



Revision Number: 006.1

Issue date: 05/03/2017

## 1. PRODUCT AND COMPANY IDENTIFICATION

**Product name:** BONDERITE M-ZN 181X R ZINC PHOSPHATE known as BONDERITE 181X REPL  
**Product type:** Coating  
**Restriction of Use:** None identified  
**Company address:** Henkel Corporation  
 One Henkel Way  
 Rocky Hill, Connecticut 06067

**IDH number:** 1397812  
**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:** MAY BE CORROSIVE TO METALS.  
 HARMFUL IF SWALLOWED.  
 CAUSES SEVERE SKIN BURNS AND EYE DAMAGE.  
 MAY CAUSE RESPIRATORY IRRITATION.  
 MAY CAUSE DROWSINESS OR DIZZINESS.

HAZARD CLASS	HAZARD CATEGORY
CORROSIVE TO METALS	1
ACUTE TOXICITY ORAL	4
SKIN CORROSION	1C
SERIOUS EYE DAMAGE	1
SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE	3

### PICTOGRAM(S)



### Precautionary Statements

**Prevention:** Keep only in original container. Avoid breathing vapors, mist, or spray. Wash affected area 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, clothing, eye and face protection.

**Response:** IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. 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. Immediately call a POISON CENTER or physician. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Wash contaminated clothing before reuse. Absorb spillage to prevent material damage.

**Storage:** Store in a well-ventilated place. Keep container tightly closed. Store locked up. Store in corrosive resistant container with a resistant inner liner.

**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*
Zinc dihydrogen phosphate	13598-37-3	20 - 30
Zinc nitrate	7779-88-6	10 - 20
Phosphoric acid	7664-38-2	10 - 20

\* Exact percentages may vary or are 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>	Remove contaminated clothing and footwear. For skin contact, flush with large amounts of water. Seek immediate medical attention.
<b>Eye contact:</b>	In case of contact with the eyes, rinse immediately with plenty of water for 15 minutes, and seek immediate medical attention.
<b>Ingestion:</b>	Get immediate medical attention. Do not induce vomiting. Give one to two glasses of water or milk. Never give anything by mouth to a victim who is unconscious or is having convulsions.
<b>Symptoms:</b>	See Section 11.

### 5. FIRE FIGHTING MEASURES

<b>Extinguishing media:</b>	Use media appropriate for surrounding material.
<b>Special firefighting procedures:</b>	Wear full protective clothing. Wear self-contained breathing apparatus.
<b>Unusual fire or explosion hazards:</b>	This product is an aqueous mixture which will not burn.
<b>Hazardous combustion products:</b>	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.

<b>Environmental precautions:</b>	Prevent further leakage or spillage if safe to do so. Wear appropriate protective equipment and clothing during clean-up. Do not allow product to enter sewer or waterways.
<b>Clean-up methods:</b>	Absorb spill with inert material. Shovel material into 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. Do not take internally. Wash thoroughly after handling. Avoid breathing vapors or mists of this product.

**Storage:** For safe storage, store at or above 40 °F (4.4 °C)  
Keep container tightly closed and in a cool, well-ventilated place away from incompatible materials. Thaw and mix thoroughly if frozen.

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
Zinc dihydrogen phosphate	None	None	None	None
Zinc nitrate	None	None	None	None
Phosphoric acid	3 mg/m3 STEL 1 mg/m3 TWA	1 mg/m3 PEL	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.

