



# DuraClear™ Crystal 7

## High performance synthetic barrier fluid

*DuraClear Crystal 7 combines exceptional lubricating properties with comprehensive chemical compatibility for optimum performance as a mechanical seal barrier fluid.*



### **Broad chemical compatibility barrier fluid for harsh chemical environments**

Modern chemical and petrochemical plants continue to drive higher standards for personnel and environmental safety. Upgrading rotating equipment with dual seals operating with a pressurized barrier fluid provides plants the capability to eliminate process fluid emissions.

To maximize the benefits of dual seals, a barrier fluid must be selected that is environmentally safe, nonreactive with the process fluid, and a good mechanical seal face lubricant. Finding a barrier fluid with all of these properties including compatibility with harsh acids, bases, solvents, and other chemicals, can be challenging.

### **Strong chemistry enables strong performance**

DuraClear Crystal 7 is a perfluoropolyether (PFPE) based fully synthetic oil. Comprised of fully bonded oxygen, fluorine and carbon atoms, this extremely stable molecule is equally extremely inert.

- Nontoxic
- Nonreactive
- Nonoxidizing
- Colorless
- Odorless
- Nonflammable
- Does not degrade with use or temperature
- Does not coke or crystallize
- Environmentally friendly
- Food grade



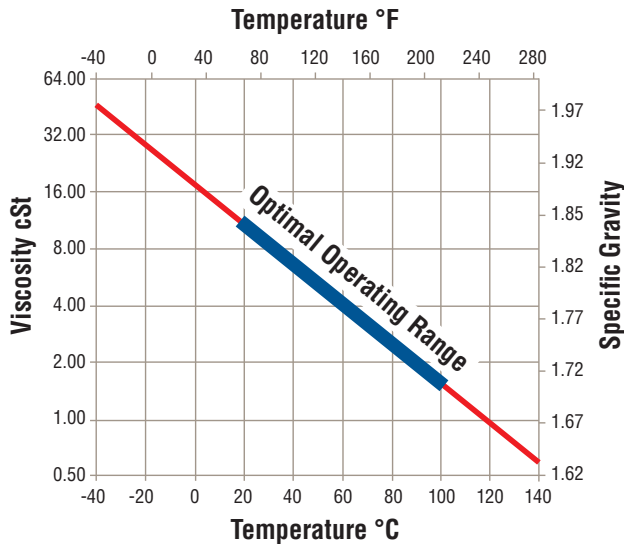
### **DuraClear Crystal 7 barrier fluid is compatible in all chemicals where mechanical seals are used**

- Sulfuric acid
- Nitric acid
- Hydrofluoric acid
- Hydrochloric acid
- Phosphoric acid
- Hydrogen Sulfide
- Potassium Hydroxide
- Sodium Hydroxide
- Ammonia
- Methanol
- Chlorine
- Fluorine
- Bromine
- Solvents
- Strong oxidizers
- Caustics

Based on extensive testing and analysis of DuraClear Crystal 7 within its recommended temperature range, there are no known compatibility limitations with process fluids or seal materials of construction.

### **Compatible with all seal face materials**

- Carbons
- Silicon Carbides
- Tungsten Carbides



**Recommended process fluid temperature range**



**Barrier fluid operating range**



**Optimal barrier fluid operating range**



DuraClear Crystal 7 can be applied as a barrier fluid in services with process temperatures outside the stated range when the barrier system is properly designed and maintained. Contact your Flowserve representative for technical support on proper setup and operation of the barrier system for long term equipment reliability.

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 find out more about Flowserve Corporation  
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**The clear upgrade for Chlorotrifluoroethylene (CTFE) fluids**

DuraClear Crystal 7 is a Perfluoropolyether (PFPE) based oil which offers several benefits over ISO 7 grade CTFE fluids:

- Better compatibility with Lewis acids
- Better lubrication capability (lower seal face wear)
- More thermally stable
- No corrosive Chlorine in molecular chain
- Flatter viscosity curve vs temperature

**Typical Properties**

ISO grade of oil	7
Viscosity ASTM D445	16 cSt at 20°C (68°F) 8 cSt at 40°C (104°F) 2 cSt at 100°C (212°F)
Pour Point	<-70°C (<-94°F)
Density g/ml	1.89 at 0°C (32°F) 1.70 at 100°C (212°F)

Part Number C0295298ZZ – 2.8 Gallon Pail (10.6 Liters)

Part Number C0295299ZZ – 28 Gallon Barrel (106 Liters)

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