



Revision Number: 005.0

Issue date: 07/21/2014

## 1. PRODUCT AND COMPANY IDENTIFICATION

**Product name:** BONDERITE C-IC DEOXML MF AERO ACID DEOXIDIZER known as DEOXALUME MF  
**IDH number:** 595518  
**Product type:** Rust dissolver  
**Restriction of Use:** None identified  
**Region:** United States  
**Company address:** Henkel Corporation  
 One Henkel Way  
 Rocky Hill, Connecticut 06067  
**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:** TOXIC IF SWALLOWED.  
 CAUSES SEVERE SKIN BURNS AND EYE DAMAGE.  
 MAY CAUSE RESPIRATORY IRRITATION.

HAZARD CLASS	HAZARD CATEGORY
ACUTE TOXICITY ORAL	3
SKIN CORROSION	1B
SERIOUS EYE DAMAGE	1
SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE	3

### PICTOGRAM(S)



### Precautionary Statements

**Prevention:** Do not breathe dust or fumes. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area. Wear protective gloves, eye protection, and face protection.  
**Response:** IF SWALLOWED: Immediately call a physician or poison control center. IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. 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. Immediately call a poison control center or physician. Wash contaminated clothing before reuse.  
**Storage:** Store in a well-ventilated place. Keep container tightly closed. 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).

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See Section 11 for additional toxicological information.

### 3. COMPOSITION / INFORMATION ON INGREDIENTS

Hazardous Component(s)	CAS Number	Percentage*
Ammonium bifluoride	1341-49-7	60 - 100
Ammonium fluoride	12125-01-8	1 - 5

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

### 4. FIRST AID MEASURES

<b>Inhalation:</b>	If mist or vapor of this product is inhaled, remove person immediately to fresh air. Seek medical attention if symptoms develop or persist.
<b>Skin contact:</b>	Rinse with large amounts of running water. GET MEDICAL ATTENTION IMMEDIATELY! If iced 0.13% benzalkonium chloride (Zephiran) solution or 2.5% calcium gluconate gel are available, the rinsing may be limited to 5 minutes, with the soaks or gel applied as soon as the rinsing is stopped. If benzalkonium chloride or calcium gluconate gel is not available, rinsing must continue until medical treatment is provided.
<b>Eye contact:</b>	In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
<b>Ingestion:</b>	If material is ingested, immediately contact a physician or poison control center. Give one to two glasses of water or milk. DO NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to a victim who is unconscious or is having convulsions.
<b>Symptoms:</b>	See Section 11.
<b>Notes to physician:</b>	Treatment of hypocalcemia associated with corrosive fluoride compounds exposure may be corrected by intravenous calcium gluconate or calcium chloride. Treatment of hypomagnesemia may be corrected by intravenous magnesium sulfate. Treat symptomatically and supportively.

### 5. FIRE FIGHTING MEASURES

<b>Extinguishing media:</b>	Use media appropriate for surrounding material.
<b>Special firefighting procedures:</b>	Wear self-contained breathing apparatus and full protective clothing, such as turn-out gear.
<b>Unusual fire or explosion hazards:</b>	Not a fire hazard.
<b>Hazardous combustion products:</b>	May liberate hydrogen fluoride. Decomposition of this product may yield ammonia gas. May react with metals to form flammable hydrogen gas.

### 6. ACCIDENTAL RELEASE MEASURES

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

<b>Environmental precautions:</b>	Wear appropriate personal protective equipment. Prevent further leakage or spillage if safe to do so. Do not let product enter drains.
<b>Clean-up methods:</b>	Sweep up or gather material and place in appropriate container for disposal. Dispose of according to Federal, State and local governmental regulations.

## 7. HANDLING AND STORAGE

- Handling:** Avoid contact with eyes, skin and clothing. Avoid breathing dust. Provide adequate ventilation. Wash thoroughly after handling. For industrial use only. Do not take internally.
- Storage:** Keep container tightly closed and in a cool, well-ventilated place away from incompatible materials.

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
Ammonium bifluoride	2.5 mg/m <sup>3</sup> TWA (as F)	2.5 mg/m <sup>3</sup> PEL (as F) 2.5 mg/m <sup>3</sup> TWA Dust.	None	None
Ammonium fluoride	2.5 mg/m <sup>3</sup> TWA (as F)	2.5 mg/m <sup>3</sup> PEL (as F) 2.5 mg/m <sup>3</sup> TWA Dust.	None	None

- Engineering controls:** Ventilation should effectively remove and prevent buildup of any dust generated from the handling of this product.
- Respiratory protection:** If ventilation is not sufficient to effectively prevent buildup of dust, appropriate NIOSH/MSHA respiratory protection must be provided.
- Eye/face protection:** Wear chemical goggles and / or face shield.
- Skin protection:** Chemical resistant, impermeable gloves. Gloves should be tested to determine suitability for prolonged contact. Use of impervious apron and boots are recommended.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

