

# Product Bulletin



## Fyrquel® L

**Fyrquel®**  
Power Generation Series



### Introduction

ICL-IP produces a wide range of triaryl phosphate ester fire resistant fluids for various industrial applications at our plant in Gallipolis Ferry, West Virginia, USA. Fyrquel products have been the worldwide leader in fire resistant fluids for the power generation industry for over 25 years/ Fyrquel products are used almost exclusively in major power generation markets such as the United States, France and Japan. In addition to superior products, ICL-IP provides a high level of technical service including a complete fluid testing program known as Fyr-Check.

ICL-IP has drawn on its extensive experience to develop a new fluid to meet the specific needs of LMZ systems.

### Fyrquel L

Fyrquel L is a triaryl phosphate ester fluid specifically developed to meet the critical needs of LMZ steam turbine hydraulic control systems. It can also function as the main lubricant in LMZ turbines. Fyrquel L provides:

- excellent fire resistance
- improved stability in the presence of moisture
- very low levels of toxicity

**TABLE 1—TYPICAL PHYSICAL PROPERTIES**

Property	Fyrquel L	Test Method
Appearance	Clear transparent liquid	
Kinematic viscosity		
at 100°C cSt	5.5	ASTM D445
at 50°C cSt	28	
at 40°C cSt	48	
Specific gravity @20/20°C	1,132	ASTM D1298
Total acid number mg KOH/g	0,03	ASTM D974
Foaming tendency @ 24°C ml	15	ASTM D892
Air release, min	< 1	ASTM D3427
Stability against hydrolysis		ASTM D2619
Acid No mgKOH/g	0,04	
sediment, %	<0,02	
Reaction of aqueous product, pH	6,0-8,0	ICL-IP method
Flash point, °C	250	ASTM D92
Fire point, °C	365	ASTM D92
Autoignition temperature, °C	730	ICL-IP method

## Compatibility

Fyrquel L has been specially designed to be compatible with the existing OMTI fluids. The Compatibility Guide, Table 2, lists materials which are suitable for use with Fyrquel L, and other phosphate esters. Primary attention should be paid to hose and elastomer materials. Standard paints and coatings will soften in the presence of phosphate esters although certain polyurethane, two-component epoxy resins and baked enamel finishes are generally resistant. ICL-IP recommends that all interior surfaces be left unpainted.

If you have any questions regarding compatibility or miscibility, please contact your ICL-IP representative.

## Maintenance

Fyrquel L is designed to provide long service life with minimal maintenance. For optimal performance, in-service fluid should be monitored on an ongoing basis. ICL-IP offers its customers a simple fluid testing service, Fyr-Check, which can detect problems such as water contamination or high particle count so that early corrective action can be taken.

ICL-IP has designed Fyrquel L to be stable in the presence of moisture. High water contamination, however, can affect fluid life and operational performance. Water should be removed as soon as possible in the event of a water leak into an operating system.

### Table 2- Compatibility Guide

#### Elastomer and Hose Compatibility

Viton® Fluorocarbon	Recommended
Butyl Rubber	Recommended
Ethylene Propylene Rubber	Compatible
Silicone Rubber	Compatible
Teflon® PTFE	Compatible
Nylon	Compatible
Buna N Nitrile Rubber	Not recommended
Natural Rubber	Not recommended
Neoprene Rubber	Not recommended

For more information about our products and to place an order, please contact your nearest ICL regional sales office

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