

## Oxygen-18, $^{18}\text{O}_2$ .



$^{18}\text{O}_2$  is often used as a cyclotron target in the production of the radioisotope  $^{18}\text{F}$ .  $^{18}\text{F}$  derivatives have clinical uses in positron emission tomography (PET).  $^{18}\text{O}_2$  also has applications as a tracer molecule in material science and in plant biology.

### Physical and Chemical Properties

|                     |               |
|---------------------|---------------|
| Chemical Purity     | ≥99.9%        |
| Isotopic Enrichment | ≥97%          |
| Natural Abundance   | 0.2%          |
| Atomic Number       | 8             |
| Mass Number         | 18            |
| Neutron Number      | 10            |
| Atomic Mass         | 17.9991610(7) |
| Spin                | +0            |

### Maximum Impurities

| COMPONENT | CONCENTRATION (%) |
|-----------|-------------------|
| Nitrogen  | ≤250ppm           |
| Hydrogen  | ≤50ppm            |
| Water     | ≤5ppm             |

A large variety of cylinder sizes and valve options are available. Please inquire about specific packaging needs.

### U.S. Shipping information

The following information is for U.S. domestic shipments only.

|                                      |                         |
|--------------------------------------|-------------------------|
| Proper shipping name                 | Oxygen                  |
| CAS #                                | 7782-44-7               |
| Hazard class number and description: | 2.2 (Non-Flammable Gas) |
| UN identification number             | UN 1072                 |
| DOT label(s) required                | Oxidizer                |

### Linde Electronics and Specialty Gases

One Greenwich Street, Suite 100, Stewartville, NJ 08886

Phone +1.908.329-9700 or +1.800.932-0624, Fax +1.908.329-9740, [www.lindeus.com](http://www.lindeus.com)