

# 二氟化氧 Oxygen Difluoride

## 1、产品介绍 Product introduction

二氟化氧（OF<sub>2</sub>），分子量为 54.0，沸点为-144.8℃，是一种无色气体，冷冻后成为淡黄色液体。由于氟的电负性大于氧，电子向氟原子偏移，故其中氧为正二价，氟为负一价。纯二氟化氧在玻璃容器中稳定，是最稳定的氟氧化合物，200℃以上分解成氧气和氟气，可用作极强的氧化剂和氟化剂，也用于制取氧正离子盐。

Oxygen difluoride (OF<sub>2</sub>) is a colorless gas with the molecular weight of 54.0 and boiling point of 144.8℃, it is pale yellow liquid when it is frozen. Since fluorine is more electronegative than oxygen and the electron migrates toward fluorine atoms, oxygen has a charge of plus two and fluorine has a charge of minus one. Pure oxygen difluoride is stable in glass container, it is one of the most stable fluorine oxygen compounds, it decomposes into oxygen and fluorine above 200 °C, it can be used as a strong oxidant and fluoridizer and also used for oxygen cation salts.

## 2、产品指标 Quality specification

项目 Items	单位 Units	指标 Index
二氟化氧 Oxygen difluoride (OF <sub>2</sub> ) ≥	Vol.%	99.5
四氟化碳 Carbon tetrafluoride (CF <sub>4</sub> ) ≤	Vol.ppm	10
氮气 Nitrogen (N <sub>2</sub> ) ≤	Vol.ppm	10
氧+氩 Oxygen+Argon (O <sub>2</sub> +Ar) ≤	Vol.ppm	20
一氧化碳 Carbon monoxide (CO) ≤	Vol.ppm	10
二氧化碳 Carbon dioxide (CO <sub>2</sub> ) ≤	Vol.ppm	5
氧化亚氮 Nitrous oxide (N <sub>2</sub> O) ≤	Vol.ppm	10
氟化氢 Hydrogen fluoride (HF) ≤	Vol.ppm	35

### 3、产品用途 Application

二氟化氧 200℃ 以上可分解成氧气和氟气，用作极强的氧化剂和氟化剂，是化学合成工业的重要原料，应用领域广泛，用于氧化和氟化反应。

Oxygen difluoride decomposes into oxygen and fluorine above 200°C, it is used as a strong oxidant and fluoridizer, and OF<sub>2</sub> is an important raw material for chemical synthesis industry with wide application field, it is used for reaction of oxidation and fluorination generally.

### 4、包装、贮藏 Packaging and storage

二氟化氧用涂敷了聚四氟乙烯层的钢瓶存放，在避光的低温干燥环境下密封贮藏。具体包装规格可根据用户要求定制。二氟化氧储存于阴凉、通风的库房中，远离火种、热源，防止受潮。应与易（可）燃物、食用化学品分开存放，切忌混储。储区应备有泄漏应急处理设备。

Oxygen difluoride is sealed in cylinder coated with PTFE and stored in a microthermal and dry environment away from light. Specific packaging specifications can be customized according to user requirements. Oxygen difluoride is stored in a shady and ventilated storeroom away from fire and heat source, protecting against moisture. It should be separately stored with inflammable (combustible), edible chemicals. The storage area shall be equipped with equipment for emergency.