

HYDROGEN FLUORIDE -- Chemical Fact Sheet

<i>What is it?!</i>	Hydrogen Fluoride is a colorless to white, corrosive gas. It has a sharp, irritating odor. It readily dissolves in water to make a clear, acidic solution, Hydrofluoric Acid. Hydrofluoric Acid is a member of the “mineral acid” family, a group of strong acids. Use of Hydrofluoric Acid, where possible, is a safer alternative than Hydrogen Fluoride. Although Hydrogen Fluoride and Hydrofluoric Acid are corrosive, the most serious health effects of exposure are from the fluoride ion’s aggressive and destructive penetration of tissues. The onset of symptoms from exposure may be delayed.
<i>Where does it come from?</i>	It is made by mixing Sulfuric Acid with the mineral Fluorspar.
<i>What are the common uses for it?</i>	Etching glass and enamel Removing rust Manufacture of silicon semiconductor chips Manufacture of fluorinated chemicals Petroleum refining (not in Contra Costa County) Manufacture of stainless steel
<i>How is it transported in CCC?</i>	Hydrogen Fluoride gas and Hydrofluoric Acid is shipped by railcar.
<i>How is it stored in CCC?</i>	Hydrogen Fluoride is stored in refrigerated and pressurized tanks.

Health Hazards from Exposure

<i>Exposure Route</i>	<i>Symptoms</i>	<i>First Aid</i>
Inhalation (low concentrations)	Irritates nose, throat and lungs Moderate to severe irritant, effects can be delayed. Burning Sensation Difficulty breathing, coughing, choking	Remove to fresh air. Seek medical attention.
Inhalation (high concentrations & prolonged exposure)	Burning sensation Coughing, sore throat Nausea, vomiting, abdominal pain Labored breathing Burns to respiratory tract, death	Remove to fresh air, get medical attention including oxygen administration. Initiate CPR if breathing has stopped.
Eyes	Severe irritation of eyes Burning/pain Watering of eyes, swelling, eye burns	Rinse eyes with water for at least 5 minutes. Seek medical attention.

Skin	Irritates, burns and penetrates skin, burning/discomfort Redness, pain Burns, scarring	Wash skin with soapy water. Seek medical attention. Administer calcium or magnesium-based medication.
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Contra Costa RMP/CalARP Companies that
Use, Store or Manufacture this Chemical²

Corteva Agrisciences

For More Information

US Environmental Protection Agency and Technology Transfer Network	www.epa.gov/swerceppo www.epa.gov/ttn/uatw/hapindex.html	(800)535-0202 EPCRA Hotline (919)541-0888
National Institute of Occupational Safety & Health and the Agency for Toxic Substances and Disease Registry	www.cdc.gov/niosh http://atsdr1.atsdr.cdc.gov:8080/hazdat.html	(800)477-1544
Occupational Safety and Health Administration	www.osha.gov www.osha-slc.gov/ChemSamp_data	(202)219-8151 or (202)219-7056
ChemFinder®	http://Chemfinder.camsoft.com	(800)315-7300
International Safety Cards	http://siri.org/msds/mf/cards/list.html	
SDS Sites	www.msdonline.com	
Poison Control Center	www.calpoison.org	(800) 876 - 4766
California Health Service Department Sacramento	www.dhs.ca.gov	(916) 540 - 3014
Contra Costa County Health Services – Hazardous Materials Department	www.cchealth.org/groups/hazmat	(925) 646 – 2286

This is a brief summary of information on this chemical. For more detailed information you can obtain a Safety Data Sheet from Contra Costa Health Services. You can also call any of the companies listed above for more information.

¹This information was obtained from the Agency for Toxic Substances and Disease Registry website.

²The companies listed were obtained from Business Plans submitted to Contra Costa County Health Services Department.