

Technical Bulletin

Barrier Fluid is a formulated, ready-to-use mixture of USP/industrial grade propylene glycol and de-ionized water with a tailored corrosion-inhibitor package and defoamer. It provides freeze protection, lubrication for mechanical seals and bearings, and corrosion control in closed systems where a low-toxicity fluid is preferred.

Application

Mechanical Seal Systems

- As a pressurized or unpressurized barrier/buffer fluid for double mechanical seals in pumps, agitators, and mixers.
- Provides lubrication, cooling, and protection of seal faces, extending seal life and reducing downtime.

Closed-Loop Cooling & Heating Systems

- Used as a heat-transfer medium where freeze protection and corrosion control are required.
- Suitable for cooling water jackets, compressor systems, and auxiliary equipment.

Chemical & Petrochemical Plants

- As a seal barrier fluid in rotating equipment handling aggressive or hazardous process fluids.
- Protects against cross-contamination between process side and atmosphere.

Power Generation & Utilities

- For barrier systems in boiler feed pumps, condensate pumps, and circulation pumps.

Marine & Offshore Applications

- Suitable as a barrier/buffer fluid for mechanical seals in marine pumps, compressors, and deck machinery operating in cold or variable climates.

Usage

- **Use:** Designed as a barrier fluid for mechanical seal systems and as a heat transfer/antifreeze fluid in closed-loop systems. Not for ingestion or food contact.
- **System preparation:** Flush system thoroughly to remove oils, scale and residues before filling. For best corrosion protection, fill with supplied product (do not mix with unknown fluids).
- **Top-up:** Use only the same product to top up. If mixing with other glycols, check compatibility and inhibitor chemistry.
- **Monitoring:** Periodically test sample for pH, freeze point, inhibitor concentration and conductivity. Replace fluid if contamination or degraded inhibitor levels are detected.

Key Features

- Low toxicity alternative to ethylene glycol (reduced ingestion hazard).
- Good freeze protection for typical industrial applications.
- Corrosion inhibition for ferrous and non-ferrous metals (with inhibitor package).
- Compatible with common elastomers and seal materials when tested (see compatibility).
- Ready-to-use (no onsite dilution required).