



Revision Number: 004.2

Issue date: 01/06/2021

1. PRODUCT AND COMPANY IDENTIFICATION

Product name: BONDERITE M-FE 1090 IRON PHOSPHATE known as BONDERITE 1090
IDH number: 594281

Product type/use: Conversion coating
Restriction of Use: None identified
Company address: Henkel Corporation
 One Henkel Way
 Rocky Hill, Connecticut 06067

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: HARMFUL IF SWALLOWED.
 TOXIC IN CONTACT WITH SKIN.
 CAUSES SEVERE SKIN BURNS AND EYE DAMAGE.

| HAZARD CLASS | HAZARD CATEGORY |
|-----------------------|-----------------|
| ACUTE TOXICITY ORAL | 4 |
| ACUTE TOXICITY DERMAL | 3 |
| SKIN CORROSION | 1B |
| SERIOUS EYE DAMAGE | 1 |

PICTOGRAM(S)



Precautionary Statements

Prevention: Wash affected area thoroughly after handling. Do not eat, drink or smoke when using this product. 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. Take off contaminated clothing.

Storage: 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* |
|------------------------|------------|-------------|
| Phosphoric acid | 7664-38-2 | 1 - 5 |
| Hydrogen fluoride | 7664-39-3 | 1 - 5 |

IDH number: 594281

Product name: BONDERITE M-FE 1090 IRON PHOSPHATE known as BONDERITE 1090

* Exact percentages may vary or are trade secret. Concentration range is provided to assist users in providing appropriate protections.

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. If breathing is difficult, give oxygen. Trained personnel should administer 2.5% calcium gluconate through a nebulizer for 20 minutes. |
| Skin contact: | Remove contaminated clothing and footwear while rinsing the affected area with large amounts of running water for at least 15 minutes. GET IMMEDIATE MEDICAL ATTENTION. If iced solution of 0.13% aqueous Benzalkonium Chloride (Zephiran) or 2.5% calcium gluconate gel is available, rinsing may be limited to 5 minutes, with the soak solution or gel applied as soon as the rinsing is stopped. Gloves should be worn when applying the gel to prevent transfer of HF and secondary burns. If using calcium gluconate gel, it should be continuously re-applied and massaged into the affected area until pain has been relieved for at least 30 minutes. If Benzalkonium Chloride (Zephiran) or calcium gluconate gel is not available, rinsing must continue until medical treatment is provided. |
| Eye contact: | Immediately flush affected eye with large amounts of gently flowing water or 0.9% sterile saline solution for at least 15 minutes. Hold eyelid wide open. Get immediate medical attention. Eye flushing should continue during transportation to a doctor. |
| Ingestion: | Get immediate medical attention. Do not induce vomiting. Attempt immediate administration of a fluoride binding substance: milk, chewable calcium carbonate tablets or 4-8 ounces (120-240 ml) of milk of magnesia or a liquid antacid. Avoid large amounts of liquid as it may induce vomiting. Never give anything by mouth to an unconscious person. |
| Symptoms: | See Section 11. |
| 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. Ocular exposure to corrosive fluoride compounds has been treated with isotonic sodium chloride or magnesium chloride. Dermal exposure to corrosive fluoride compounds has been treated with calcium gluconate or calcium carbonate gel applied topically to the affected areas to relieve pain at the site of exposure. Treat symptomatically and supportively. |

5. FIRE FIGHTING MEASURES

| | |
|---|---|
| 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. Flammable and explosive hydrogen gas may be formed when hydrofluoric acid reacts with certain metals. Hydrogen fluoride gas may evolve when chemical is subjected to prolonged high temperature. |

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 personal protective equipment. |
|-----------------------------------|---|

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. If stored outside of this range, mix well before using.

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 |
|------------------------|---|-----------------------------------|-----------|-------|
| Phosphoric acid | 3 mg/m3 STEL 1 mg/m3 TWA | 1 mg/m3 PEL | None | None |
| Hydrogen fluoride | 2 ppm Ceiling (as F) 0.5 ppm TWA (as F) (SKIN) (as F) | 2.5 mg/m3 PEL (as F) 3 ppm TWA | None | None |
| sodium chlorate | None | None | None | None |

Engineering controls:

Use general ventilation and use local exhaust, where possible, in confined or enclosed spaces.

