

GasDetector

Honeywell Gas Detectors

Serve Emergency Backup Role in U.S. Rocket Launch to Destroy Spy Satellite



A U.S. Standard Missile 3 (SM-3) enabled by Honeywell technology recently shot down a rogue U.S. spy satellite in space carrying over 1000 pounds of hydrazine, a highly toxic chemical used in rocket fuel. Meanwhile, Honeywell Analytics gas detection technology played a critical backup role in the operation: the company's Single Point Monitor (SPM) was deployed at over 25 FEMA locations throughout the United States to monitor for hydrazine gas clouds in the event that the chemical was attached to any debris that fell to earth.



Honeywell SPM



Honeywell Chemcassette®

Nelson Rivera, Honeywell Analytics marketing manager for the High Tech Line of Business, said that the SPM demonstrates the proven colorimetric detection technology required to monitor hydrazine down to parts per billion (ppb) gas concentration levels. Honeywell Analytics is proud to report that the SPM monitor in different versions has been used by NASA for hydrazine monitoring since the 1970s.

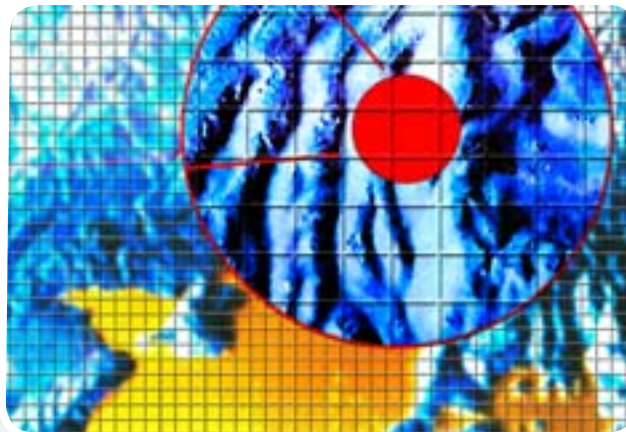
Hydrazine: An Awesome Power — and Danger

Hydrazine (N_2H_4) is a chemical compound derived from ammonia and liquefied for use as propellant in rocket fuels. It stores easily and does not require an oxidizer for ignition, as do other chemical fuel igniters. Today it is used by nearly every spacecraft's on-board thrusters including Titan, Voyagers 1 and 2, and the International Space Station's auxiliary power units.

The problem with hydrazine is that it is extremely toxic and corrosive. At low levels of exposure, it causes coughing and lung and throat irritation; at higher levels, tremors and nausea; with prolonged

exposure, liver and kidney damage. When a Space Shuttle lands, astronauts routinely are required to remain inside until special trucks dispatched to the site can test the air around the space vehicle.

Effective hydrazine monitoring requires a sensing technology that is fast and responsive at parts per billion gas concentration levels. Honeywell Analytics' Single Point Monitor uses the company's patented Chemcassette® technology, wherein a special chemically impregnated paper tape that is highly specific to hydrazine reacts to the gas with "proof of evidence" detection that shows a



change in color or stain on the paper. The chemical methods are specially formulated and have been developed over 25 years of testing in a controlled laboratory environment and industrial field use. The Chemcassette paper tape is available in 33 "flavors" for detecting a wide range of industrial gases, chemicals and unidentified chemicals and odors.