SINCE 1839
Schaeffer's
SPECIALIZED LUBRICANTS

TECHNICAL DATA

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ISO 9001 CERTIFIED

620 SYNQUENCH

Synquench is a polyol ester base fire resistant hydraulic fluid recommended for hydraulic applications where potential fire hazards exist.

Synquench is blended from the highest quality polyol ester base fluids available which provide the following advantages:

- Excellent lubricity characteristics.
- Excellent viscosity-temperature relationship. These polyol esters provide a viscosity index greater than 200 which allows the fluid to exhibit little change in viscosity with changes in temperature and provide maximum hydraulic efficiency and minimum difficulty in operating over a wide range of temperatures.
- Low acid numbers and hydroxyl values provide excellent resistance to the formation of varnish and lacquer deposits, especially under high temperature conditions which results in increased fluid stability and extended service life.
- High flash point autoignition temperatures results in a fluid that is more difficult to ignite and therefore, safer to use than petroleum oils.
- Excellent low temperature properties.
- Excellent resistance to thermal degradation.

Blended into these polyol ester base fluids is a highly specialized additive package which provides Synquench with exceptional anti-wear, rust and oxidation inhibiting, corrosion inhibiting and demulsibility properties.

Synquench is compatible with all ferrous and non-ferrous metals and their alloys and with the following elastomers:

Elastomers	Compatibility
Fluroro-elsatomers (Viton®, Teflon®)	Satisfactory
Nitrile Buna N	Satisfactory
Polyurethane	Satisfactory
Nylon	Satisfactory
Silicon Rubber	Satisfactory
Butyl	Satisfactory but with reduced life
Ethylene Propylene	Satisfactory but with reduced life
EPR	Satisfactory but with reduced life
Neoprene	Satisfactory but with reduced life
Low Nitrile Buna N	Satisfactory but with reduced life

Synquench has a specific gravity that is less than water. This aspect, in addition to its excellent demulsibility properties, allows it to be removed from ponds and collection tanks by standard skimming techniques.

Synquench is relatively non-toxic and does not require any industrial handling or health hazard precautions. However, it is suggested that standard industrial hygiene be practiced. Precautions can also be taken by the use of protective goggles and gloves.

Synquench, like any other synthetic fluid, under the proper circumstances, will burn. However, unlike some synthetic base fluids when burned, Synquench does not evolve large volumes of dense and noxious smoke and fumes.

Synquench meets and exceeds Denison HF-5, Sperry Vickers and Factory Mutual's Class II less hazardous fluid rating.

Installation

To Convert from Other Polyol Ester Fluids, Phosphate Esters or Oil-Synthetic Blends:

Synquench is compatible and miscible with polyol esters, phosphate esters and oil-synthetic blends, as long as the used fluids are in good condition and contain no water. Simply add Synquench to the system, or to completely convert, drain the old fluid (it can be used elsewhere) and recharge with Synquench. Flushing is not necessary.

To Convert from Water Containing Fluids:

Water containing fluids such water glycols, inert emulsions and thickened high water content fluids must be thoroughly drained and the system flushed with Synquench. For optimum performance, Synquench should have a water content less than 1%.

To Convert from Petroleum Oil-Based Fluids:

Completely drain and recharge system with Synquench. However, to preserve the highest degree of fire resistance, petroleum oil residual should be less than 5%. Depending upon the system design, this may require a flush with Synquench following the drain. In all conversions, consideration should be given to the use of proper seals and hoses. This is also an appropriate time for the cleaning and/or replacement of suction strainers and filter elements to ensure trouble free operation after the changeover.

TYPICAL PROPERTIES

ISO Grade	**68**
Specific Gravity 60°F	.91
Viscosity 40°C cSt (ASTM D-445)	61.2-74.8
Viscosity 100°C cSt (ASTM D-445)	12.51-14.32
Viscosity Index (ASTM D-2270)	200
Pour Point °F/°C (ASTM D-97)	-30°/-34.44°
Flash Point °F/°C (ASTM D-92)	560°/293.3°
Fire Point °F/°C (ASTM D-92)	640°/337.78°
Autoignition Temperature °F/°C	900°/482.22°
ISO Cleanliness Level	17/15
Total Acid Number (ASTM D-974)	1-1.5
Rust Test (ASTM D-664)	
Procedure A (Distilled Water)	Pass
Procedure B (Salt Water)	Pass
Copper Strip Corrosion Test (ASTM D-130) 3 Hours	1a
Four Ball Wear Test (ASTM D-2266) (1 hr/40kg/130°F)	
Wear Scar Diameter, mm	.45
Demulsibility (ASTM D-1401) Oil/Water/Emulsion	40-40-0
Time, min.	20
Foaming Tendency (ASTM D-892)	Pass
Pump Wear Test (ASTM D-2882)	
Weight Loss, Ring and Vane Combined, mg.	10-15