

Oxygen-Safe Lubrication – Solutions for Reactive Atmospheres



Challenge:

In applications with more than 21% oxygen concentration or with pure gaseous/liquid oxygen, the highest safety standards apply. Common fields include:

- Oxygen valves and fittings in industry and medical technology
- Oxygen lances in steel production
- Pumps and compressors in gas logistics
- Diving and rescue systems

Requirements:

- Non-flammable and chemically inert - conventional lubricants pose explosion/fire risks
- Oxygen compatibility at pressures up to 450 bar (gas & liquid)
- Material compatibility with plastics, elastomers, and metals
- No residues or outgassing - essential for operational safety
- Compliance with legal and safety standards (e.g. BAM approval)
- Only specially formulated lubricants meet these criteria and ensure safe, reliable performance in oxygenrich environments

Solution:

TURMOXYGEN – Safety meets performance.

LUBCON's TURMOXYGEN lubricants are specially designed for use in oxygen applications and tested by BAM for oxygen compatibility. They offer maximum safety and top technical performance.

Key products:

TURMOXYGEN LCO 27

NSF H1-certified, safe for incidental food contact

- For gaseous and liquid oxygen up to 450 bar
- Temperature range: -40 to +260°C
- Non-flammable, chemically inert, high-pressure resistant

TURMOXYGEN LCO 25 / LCO 36

For steel production and diving systems

- Long service life, resistant to O₂, steam and heat
- Typical uses: seals, valves, slides, lances

TURMOXYGEN 130 FLUID / LC 40 FLUID

For pumps, compressors, tankers, and gearboxes

- Suitable as hydraulic and compressor oil in O₂ systems
- BAM-tested: 110 bar (gas) and 2 bar (vacuum)

Result:

- ✓ Safe operation even under reactive conditions
- ✓ BAM-tested and approved
- ✓ Wide range of applications in industry, medicine, food, and special tech
- ✓ H1-compliant, chemically inert, excellent material compatibility