



# Pure Synthetic Mechanical Seal Barrier Fluid

## DuraClear™ 5-F, 17-F and 32-F

### Product description

DuraClear synthetic fluids are long-life, food-grade lubricants specially processed for use as barrier and buffer fluids for mechanical seals on rotating equipment requiring excellent chemical stability and compatibility.

DuraClear fluids are recommended for systems operating in high and low ambient temperature environments.

DuraClear synthetic barrier fluids meet 21 CFR 178.3570 requirements for lubricants with the possibility of incidental food contact. These are authorized by the USDA for use in federally inspected meat and poultry plants (H-1). All are non-toxic, non-hazardous, and contain no heavy metals.



### Typical properties\*

Property	DuraClear Product			
	5-F	17-F	32-F	
Oil type	Synthetic PAO			
ISO viscosity, ASTM D-445	5	17	32	
Viscosity index, ASTM D-2270	122	123	135	
Kinematic viscosity, SUS (cSt)	@40°C (100°F) per ASTM D-445	5.1 (43.7)	17.2 (85.8)	31.4 (161)
	@100°C (210°F)	1.7 (32.0)	3.9 (39.5)	6.0 (46.0)
Average molecular weight	280	440	530	
Density, lbm/gal (g/cc)	@16°C (60°F)	0.80 (6.7)	0.82 (6.8)	0.83 (6.9)
Specific gravity	@16°C (60°F)	0.79	0.82	0.83
Vapor pressure, mm Hg	@38°C (100°F)	0.05	0.003	0.0002
Specific heat, kJ/kg °C (BTU/lbm °F)	@38°C (100°F)	2.26 (0.54)	2.18 (0.52)	2.22 (0.53)
	@93°C (200°F)	2.43 (0.58)	2.51 (0.6)	2.38 (0.57)
Thermal conductivity, W/m °C (BTU/hr ft °F)	@-18°C (0°F)	0.147 (0.085)	0.157 (0.091)	0.159 (0.092)
	@38°C (100°F)	0.142 (0.082)	0.145 (0.084)	0.154 (0.89)
	@66°C (200°F)	0.135 (0.078)	0.140 (0.081)	0.150 (0.087)
	@149°C (300°F)	0.130 (0.075)	0.123 (0.071)	0.147 (0.085)
Pour point, °C (°F) ASTM D-97	-69 (-92)	-72 (-97)	-66 (-86)	
Flash point, °C (°F) ASTM D-92	160 (320)	216 (420)	240 (464)	
Fire point, °C (°F) ASTM D-92	174 (345)	256 (492)	268 (514)	
Auto ignition, °C (°F) ASTM D-2155	440 (227)	338 (640)	354 (669)	
Total acid number ASTM D-974	< 0.03	< 0.03	< 0.03	
Water content, ppm	< 75	< 75	< 75	
ISO cleanliness number	17/15	17/15	17/15	

\* These values are not intended for use in preparatory applications.

## Storage

It is recommended that Flowserve DuraClear containers are stored out of direct sunlight and protected from natural elements such as wind and rain. Storage temperature should be controlled between 4 and 37°C (40 and 100°F) and should not be exposed to rapid temperature changes. The environment should be free from large amounts of dust, debris or sand, which could contaminate the oil when the containers are opened for use. The shelf life is indefinite if stored indoors, in unopened containers, and in a climate-controlled area.

Once a DuraClear container's seal is broken, the risk of dust, dirt and weather ingress goes up considerably. Flowserve offers inspection and recertification for DuraClear containers which are suspected of being contaminated or stored improperly. Please contact your Flowserve representative for more information.



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FTA114-01 (EN/AQ) November 2023