Treatment of Hydrofluoric Acid (HF) Exposure Quick Reference

NOTE: In addition to the usual medical history, the physician should obtain the following information; concentration of HF, date and time of exposure, duration of exposure, how exposure occurred, body parts exposed/affected, first aid measures instituted (what, when, how long), Injuries due to dilute HF solutions or low concentrations of vapors may result in delays in clinical presentation up to 24 hours following exposure.

SKIN BURNS		EYE EXPOSURE	INHALATION		INGESTION
CONCENTRATED HF Water Wash THEN Iced Benzalkonium Chloride* 0.13% Soaks OR Calcium Gluconate 2.5% Gel	DILUTE HF Water Wash THEN Iced Benzalkonium Chloride* 0.13% Soaks OR Calcium Gluconate 2.5% Gel	ALL HF Water Wash OR Saline Wash	CONCENTRATED HF Oxygen AND 2.5% Calcium Gluconate ⁴ by Nebulizer	(Mild Exposures) DILUTE HF Oxygen THEN Consider 2.5% Calcium Gluconate ⁴ by Nebulizer	ALL HF DO NOT INDUCE VOMITING Milk or Water THEN Milk of Magnesia OR Mylanta®+
		MEDICAL	TREATMENT		
CONCENTRATED HF	DILUTE HE	ALL HF	CONCENTRATED HF	DILUTE HF	ALL HF
Debride (if necessary) THEN Continue Soaks OR Calcium Gluconate 2.5% - 5% injection ^{2,4} AND Observe for/Treat Systemic Effects ³ (especially if > 25 sq. in.)	Debride (if necessary) THEN Continue Soaks OR Calcium Gluconate 2.5% Gel OR Calcium Gluconate 2.5% - 5% Injection ^{2,4} Systemic Effects ³ Unlikely	Topical Tetracaine Hydrochloride THEN 1% Calcium Gluconate Irrigation⁴ AND Consult Opthamologist	Continue Calcium Gluconate by Nebulizer Observe and Treat for Respiratory Distress, Bronchoconstriction, Pulmonary Edema, Systemic Effects ¹ (Inhaled Steroids and/or Bronchodialators as Needed)	Continue Calcium by Gluconate Nebulizer Observe Serious Effects Unlikely Inhalation of HF Fumes from Diluted Acid is Uncommon	Lavage with Calcium Chloride or Calcium Gluconate AND Treat Systemic Effects³

- 1. This is a brief summary of First Aid and Medical Treatment measures. The text of the brochure "RECOMMENDED MEDICAL TREATMENT FOR HYDROFLUORIC ACID EXPOSURE" must be consulted for more complete information.
- 2. 2.5% calcium gluconate injections must be used if the soaks or gel do not significantly relieve pain in 30-40 minutes. Injections may also be used as the primary treatment, especially for larger and/or deeper burns.
- 3. Systemic effects include hypocalcemia. hypomagnesemia, hyperkalemia, cardiac arrhythmias. and altered pulmonary hemodynamics. TREATMENT includes cardiac monitoring, monitoring serum calcium, fluoride, magnesium, and electrolytes; administration of IV calcium gluconate, correcting magnesium and electrolyte imbalance, and, in extreme cases, hemodialysis.
- 4. Calcium gluconate is normally supplied in ampules containing 10% calcium gluconate, Concentrations less than 10% are obtained by diluting with normal saline.

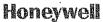
For additional reference charts or information on properties, storage and handling, or medical treatment for hydrofluoric acid, contact:

> Honeywell Specialty Materials 101 Columbia Road Morristown, NJ 07962

In the event of a medical emergency with this product, call the 24-hour Honeywell emergency telephone number: 800-498-5701

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This foldout chart is also available as a laminated 15" x 23" wall poster.



^{*} BenzaBorisim chlaride is a high molecular weight quaternary annuarium compound available as Zephitan® a Registered Trademark of Sanos Pharmaceuscals, New York, NY 10016