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

**Eyeface protection:** Wear chemical goggles; face shield (if splashing is possible).

**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

<b>Physical state:</b>	Liquid
<b>Color:</b>	Green
<b>Odor:</b>	Odorless
<b>Odor threshold:</b>	Not available.
<b>pH:</b>	< 2
<b>Vapor pressure:</b>	Not determined
<b>Boiling point/range:</b>	> 100 °C (> 212°F)
<b>Melting point/ range:</b>	Not determined
<b>Specific gravity:</b>	1.48 - 1.50
<b>Vapor density:</b>	Not applicable
<b>Flash point:</b>	Not applicable
<b>Flammable/Explosive limits - lower:</b>	Not applicable
<b>Flammable/Explosive limits - upper:</b>	Not applicable
<b>Autoignition temperature:</b>	Not applicable
<b>Flammability:</b>	Not applicable
<b>Evaporation rate:</b>	Not applicable
<b>Solubility in water:</b>	Complete
<b>Partition coefficient (n-octanol/water):</b>	Not determined
<b>VOC content:</b>	Not applicable
<b>Viscosity:</b>	Not available.
<b>Decomposition temperature:</b>	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>	Decomposes with heat to produce oxides of nitrogen.
<b>Incompatible materials:</b>	Strong acids, alkalies and oxidizing agents. Fluorine.
<b>Reactivity:</b>	May react with metals to form flammable hydrogen gas.
<b>Conditions to avoid:</b>	Store away from incompatible materials.

## 11. TOXICOLOGICAL INFORMATION

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

### Potential Health Effects/Symptoms

<b>Inhalation:</b>	Mists, vapors or liquid may cause severe irritation or burns.
<b>Skin contact:</b>	Contact with liquid may produce severe skin irritation including redness, inflammation and chemical burns. Contact with skin can cause irritation and allergic reaction (sensitization) in some individuals.
<b>Eye contact:</b>	This product is severely irritating to the eyes and may cause irreversible damage including burns and blindness.
<b>Ingestion:</b>	This product may produce corrosive damage to the gastrointestinal tract if it is swallowed. Ingestion of corrosive acids may result in moderately severe burns to mouth and esophagus with more severe burns and damage to the stomach.

Hazardous Component(s)	LD50s and LC50s	Immediate and Delayed Health Effects
Zinc dihydrogen phosphate	None	Blood, Central nervous system, Corrosive, Endocrine, Gastrointestinal, Immune system, Irritant, Kidney, Metabolic, Pancreas, Respiratory
Zinc nitrate	Oral LD50 (Rat) = 1,400 mg/kg Oral LD50 (Mouse) = 241.3 mg/kg Oral LD50 (Rat) = 1,558.7 mg/kg	Blood, Cardiac, Central nervous system, Corrosive, Endocrine, Gastrointestinal tract, Immune system, Irritant, Kidney, Metabolic, Pancreas, Respiratory, Vascular
Phosphoric acid	Oral LD50 (Rat) = 1,530 mg/kg Dermal LD50 (Rabbit) = 2,740 mg/kg	Irritant, Corrosive

Hazardous Component(s)	NTP Carcinogen	IARC Carcinogen	OSHA Carcinogen (Specifically Regulated)
Zinc dihydrogen phosphate	No	No	No
Zinc nitrate	No	No	No
Phosphoric acid	No	No	No

## 12. ECOLOGICAL INFORMATION

**Ecological information:** Harmful to aquatic organisms.

## 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:** This product, if discarded directly, would be a characteristic RCRA corrosive waste (D002).

## 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:** Phosphoric acid solution  
**Hazard class or division:** 8  
**Identification number:** UN 1805  
**Packing group:** III  
**DOT Hazardous Substance(s):** Zinc nitrate, Phosphoric acid

### International Air Transportation (ICAO/IATA)

**Proper shipping name:** Phosphoric acid, solution  
**Hazard class or division:** 8  
**Identification number:** UN 1805  
**Packing group:** III

### Water Transportation (IMO/IMDG)

**Proper shipping name:** CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (Phosphoric acid, Zinc nitrate)  
**Hazard class or division:** 8  
**Identification number:** UN 3264  
**Packing group:** III  
**Marine pollutant:** Zinc nitrate  
**Exceptions:** Classified per IMDG Amendment 34; Effective Jan 1, 2010.

## 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). Zinc dihydrogen phosphate (CAS# 13598-37-3). Zinc nitrate (CAS# 7779-88-6). Zinc nitrate (CAS# 7779-88-6) 1,000 lbs. (454 kg)  
**CERCLA Reportable quantity:** Phosphoric acid (CAS# 7664-38-2) 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: New Safety Data Sheet format.

**Prepared by:** Mark Mau, Manager, Regulatory Affairs

**Issue date:** 05/03/2017

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