



## TECH NOTE

ISO 9001:2008  
ISO 14001

### SEALING ELEMENTS FOR OXYGEN SERVICE APPLICATIONS

To most of us, oxygen means life; after all, we breath it all the time. But 50 years ago, the Apollo I fire that killed three astronauts was a grim reminder that pure oxygen constitutes a perilous oxidizing environment where safety has to be foremost. Therefore with oxygen service in industry, all components are critical, including sealing elements. Institutions such as ASTM and NFPA (National Fire Protection Agency) specify that sealing components must not only be resistant to pure oxygen but also follow a special preparation and cleaning process to avoid risky contamination and provide the necessary degree of safety.

Oxygen service has many inherent hazards. Virtually all organic and inorganic materials will react with gaseous or liquid oxygen at elevated temperatures and pressure potentially causing a fire or explosion.

Gaskets and packing are considered clean when the removal of organic and inorganic contamination is certified. Oxygen cleaning service must guarantee the absence of particulates, fiber, oil, grease, and other contaminants, providing a gasket or packing that will meet oxygen service criteria as required by a standard that governs the sealing element in contact with oxygen.

Robco can provide the required materials and cleaning service. We offer a variety of sealing materials for oxygen service: from PTFE-based sheet such as TopChem to compressed sheets such as Quantum or C4500 that have passed the BAM oxygen test (**German Federal Institute for Materials Research and Testing**) to Robco 1120 braided compression packing made of 100% PTFE.

We will be happy to assist you with a recommendation at [info@robco.com](mailto:info@robco.com) or by calling 514-367-2252.

Work safely.

