



Revision Number: 002.0

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1. PRODUCT AND COMPANY IDENTIFICATION

Product name: BONDERITE S-FN 330 FUNCTIONAL COATING ACHESON known as EMRALON330
IDH number: 1224868
Product type: Dry film lubricant
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. MAY BE FATAL IF SWALLOWED AND ENTERS AIRWAYS. CAUSES SKIN IRRITATION. MAY CAUSE AN ALLERGIC SKIN REACTION. CAUSES SERIOUS EYE IRRITATION. 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
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

Response:

gloves, eye protection, and face protection. Use personal protective equipment as required. In case of inadequate ventilation wear respiratory protection.

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*
n-Butyl alcohol	71-36-3	10 - 30
Synthetic resin	Proprietary	10 - 30
Ethanol	64-17-5	10 - 30
Toluene	108-88-3	10 - 30
Methoxypropyl acetate 2-	108-65-6	10 - 30
Pentylacetat	628-63-7	1 - 5
Xylenes	1330-20-7	1 - 5
Polyvinyl butyral - polyvinyl alcohol - polyvinyl acetate terpolymer	27360-07-2	1 - 5
Methanol	67-56-1	1 - 5
Phenol	108-95-2	1 - 5
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:

Get medical attention. If symptoms are experienced, remove source of contamination or move victim to fresh air. If not breathing, give artificial respiration.

Skin contact:

In case of contact, immediately remove contaminated clothing and flush skin with copious amounts of water. If symptoms develop and persist, get medical attention. Discard any shoes or clothing items that cannot be decontaminated.

Eye contact:

In case of contact with the eyes, rinse immediately with plenty of water for 15 minutes, and seek immediate medical attention.

Ingestion:

Get medical attention. DO NOT induce vomiting unless directed to do so by medical personnel. Give one to two glasses of water or milk. Never give anything by mouth to a victim who is unconscious or is having convulsions.

Symptoms:

See Section 11.

5. FIRE FIGHTING MEASURES

Extinguishing media:	Water spray (fog), foam, dry chemical or carbon dioxide. In case of fire, keep containers cool with water spray.
Special firefighting procedures:	Wear self-contained breathing apparatus and full protective clothing, such as turn-out gear.
Unusual fire or explosion hazards:	Vapors are heavier than air and may travel to ignition sources and flash back. Do not pressurize, cut, heat or weld containers. Empty product containers may contain product residue. Do not reuse empty containers.
Hazardous combustion products:	Upon decomposition, this product emits carbon monoxide, carbon dioxide and/or low molecular weight hydrocarbons.

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:	Eliminate ignition sources including sources of electrical, static or frictional sparks. Ventilate area. Do not allow product to enter sewer or waterways. Wear appropriate personal protective equipment.
Clean-up methods:	Collect spilled material with an inert absorbent such as sand or vermiculite. Place in properly labeled closed container. Dispose of according to Federal, State and local governmental regulations.

7. HANDLING AND STORAGE

Handling:	Provide adequate ventilation. Avoid contact with eyes, skin and clothing. Avoid breathing vapors or mists of this product. Do not cut or weld on empty drums. Sufficient vapors from residues may be present to cause explosion and serious injury and/or death. Wash thoroughly after handling.
Storage:	For safe storage, store between 40 °F (4.4 °C) and 90 °F (32.2 °C) Keep the container tightly closed and in a cool, well-ventilated place. Remove all sources of ignition. Keep away from heat, spark and flame. Store in original container until ready to use. Protect from direct sunlight. Ground and bond metal containers for liquid transfer to avoid static sparks. Keep out of reach of children and away from food and drink.

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
n-Butyl alcohol	20 ppm TWA	100 ppm (300 mg/m3) PEL	None	None
Synthetic resin	None	None	None	None
Ethanol	1,000 ppm STEL	1,000 ppm (1,900 mg/m3) PEL	None	None
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
Pentylacetat	50 ppm TWA 100 ppm STEL	100 ppm (525 mg/m3) PEL	None	None
Xylenes	100 ppm TWA 150 ppm STEL	100 ppm (435 mg/m3) PEL	None	None
Polyvinyl butyral - polyvinyl alcohol - polyvinyl acetate terpolymer	None	None	None	None
Methanol	200 ppm TWA (SKIN) 250 ppm STEL	200 ppm (260 mg/m3) PEL	None	None
Phenol	5 ppm TWA (SKIN)	5 ppm (19 mg/m3) PEL (SKIN)	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 local and general exhaust ventilation to effectively remove and prevent buildup of any vapors or mists generated from the handling of this product. Prevent electrostatic charge build-up by using common bonding and grounding techniques.

Respiratory protection:

If ventilation is not sufficient to effectively prevent buildup of aerosols, mists or vapors, appropriate NIOSH/MSHA respiratory protection must be provided.

Eye/face protection:

Wear chemical goggles; face shield (if splashing is possible).

