



Revision Number: 004.1

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1. PRODUCT AND COMPANY IDENTIFICATION

Product name: BONDERITE M-FE 1020 IRON PHOSPHATE known as BONDERITE 1020
IDH number: 593875
Product type: Conversion coating
Region: United States
Company address: Henkel Corporation
 32100 Stephenson Highway
 Madison Heights, MI 48071
Contact information:
 Telephone: 248.583.9300
 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

Physical state:	Liquid	HMIS:	
Color:	Colorless	HEALTH:	*3
Odor:	Bland	FLAMMABILITY:	0
		PHYSICAL HAZARD:	0
		Personal Protection:	See MSDS Section 8

DANGER-CORROSIVE!: CAUSES EYE, SKIN AND RESPIRATORY TRACT BURNS.
 MAY BE HARMFUL IF SWALLOWED OR ABSORBED THROUGH SKIN.

Relevant routes of exposure: Skin, Inhalation, Eyes

Potential Health Effects

Inhalation: Mists, vapors or liquid may cause severe irritation or burns.
Skin contact: Contact with liquid may produce severe skin irritation including redness, inflammation and chemical burns. Following skin exposure to this product, the sensation of irritation or pain may be delayed.
Eye contact: This product is severely irritating to the eyes and may cause irreversible damage including burns and blindness.
Ingestion: This product may produce corrosive damage to the gastrointestinal tract if it is swallowed. Contains fluorides. Exposure to fluorides over years may cause fluorosis.

Existing conditions aggravated by exposure: Eye, skin and respiratory disorders. Preexisting cardiovascular or bone marrow diseases.

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

See Section 11 for additional toxicological information.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Hazardous components	CAS NUMBER	%
Sodium dihydrogen phosphate	7558-80-7	10 - 30
Phosphoric acid	7664-38-2	1 - 5
Phosphate ester potassium salt	Proprietary	1 - 5
Molybdate salt	Proprietary	1 - 5
Hydrogen fluoride	7664-39-3	0.1 - 1

4. FIRST AID MEASURES

Inhalation:	If mist or vapor of this product is inhaled, remove person immediately to fresh air. Seek medical attention if symptoms develop or persist.
Skin contact:	Remove contaminated clothing and footwear. For skin contact, flush with large amounts of water. Seek immediate medical attention.
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.
Notes to physician:	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.

5. FIRE FIGHTING MEASURES

Flash point:	Not applicable
Autoignition temperature:	Not applicable
Flammable/Explosive limits - lower:	Not applicable
Flammable/Explosive limits - upper:	Not applicable
Extinguishing media:	Use media appropriate for surrounding material.
Special firefighting procedures:	Wear full protective clothing. Wear self-contained breathing apparatus.
Unusual fire or explosion hazards:	This product is an aqueous mixture which will not burn.
Hazardous combustion products:	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. Wear appropriate protective equipment and clothing during clean-up.
Clean-up methods:	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. Avoid breathing mists or aerosols of this product. Wash thoroughly after handling. Do not take internally. For industrial use only.
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 components	ACGIH TLV	OSHA PEL	AIHA WEEL	OTHER
Sodium dihydrogen phosphate	None	None	None	None
Phosphoric acid	1 mg/m ³ TWA 3 mg/m ³ STEL	1 mg/m ³ TWA	None	None
Phosphate ester potassium salt	None	None	None	None
Molybdate salt	10 mg/m ³ TWA (as Mo) Inhalable fraction. 0.5 mg/m ³ TWA (as Mo) Respirable fraction. 3 mg/m ³ TWA (as Mo) Respirable fraction.	15 mg/m ³ TWA (as Mo) Total dust. 5 mg/m ³ TWA (as Mo)	None	None
Hydrogen fluoride	(SKIN) (as F) 0.5 ppm TWA (as F) 2 ppm Ceiling (as F)	3 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.

