Safety Data Sheet

Revision Number: 005.0

Issue date: 11/19/2025

1. IDENTIFICATION

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

IDH number: 890712

Product type/ Recommended use: Conversion coating

Item number: 890712

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
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:	H302 - HARMFUL IF SWALLOWED. H311 - TOXIC IN CONTACT WITH SKIN. H314 - 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:
P264 - Wash affected area thoroughly after handling.
P270 - Do not eat, drink or smoke when using this product.
P280 - Wear protective gloves, clothing, eye and face protection.

Response:
P301+P312+P330 - IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you feel unwell. Rinse mouth.
P301+P330+P331 - IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303+P361+P353 - If on skin (or hair): Take off immediately all contaminated clothing.
P304+P340+P310 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or physician.
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P361+P364 - Take off immediately all contaminated clothing and wash it before reuse.

Storage:
P405 - Store locked up.

Disposal:
P501 - Dispose of contents and/or container according to Federal, State/Provincial and local governmental regulations.

Other hazards Not available.

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	Weight %*
Phosphoric acid	7664-38-2	1 - 5
sodium 3-nitrobenzenesulphonate	127-68-4	1 - 5
Hydrogen fluoride	7664-39-3	1 - 5
Sodium chlorate	7775-09-9	0.1 - 1

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

4. FIRST AID MEASURES

First Aid Measures by likely routes of exposure

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.

Most important symptoms and effects (acute and delayed): The most important known symptoms and effects, both acute and delayed, are described in Section 11: Toxicological Information.

Indication of any immediate medical attention / special treatment needed: 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: Water spray (fog), foam, dry chemical or carbon dioxide.

Improper extinguishing agents: Not available.

Special firefighting procedures: Wear self-contained breathing apparatus and full protective clothing, such as turn-out gear.

Unusual fire or explosion hazards: Closed containers may rupture (due to build up of pressure) when exposed to extreme heat. In case of fire, keep containers cool with water spray.

Hazardous combustion products: Upon decomposition, this product emits carbon monoxide, carbon dioxide and/or low molecular weight hydrocarbons. Hydrogen fluoride.

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. Do not allow product to enter sewer or waterways.

Clean-up methods: Ensure adequate ventilation. Wear appropriate personal protective equipment. Refer to Section 8 "Exposure Controls / Personal Protection" prior to clean up. Absorb spill with inert material. Shovel material into appropriate container for disposal.

7. HANDLING AND STORAGE

Handling: Prevent contact with eyes, skin and clothing. Do not breathe vapor and mist. Wash thoroughly after handling. Use only with adequate ventilation. Keep container closed. See Section 8 of the SDS for Personal Protective Equipment. For industrial use only. Do not take internally.

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.

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
Phosphoric acid	3 mg/m3 STEL 1 mg/m3 TWA	1 mg/m3 PEL	None	None
Hydrogen fluoride	(SKIN) (as F) 0.5 ppm TWA (as F) 2 ppm Ceiling (as F)	2.5 mg/m3 PEL (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). Safety showers and eye wash stations should be available.

Skin protection: Use chemical resistant, impermeable clothing including gloves and either an apron or body suit to prevent skin contact. Gloves should be tested to determine suitability for prolonged contact. Use of impervious boots is recommended.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state:	Liquid
Color:	Amber
Odor:	Mild, Sour/Acid
Odor threshold:	Not available.
pH:	0 - 2
Vapor pressure:	23.4 hPa (20 °C (68°F)) Values referring to water
Boiling point/range:	> 100 °C (> 212°F)Aqueous solution
Melting point/ range:	Not applicable, Product is a liquid
Density/Relative density:	1.171 - 1.191
Relative vapor density:	< 1 20 °C
Flash point:	Not applicable
Flammable/Explosive limits - lower:	Not available.
Flammable/Explosive limits - upper:	Not available.
Autoignition temperature:	Not applicable
Flammability:	Not applicable
Evaporation rate:	Not available.
Solubility:	Complete Water
Partition coefficient n-octanol/water (logarithmic value):	Not available.
VOC content:	Not applicable
Dynamic viscosity:	Not available.
Kinematic viscosity:	1 - 2.5 mm2/s
Particle characteristics:	Not applicable, Product is a liquid
Decomposition temperature:	Not available.

10. STABILITY AND REACTIVITY

Stability:	Stable under normal conditions of storage and use.
Hazardous reactions:	None under normal processing.
Hazardous decomposition products:	Upon decomposition, this product emits carbon monoxide, carbon dioxide and/or low molecular weight hydrocarbons. May liberate hydrogen fluoride.
Incompatible materials:	Acids. Bases. Oxidizing agents. This material will react with glass, concrete, certain metals, silica containing materials, rubber, leather, and many organics.
Reactivity:	Not available.
Conditions to avoid:	Keep away from heat, ignition sources and incompatible materials. Protect from direct sunlight.

11. TOXICOLOGICAL INFORMATION

Likely routes of exposure: Skin, Inhalation, Eyes, Ingestion

Potential Health Effects/Symptoms

Inhalation: Mists, vapors or liquid may cause severe irritation or burns. Contains fluorides. Exposure to fluorides over years may cause fluorosis.

Skin contact: This product is severely irritating to the skin and may cause burns. Liquid or vapor can cause fluoride-type irritation or burns which may not be immediately painful or visible. Hydrofluoric acid will penetrate the skin and attack underlying tissue and bone. Large burns (over 25 square inches) may also cause hypocalcemia and other systemic effects which may be fatal.

Eye contact: This product is severely irritating to the eyes and may cause irreversible damage including burns and blindness.

Ingestion: 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. Ingestion causes burns of the upper digestive and respiratory tracts. Contains fluorides. Exposure to fluorides over years may cause fluorosis.

Hazardous Component(s)	LD50s and LC50s
Phosphoric acid	Oral LD50 (Rat) = 1,530 mg/kg Dermal LD50 (Rabbit) = 2,740 mg/kg
sodium 3-nitrobenzenesulphonate	Inhalation LC50 (Rat, 4 h) = > 5.1 mg/l Inhalation LC50 (Rat, 4 h) = > 5.1 mg/l
Hydrogen fluoride	None
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

Hazardous Component(s)	Immediate Health Effects	Delayed Health Effects	Chronic Health Effects
Phosphoric acid	Irritant Corrosive		
sodium 3-nitrobenzenesulphonate	Irritant		
Hydrogen fluoride	Corrosive Irritant	Allergen	Blood Bone Marrow Cardiac Central nervous system Kidney Liver Lung Muscle Nervous System Respiratory Teeth
Sodium chlorate	Irritant		Blood Kidney Liver

Hazardous Component(s)	NTP Carcinogen	IARC Carcinogen	OSHA Carcinogen (Specifically Regulated)
Phosphoric acid	No	No	No
sodium 3-nitrobenzenesulphonate	No	No	No
Hydrogen fluoride	No	No	No
Sodium chlorate	No	No	No

12. ECOLOGICAL INFORMATION

Ecological information: Not 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. 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 packaging.

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:	None above reporting de minimis
CERCLA/SARA Section 302 EHS:	Hydrogen fluoride (CAS# 7664-39-3). Ethylene oxide (CAS# 75-21-8). Formaldehyde (CAS# 50-00-0).
CERCLA/SARA Section 311/312:	Please refer to the GHS classification in Section 2
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: New Safety Data Sheet format.

Prepared by: Product Safety and Regulatory Affairs

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