Skin protection:

Chemical resistant, impermeable gloves. Use of impervious apron and boots are recommended.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state:	Liquid
Color:	Blue
Odor:	pungent, Alcohol
Odor threshold:	Not available.
pH:	Not applicable
Vapor pressure:	Not available.
Boiling point/range:	78 °C (172.4 °F)
Melting point/ range:	< 0 °C (< 32°F)
Specific gravity:	0.97 - 0.99
Vapor density:	Not available.
Flash point:	10 °C (50°F) Closed cup
Flammable/Explosive limits - lower:	1.1 %
Flammable/Explosive limits - upper:	36.5 %
Autoignition temperature:	>= 272 °C (>= 521.6 °F)
Evaporation rate:	Not determined
Solubility in water:	Slightly soluble

Partition coefficient (n-octanol/water):	Not determined
VOC content:	Not available.
Viscosity:	60 - 150 cp
Decomposition temperature:	Not available.

10. STABILITY AND REACTIVITY

Stability:	Stable at normal conditions.
Hazardous reactions:	Will not occur.
Hazardous decomposition products:	Upon decomposition, this product emits carbon monoxide, carbon dioxide and/or low molecular weight hydrocarbons.
Incompatible materials:	This product may react with strong oxidizing agents.
Reactivity:	Not available.
Conditions to avoid:	Keep away from heat, spark and flame.

11. TOXICOLOGICAL INFORMATION

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

Inhalation: Inhalation of high vapor concentrations may produce respiratory irritation, and may cause central nervous system (CNS) depression. Continued overexposure may result in coma, respiratory arrest, and death. Product contains toluene which is harmful or fatal if inhaled or absorbed through the skin, may cause permanent nervous system damage upon repeated exposure, and has been shown to be a human reproductive hazard. Chronic exposure to toluene may have effects on the central nervous system and these effects may progress to be irreversible. Intentional misuse of toluene has resulted in reproductive effects including physical and developmental abnormalities.

Skin contact: This product is irritating to the skin. Prolonged or repeated skin contact may cause dermatitis.

Eye contact: This product is irritating to the eyes. This product may be severely irritating to the eyes.

Ingestion: Ingestion of this product may cause nausea, vomiting and diarrhea.

Hazardous Component(s)	LD50s and LC50s	Immediate and Delayed Health Effects
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
Synthetic resin	None	Allergen, Corrosive, Irritant, Kidney, Respiratory, Skin
Ethanol	Oral LD50 (RAT) = 9.9 g/kg Oral LD50 (RAT) = 6.2 g/kg Oral LD50 (RAT) = 17.8 g/kg Oral LD50 (RAT) = 11.5 g/kg Oral LD50 (RAT) = 10.6 g/kg Oral LD50 (RAT) = 7,060 mg/kg Inhalation LC50 (RAT, 10 h) = 20000 ppm	Central nervous system, Irritant
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-Pentylacetat	None	Irritant, Central nervous system
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
Polyvinyl butyral - polyvinyl alcohol - polyvinyl acetate terpolymer	None	No Records
Methanol	Oral LD50 (RAT) = 5,628 mg/kg Oral LD50 (RABBIT) = 14.4 g/kg Dermal LD50 (RABBIT) = 15,800 mg/kg Inhalation LC50 (RAT, 6 h) = 87.5 mg/l Inhalation LC50 (RAT, 4 h) = 64000 ppm	Eyes, Heart, Irritant, Kidney, Liver, Metabolic, Nervous System, Reproductive
Phenol	Oral LD50 (RAT) = 317 mg/kg Oral LD50 (RAT) = 530 mg/kg Dermal LD50 (RAT) = 669 mg/kg Dermal LD50 (RABBIT) = 850 mg/kg	Blood, Cardiac, Corrosive, Developmental, Eyes, Irritant, Kidney, Liver, Mutagen, Nervous System, Skin, Vascular
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)
n-Butyl alcohol	No	No	No
Synthetic resin	No	No	No
Ethanol	No	No	No
Toluene	No	No	No

Methoxypropyl acetate 2-	No	No	No
Pentylacetat	No	No	No
Xylenes	No	No	No
Polyvinyl butyral - polyvinyl alcohol - polyvinyl acetate terpolymer	No	No	No
Methanol	No	No	No
Phenol	No	No	No
Formaldehyde	Known To Be Human Carcinogen.	Group 1	Yes

12. ECOLOGICAL INFORMATION

Ecological information: No data available.

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. This product contains a component or components identified as hazardous under 40 CFR 261.24. U239: Xylene - mixture of isomers U031 U220

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: Ethene, tetrafluoro-, homopolymer (CAS# 9002-84-0).

CERCLA/SARA Section 302 EHS: Phenol (CAS# 108-95-2).

CERCLA/SARA Section 311/312: 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). n-Butyl alcohol (CAS# 71-36-3). Toluene (CAS# 108-88-3). Xylenes (CAS# 1330-20-7). Methanol (CAS# 67-56-1). Phenol (CAS# 108-95-2). Ethylbenzene (CAS# 100-41-4). Formaldehyde (CAS# 50-00-0).

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

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