- Physical state:** Solid
- Color:** White
- Odor:** None
- Odor threshold:** Not available.
- pH:** 2.0 - 3.0 (5% solution)
- Vapor pressure:** Not determined
- Boiling point/range:** 464 °F (240°C)
- Melting point/ range:** 257 °F (125°C)
- Specific gravity:** 1.50 - 1.52
- Vapor density:** Not determined
- Flash point:** Not applicable
- Flammable/Explosive limits - lower:** Not available.
- Flammable/Explosive limits - upper:** Not available.
- Autoignition temperature:** Not applicable
- Evaporation rate:** Not applicable
- Solubility in water:** Appreciable
- Partition coefficient (n-octanol/water):** Not determined
- VOC content:** Not applicable
- Viscosity:** Not available.
- Decomposition temperature:** Not available.

## 10. STABILITY AND REACTIVITY

<b>Stability:</b>	Stable at normal conditions.
<b>Hazardous reactions:</b>	Will not occur.
<b>Hazardous decomposition products:</b>	Decomposition of this product may yield ammonia gas. May liberate hydrogen fluoride.
<b>Incompatible materials:</b>	This material will react with glass, concrete, certain metals, silica containing materials, rubber, leather, and many organics.
<b>Reactivity:</b>	Not available.
<b>Conditions to avoid:</b>	Avoid contact with acids and oxidizing agents. Keep away from alkalis.

## 11. TOXICOLOGICAL INFORMATION

**Relevant routes of exposure:** Skin, Inhalation, Eyes

### Potential Health Effects/Symptoms

<b>Inhalation:</b>	Inhalation of dusts of this product may cause severe irritation and burns to the respiratory tract. May cause delayed lung injury. Contains fluorides. Exposure to fluorides over years may cause fluorosis.
<b>Skin contact:</b>	Corrosive to the skin. Contact with the skin or mucous membranes may cause severe irritation and burns. Following skin exposure to this product, the sensation of irritation or pain may be delayed.
<b>Eye contact:</b>	This product is severely irritating to the eyes and may cause irreversible damage including burns and blindness.
<b>Ingestion:</b>	Ingestion of this product may cause nausea, vomiting and diarrhea. Ingestion of small amounts of this product may result in potentially fatal hypocalcemia and systemic toxicity. Ingestion of large amounts of this product may result in fluoride poisoning including symptoms of calcification of the ligaments and severe bone changes making normal movements painful, mottling of the teeth, pulmonary fibrosis, anemia, anorexia, dental effects, and possibly death.

Hazardous Component(s)	LD50s and LC50s	Immediate and Delayed Health Effects
Ammonium bifluoride	Oral LD50 (RAT) +/- 130 mg/kg	Cardiac, Corrosive, Gastrointestinal tract, Irritant, Kidney, Lung, Metabolic, Nervous System, Respiratory, Teeth
Ammonium fluoride	None	Cardiac, Corrosive, Irritant, Kidney, Metabolic, Muscle, Nervous System, Respiratory

Hazardous Component(s)	NTP Carcinogen	IARC Carcinogen	OSHA Carcinogen (Specifically Regulated)
Ammonium bifluoride	No	No	No
Ammonium fluoride	No	No	No

## 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:** Material, if discarded, is not expected to be a characteristic hazardous waste under RCRA. Wastes must be tested using methods described in 40 CFR Part 261 to determine if it meets applicable definitions of hazardous wastes.

### 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:** Ammonium hydrogendifluoride, solid  
**Hazard class or division:** 8  
**Identification number:** UN 1727  
**Packing group:** II  
**DOT Hazardous Substance(s):** Ammonium bifluoride

#### International Air Transportation (ICAO/IATA)

**Proper shipping name:** Ammonium hydrogendifluoride, solid  
**Hazard class or division:** 8  
**Identification number:** UN 1727  
**Packing group:** II

#### Water Transportation (IMO/IMDG)

**Proper shipping name:** AMMONIUM HYDROGENDIFLUORIDE, SOLID  
**Hazard class or division:** 8  
**Identification number:** UN 1727  
**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  
**CERCLA/SARA Section 311/312:** Immediate Health, 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). Ammonium bifluoride (CAS# 1341-49-7). Ammonium fluoride (CAS# 12125-01-8).

**CERCLA Reportable quantity:** Ammonium bifluoride (CAS# 1341-49-7) 100 lbs. (45.4 kg)  
Ammonium fluoride (CAS# 12125-01-8) 100 lbs. (45.4 kg)

**California Proposition 65:** No California Proposition 65 listed chemicals are known to be present.

**Export Restrictions:** This product is controlled for export by the United States Department of Commerce. The Export Classification Control Number (ECCN) is 1C350.d.01

#### 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 Material Safety Data Sheet format.

**Prepared by:** Regulatory Affairs

**Issue date:** 07/21/2014

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