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: | Amber |
| Odor: | Mild |
| Odor threshold: | Not available. |
| pH: | < 2 |
| Vapor pressure: | Not available. |
| Boiling point/range: | > 100 °C (> 212°F)Aqueous solution |
| Melting point/ range: | 28 °F (-2.2 °C) |
| Specific gravity: | 1.171 - 1.191 |
| Vapor density: | Not determined |
| Flash point: | Not applicable |
| Flammable/Explosive limits - lower: | Not applicable |
| Flammable/Explosive limits - upper: | Not applicable |
| Autoignition temperature: | Not applicable |
| Flammability: | Not applicable |
| Evaporation rate: | Not available. |
| Solubility in water: | Complete |
| Partition coefficient (n-octanol/water): | Not determined |
| VOC content: | Not applicable |
| Viscosity: | Not available. |
| 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 oxides of sulfur, carbon monoxide, carbon dioxide and/or low molecular weight hydrocarbons. 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. |
| Reactivity: | Not available. |
| Conditions to avoid: | None identified. |

11. TOXICOLOGICAL INFORMATION

Relevant routes of exposure: Skin, Inhalation, Eyes

Potential Health Effects/Symptoms

| | |
|----------------------|--|
| 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. Causes skin burns. |
| Eye contact: | This product is severely irritating to the eyes and may cause irreversible damage including burns and blindness. Causes serious eye damage. |
| Ingestion: | This product may produce corrosive damage to the gastrointestinal tract if it is swallowed. |

| Hazardous Component(s) | LD50s and LC50s | Immediate and Delayed Health Effects |
|------------------------|--|---|
| Phosphoric acid | Oral LD50 (Rat) = 1,530 mg/kg Dermal LD50 (Rabbit) = 2,740 mg/kg | Irritant, Corrosive |
| Hydrogen fluoride | None | Allergen, Blood, Bone Marrow, Cardiac, Central nervous system, Corrosive, Irritant, Kidney, Liver, Lung, Muscle, Nervous System, Respiratory, Teeth |
| sodium chlorate | Oral LD50 (Mouse) = 8,350 mg/kg Oral LD50 (Rabbit) = 7,200 mg/kg Oral LD50 (Rat) = 1,200 mg/kg Oral LD50 (Mouse) = 8,350 mg/kg Oral LD50 (Rabbit) = 7,200 mg/kg Oral LD50 (Rat) = 1,200 mg/kg | Irritant, Blood, Kidney, Liver |

| Hazardous Component(s) | NTP Carcinogen | IARC Carcinogen | OSHA Carcinogen (Specifically Regulated) |
|------------------------|----------------|-----------------|--|
| Phosphoric acid | No | No | No |
| Hydrogen fluoride | No | No | No |
| sodium chlorate | No | No | No |

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. This chemical contains phosphates.

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: Corrosive liquids, toxic, n.o.s. (Hydrofluoric acid, Phosphoric acid)
Hazard class or division: 8 (6.1)
Identification number: UN 2922
Packing group: II
DOT Hazardous Substance(s): Hydrofluoric acid

International Air Transportation (ICAO/IATA)

Proper shipping name: Corrosive liquid, toxic, n.o.s. (Hydrofluoric acid, Phosphoric acid)
Hazard class or division: 8 (6.1)
Identification number: UN 2922
Packing group: II

Water Transportation (IMO/IMDG)

Proper shipping name: CORROSIVE LIQUID, TOXIC, N.O.S. (Hydrofluoric acid, Phosphoric acid)
Hazard class or division: 8 (6.1)
Identification number: UN 2922
Packing group: II
Additional information: IMDG-Code: Segregation group 1- Acids

15. REGULATORY INFORMATION

United States Regulatory Information

TSCA 8 (b) Inventory Status: All components are listed as active or are exempt from listing on the Toxic Substances Control Act (TSCA) inventory.

TSCA 12 (b) Export Notification: noneNone above reporting de minimis

CERCLA/SARA Section 302 EHS: Hydrogen fluoride (CAS# 7664-39-3).
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). Hydrogen fluoride (CAS# 7664-39-3).
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/NDSL 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: 4

Prepared by: Product Safety and Regulatory Affairs

Issue date: 01/06/2021

DISCLAIMER: The data contained herein are furnished for information only and are believed to be reliable. However, Henkel Corporation and its affiliates ("Henkel") does not assume responsibility for any results obtained by persons over whose methods Henkel has no control. It is the user's responsibility to determine the suitability of Henkel's products or any production methods mentioned herein for a particular purpose, and to adopt such precautions as may be advisable for the protection of property and persons against any hazards that may be involved in the handling and use of any Henkel's products. In light of the foregoing, Henkel specifically disclaims all warranties, express or implied, including warranties of merchantability and fitness for a particular purpose, arising from sale or use of Henkel's products. Henkel further disclaims any liability for consequential or incidental damages of any kind, including lost profits.

This Safety Data Sheet has been generated based on OSHA Hazard Communication Standard (29 CFR 1910.1200) and provides information in accordance with U.S. federal law only. No warranty or representation of any kind is given with respect to the substantive or export laws of any other jurisdiction or country. Please confirm that the information provided herein conforms to the substantive export or other law of any other jurisdiction prior to export. Please contact Henkel Product Safety and Regulatory Affairs for additional assistance.