



# OXYGEN DIFLUORIDE

UN 2190

Shipping Name: Oxygen difluoride  
Other Names: Difluorine monoxide  
Fluorine monoxide  
Fluorine oxide



- WARNING!**
- **EXPLOSIVE ! EXPLODES UPON CONTACT WITH AIR AND WATER!**
  - **POISON! BREATHING THE GAS CAN KILL YOU! SKIN AND EYE CONTACT CAUSES SEVERE BURNS AND BLINDNESS!**
  - Firefighting gear (including SCBA) does not provide adequate protection. If exposure occurs, remove and isolate gear immediately and thoroughly decontaminate personnel
  - **STRONG OXIDIZER! WILL INCREASE THE INTENSITY OF A FIRE; MAY CAUSE FIRE UPON CONTACT WITH COMBUSTIBLES!**

<b>Hazards:</b> <ul style="list-style-type: none"><li>● Gas is heavier than air and will collect and stay in low areas</li><li>● Container may BLEVE or explode when exposed to fire</li><li>● Forms explosive reactions with adsorbents like silica gel, alumina and molecular sieve</li><li>● Contact with liquid may cause frostbite</li><li>● Decomposition products upon heating include toxic fluorine gas</li></ul>	<b>Description:</b> <ul style="list-style-type: none"><li>● Colorless gas</li><li>● Foul odor</li><li>● Shipped and stored as a compressed gas</li><li>● Moderately soluble in water and reacts slowly in water to form hydrofluoric acid</li><li>● Nonflammable</li><li>● Vapors are heavier than air and will collect and stay in low areas</li></ul>
<b>Awareness and Operational Level Training Response:</b> <ul style="list-style-type: none"><li>● <b>DO NOT ATTEMPT RESCUE!</b></li><li>● Stay upwind and uphill</li><li>● Determine the extent of the problem</li><li>● <b>BACK OFF!</b> - Isolate a wide area around the release or fire, deny entry and call for expert help</li><li>● Remove all ignition sources</li><li>● For container exposed to fire evacuate the area in all directions because of the risk of BLEVE or explosion</li><li>● Evacuate or shelter in place the immediate area and downwind for a large release</li><li>● Notify local health and fire officials and pollution control agencies</li><li>● If contaminated runoff enters waterways, notify downstream users of potentially contaminated water</li></ul>	<b>Operational Level Training Response:</b> <p>RELEASE, NO FIRE:</p> <ul style="list-style-type: none"><li>● Stop the release if it can be done safely from a distance</li><li>● Use large amounts of water well away from the material to disperse vapors - contain runoff</li><li>● Ventilate confined area if it can be done without placing personnel at risk</li></ul> <p>FIRE:</p> <ul style="list-style-type: none"><li>● Material does not burn; fight surrounding fire with an agent other than water; if water must be used, use it in flooding quantities</li><li>● If material is not leaking, cool exposed containers with large quantities of water from unattended equipment or remove intact containers if it can be done safely</li><li>● If cooling streams are ineffective (unvented container distorts, bulges or shows any other signs of expanding), withdraw immediately to a secure location</li></ul>

## First Aid:

- **DO NOT ATTEMPT RESCUE!**
- Provide Basic Life Support/CPR as needed
- Decontaminate the victim as follows:
  - ◆ Inhalation - remove the victim to fresh air and give oxygen if available
  - ◆ Skin - remove and isolate contaminated clothing (including shoes) and wash skin with soap and large volumes of water for 15 minutes
  - ◆ Eye - rinse eyes with large volumes of water or saline for 15 minutes
  - ◆ Swallowed - do not make the victim vomit
- Victims should be examined by a physician as soon as possible
- Frostbite - warm injured area in very warm water
- Toxic effects may be delayed
- For skin burns decontaminate with water and apply a clean dry dressing
- Note to physician: skin burns can be treated with calcium gluconate gel

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