
Formaldehyde (CAS# 50-00-0).

CERCLA Reportable quantity: Xylenes (CAS# 1330-20-7) 100 lbs. (45.4 kg)
n-Butyl alcohol (CAS# 71-36-3) 5,000 lbs. (2,270 kg)
Toluene (CAS# 108-88-3) 1,000 lbs. (454 kg)

California Proposition 65: This product contains a chemical known in the State of California to cause cancer. This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

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: New Safety Data Sheet format.

Prepared by: John DiCerbo, Sr. Regulatory Affairs Specialist

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