



# MSA Gas Detection System

[ Ultima X® Gas Monitor Series  
for HF Monitoring ]

## Hydrogen Fluoride (HF)

Hydrogen Fluoride (HF) is a common industrial compound used in various applications, such as glass etching, refining, brass and crystal cleaning, as well as manufacturing of fluorine, refrigerants, ceramic steel, silicon semiconductor chips, and automotive cleaning products. Other uses for HF are found in commercial rust removal, metallurgy, oil exploration, electroplating, and dental laboratories.

HF is non-flammable, highly corrosive and very toxic with a pungent odor. It reacts readily with water (including humidity) to form hydrofluoric acid, which is highly irritating to the skin, eyes and respiratory tract. Exposure to HF can also result in heart damage, joint pain, bone decalcification, and corrosion of the esophagus. Injury from HF can occur due to accidental splash or other skin contact as well as gaseous exposure.

## MSA HF Sensor Performance

- Detection well below the ACGIH 3 ppm ceiling value for HF
- Fast, reliable detection
- Easy calibration with HCL span gas cylinder (MSA PN 10053747)

## Product Description

## MSA Ultima X® HF Sensor Specifications

MSA's Ultima X Series Gas Monitors, for the detection of oxygen, combustible and toxic gases, feature:

- Sensor disconnect-under-power without declassifying a hazardous area
- Interchangeable smart sensors; no reconfiguration required
- Advanced LCD display; detailed, scrolling messages
- Alternating display for sensor reading and gas type
- One circuit board; increased reliability and easier serviceability
- Optional relay contacts for Fault and three levels of Alarm

With the Ultima X Series Monitors, you are assured of the latest sensing technology from an industry leader with more than 85 years of experience.

For more information on the Ultima X Series Gas Monitor, see data sheet #07-2051.

*Note: This is a representative description of this product and its possible applications. Contact MSA Custom Products at [customproducts@MSAnet.com](mailto:customproducts@MSAnet.com) for information on customizing this unit to fit a specific need.*

Gas Types	Combustibles, oxygen, toxics
Power Input	7-30VDC (oxygen and toxics) 7-30VDC @ 450mA maximum (combustibles)
Signal Output	4-20mA 2-wire current sink 4-20mA 3-wire current source
Hydrogen Fluoride (HF) Sensor Performance	Range 0-10 PPM Display Resolution 0.1 PPM Detection Limit 0.2 PPM Response Time T50 <25 Secs., T90 < 75 Secs. (HCl span gas) Operating Temperature Range: -0°C to +40°C (32°F to +104°F) Extended Temperature Range: -20° to 40°C (-4°F to 104°F)



Note: This Data Sheet contains only a general description of the product shown. While uses and performance capabilities are described, under no circumstances should the product be used except by qualified, trained personnel, and not until the instructions, labels or other literature accompanying the product have been carefully read and understood and the precautions therein set forth followed. Only they contain the complete and detailed information concerning this product.

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