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. 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:	Liquid
Color:	Colorless
Odor:	Bland
Odor threshold:	Not available.
pH:	< 2
Vapor pressure:	Not determined
Boiling point/range:	> 100 °C (> 212°F) calculated
Melting point/ range:	Not determined
Specific gravity:	1.15 - 1.25
Vapor density:	Not determined
Flash point:	Not applicable
Flammable/Explosive limits - lower:	Not applicable
Flammable/Explosive limits - upper:	Not applicable
Autoignition temperature:	Not applicable
Evaporation rate:	Not available.
Solubility in water:	Complete
Partition coefficient (n-octanol/water):	Not determined
VOC content:	Not applicable

10. STABILITY AND REACTIVITY

Stability:	Stable at normal conditions.
Hazardous reactions:	Will not occur.
Hazardous decomposition products:	Upon decomposition, this product may yield oxides of nitrogen and ammonia, carbon dioxide, carbon monoxide and other low molecular weight hydrocarbons. Oxides of sulfur. May liberate hydrogen fluoride.
Incompatible materials:	This product may react with strong alkalies. This material will react with glass, concrete, certain metals, silica containing materials, rubber, leather, and many organics.
Conditions to avoid:	None identified.

11. TOXICOLOGICAL INFORMATION

Hazardous components	NTP Carcinogen	IARC Carcinogen	OSHA Carcinogen (Specifically Regulated)
Sodium dihydrogen phosphate	No	No	No
Phosphoric acid	No	No	No
Phosphate ester potassium salt	No	No	No
Molybdate salt	No	No	No
Hydrogen fluoride	No	No	No

Hazardous components	Health Effects/Target Organs
Sodium dihydrogen phosphate	Cardiac, Corrosive, Gastrointestinal, Irritant, Metabolic, Nervous System
Phosphoric acid	Irritant, Corrosive
Phosphate ester potassium salt	No Records
Molybdate salt	Blood, Gastrointestinal, Immune system, Irritant, Kidney, Liver, Lung, Metabolic, Muscle, Skin, Less weight gain and food intake.
Hydrogen fluoride	Allergen, Blood, Bone Marrow, Cardiac, Central nervous system, Corrosive, Irritant, Kidney, Liver, Lung, Muscle, Nervous System, Respiratory, Teeth

12. ECOLOGICAL INFORMATION

Ecological information:	Because of the low pH of this product, it would be expected to produce significant ecotoxicity upon exposure to aquatic organisms and aquatic systems.
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13. DISPOSAL CONSIDERATIONS

Information provided is for unused product only.

Recommended method of disposal:	Follow all local, state, federal and provincial regulations for disposal. This chemical contains phosphates. This chemical contains heavy metals.
Hazardous waste number:	This product, if discarded directly, would be a characteristic RCRA corrosive waste (D002). This product contains a component or components identified as hazardous under 40 CFR 261.24. U134: Hydrogen fluoride

14. TRANSPORT INFORMATION

U.S. Department of Transportation Ground (49 CFR)

Proper shipping name:	Corrosive liquid, acidic, inorganic, n.o.s. (Phosphoric acid, Hydrofluoric acid)
Hazard class or division:	8
Identification number:	UN 3264
Packing group:	III
DOT Reportable quantity:	Hydrofluoric acid

International Air Transportation (ICAO/IATA)

Proper shipping name:	Corrosive liquid, acidic, inorganic, n.o.s. (Phosphoric acid, Hydrofluoric acid)
Hazard class or division:	8
Identification number:	UN 3264
Packing group:	III

Water Transportation (IMO/IMDG)

Proper shipping name:	CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (Phosphoric acid, Hydrofluoric acid)
Hazard class or division:	8
Identification number:	UN 3264
Packing group:	III

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 minimus
CERCLA/SARA Section 302 EHS:	None above reporting de minimus
CERCLA/SARA Section 311/312:	Immediate Health, Delayed Health
CERCLA/SARA 313:	None above reporting de minimus
CERCLA Reportable quantity:	Hydrogen fluoride (CAS# 7664-39-3) 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.
WHMIS hazard class:	D.2.B, E

16. OTHER INFORMATION

This material safety data sheet contains changes from the previous version in sections: New Material Safety Data Sheet format.

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