Revision Number: 002.0

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1. PRODUCT AND COMPANY IDENTIFICATION

Product name: **BONDERITE L-FM TI-KOTE-L ACHESON CONVERSION COATING known as TI-KOTE-L**

IDH number: 1695808

Product type/use: Phosphating Products for Metals

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:	CONTAINS FLUORIDES. MAY CAUSE DELAYED BURNS (NOT IMMEDIATELY PAINFUL OR VISIBLE)! LONG TERM EXPOSURE TO FLUORIDES OVER YEARS MAY CAUSE FLUOROSIS! TOXIC IF SWALLOWED. FATAL IN CONTACT WITH SKIN. CAUSES SKIN IRRITATION. CAUSES SERIOUS EYE DAMAGE. HARMFUL IF INHALED.

HAZARD CLASS	HAZARD CATEGORY
ACUTE TOXICITY ORAL	3
ACUTE TOXICITY INHALATION	4
ACUTE TOXICITY DERMAL	2
SKIN IRRITATION	2
SERIOUS EYE DAMAGE	1

PICTOGRAM(S)

Precautionary Statements

Prevention:

Avoid breathing vapors, mist, or spray. Do not get in eyes, on skin, or on clothing. 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: Immediately call a POISON CENTER or doctor/ physician. Rinse mouth. IF ON SKIN: Gently wash with plenty of soap and water. Immediately call a POISON CENTER or doctor/ physician. IF ON SKIN: Wash with plenty of water. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or physician if you feel unwell. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If skin irritation occurs: Get medical attention. 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*
Sodium dihydrogen phosphate	7558-80-7	5 - 10
Hydrogen fluoride	7664-39-3	1 - 5
Sulfamic acid	5329-14-6	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

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 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.

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.

5. FIRE FIGHTING MEASURES

Extinguishing media: Use media appropriate for surrounding material.

Special firefighting procedures: Wear self-contained breathing apparatus. Wear full protective clothing.

Unusual fire or explosion hazards: This product is an aqueous mixture which will not burn.

Hazardous combustion products: Upon decomposition, this product emits carbon monoxide, carbon dioxide and/or low molecular weight hydrocarbons. Oxides of nitrogen. 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 personal protective equipment. Block any potential routes to water systems.

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. Keep container closed. Provide adequate ventilation. Wash thoroughly after handling. Do not reuse the empty container.

Storage: For safe storage, store at or above 50 °F (10°C)
Keep container tightly closed and in a cool, well-ventilated place away from incompatible materials. Protect from freezing.

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
Sodium dihydrogen phosphate	None	None	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
Sulfamic acid	None	None	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. Use of impervious apron and boots are recommended.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state: Liquid
Color: Colorless
Odor: None
Odor threshold: Not available.
pH: 3.4 - 3.8
Vapor pressure: Not determined
Boiling point/range: > 100 °C (> 212°F)calculated
Melting point/ range: Not determined
Specific gravity: 1.06 - 1.10 at 16 °C (60.8 °F)
Vapor density: Not determined
Flash point: > 100 °C (> 212°F) calculated
Flammable/Explosive limits - lower: Not available.
Flammable/Explosive limits - upper: Not available.
Autoignition temperature: Not determined
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 carbon monoxide, carbon dioxide and/or low molecular weight hydrocarbons. May liberate hydrogen fluoride. Oxides of sulfur.

Incompatible materials: May react with strong bases or 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: 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. Contains fluorides. Exposure to fluorides over years may cause fluorosis.

Skin contact: 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. 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.

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

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

Hazardous Component(s)	LD50s and LC50s	Immediate and Delayed Health Effects
Sodium dihydrogen phosphate	Oral LD50 (Rat) = 8,290 mg/kg Oral LD50 (Mouse) = > 2,000 mg/kg Dermal LD50 (Rabbit) = > 7,940 mg/kg	Cardiac, Corrosive, Gastrointestinal, Irritant, Metabolic, Nervous System
Hydrogen fluoride	None	Allergen, Blood, Bone Marrow, Cardiac, Central nervous system, Corrosive, Irritant, Kidney, Liver, Lung, Muscle, Nervous System, Respiratory, Teeth
Sulfamic acid	None	Corrosive, Irritant

Hazardous Component(s)	NTP Carcinogen	IARC Carcinogen	OSHA Carcinogen (Specifically Regulated)
Sodium dihydrogen phosphate	No	No	No
Hydrogen fluoride	No	No	No
Sulfamic acid	No	No	No

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.

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: This product, if discarded, may be characterized as a 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

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, Sulphamic 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, Sulphamic 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, Sulphamic 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).
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: No California Proposition 65 listed chemicals are known to be present.

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: Regulatory Affairs

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