

CITGO CLARION® FOOD GRADE  
FR FLUID



Date 10/06

**DESCRIPTION:** CITGO Clarion Food Grade FR Hydraulic Fluid is a premium ISO 46 water-glycol based fire resistant fluid designed to provide optimum performance in hydraulic systems in applications where a product with NSF H-1 certification is required or desirable. This product has demonstrated in stringent testing the ability to “snuff out” ignition that can occur when a pressurized hydraulic leak comes into contact with a high temperature source.

- QUALITIES:**
- Approved by Factory Mutual under Group 1 (HFC) as a less flammable fluid. Approval number 3021353.
  - NSF H1 registered lubricants (formerly USDA H1) for use in food processing plants under the jurisdiction and inspection of the USDA.
  - Demonstrates lower overall system temperatures thereby providing better system performance.
  - Demonstrated lower power consumption resulting in additional energy savings.
  - Exceeds FDA 21 CFR 178.3570 for incidental food contact, {may not exceed 60 ppm}.

**APPLICATIONS:** CITGO Clarion Food Grade FR Fluid is designed for food process applications that require fire resistant product such as fryers, ovens, cookers and others.

Very high Viscosity Index, low pour point, and excellent heat transfer properties allow usage over a wide range of applications and operating conditions.

**Note:** As true with other water-containing fluids, the fluid should be monitored to ensure proper fire resistant properties.

**TYPICAL PROPERTIES:**

**CITGO CLARION FOOD GRADE FR FLUID**

Commodity Code	632503001
ISO Grade	46
Specific Gravity, at 60°F	1.06
Density lb/gal	8.84
Color	Water White
Appearance	Slight Haze
Viscosity cSt at 40°C	46
SUS at 100°F	214
Pour Point, ASTM D 97, °F (°C)	-58 (-50)
Flash Point, ASTM D 92	None
Rust Prevention G31-72 mod.	Pass
Copper Corosion, ASTM D 130	1A
pH.	8.9
Vane Pump Wear Test, mg wear	<25
Rust Test, ASTM D 665A	Pass
Bulk Modulus, ASTM D 6793	2.189 x 10 <sup>6</sup> kpa
NSF Registered	H1
FDA, 21CFR 178.3570	✓