**Chemical of the Week – Part 2**

| Hazard Profile | |
|---|---|
| Chemical Name and Pseudonyms | Fluorine, Fluorine-19, F2, Difluorine |
| UN Number | 9192 (cryogenic gas), 1045 (compressed gas) |
| Chemical Formula | $F_2$ |
| Hazards | Toxic, corrosive, oxidizing gas |
| PPE Considerations | Vapor protective CPC with SCBA |
| Fire Fighting Considerations | Appropriate extinguishing agent for adjacent flammable materials |
| Decontamination | Ventilation, soap and water, flooding water/flushing for exposed tissue |
| Detection and Monitoring | Colormetric, electrochemical sensor |
| **Chemical and Physical Properties** | |
| Physical State | Pale yellow gas with pungent odor |
| Vapor Pressure | >1 ATM |
| Boiling Point | -307°F |
| Vapor Density | ~1.3 |
| Specific Gravity | - |
| Miscibility | Reacts with water to form acidic solutions |
| Flash Point | - |
| LEL/UEL | - |
| Autoignition Temp | - |
| pH | Will form acidic solutions in water |
| **Toxicity** | |
| IDLH | 26 PPM |
| PEL/REL/STEL | .1 ppm/.1 ppm/- |
| LD50 | - |
| LC50 | 185 PPM |
| Radioactive (Yes/No) | No |
| **Medical** | |
| Toxicological Considerations | Toxic by all routes. Requires specific antidote treatments |
| Signs/Symptoms of Exposure | Respiratory symptoms, skin and eye irritation and burns, eye damage, chest tightness, cardiac dysrhythmias, CNS |
| Medical Treatment | Fresh air, flush areas of contact with copious amounts of water, chemical specific treatment based on route of exposure |
| **Other Information** | |

| Reacts with all combustible materials, water, nitric acid, oxidizers, and inorganic compounds |
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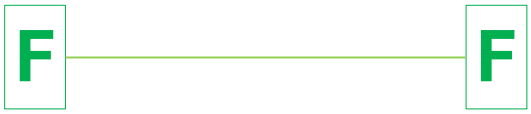
| **Chemical Structure** |
|  |