# Bulletin

## Fyrquel® EHC Plus - Advantages

**Key terminology**

Modern next generation triaryl phosphate ester
More sustainable design electro-hydraulic control fluid
Chemical name: Butylated triphenyl phosphate ester with low triphenyl phosphate
Trixylenyl phosphate-free modern phosphate ester design

**Overview**

Fyrquel® EHC Plus is a third generation self-extinguishing improved phosphate ester electro-hydraulic control fluid designed for steam turbine application directly replacing earlier generation phosphate ester fluids. If changing from a non phosphate ester fluid, contact your Fyrquel® Representative for technical assistance. It's made using a new phosphate ester base stock that features a more sustainable product design, is OEM approved and compatible with prior generation phosphate ester fluids.

**More Sustainable Product Design**

- More environmentally friendly – readily biodegradable, also like *all* Fyrquel® EH series fluids recyclable using the Fyr-Back® waste alternative program. Standard fluid disposal not needed. Not currently available in all regions.
- Lower cost supply - same high value-in-use self-extinguishing property but at a better price.
- More worker friendly MSDS and product labeling – no specific GHS hazard identification required. Made from modern base stocks that are trixylenyl phosphate free. Not classified under GHS nor regulated for transport.
- Designed for longer service life
- More thermally stable providing better resistance to fluid degradation.
- Better performance – improved air entrainment protection,
- Better quality - same needed low chlorine content, lower better fluid acidity, highest cleanliness design protecting valves and featuring a better resistivity specification.
- More secure supply – protected by a supply chain using more available modern base stocks.

**Application**

Fyrquel® EH series fluids are ISO 46 viscosity grade triaryl phosphate ester type *self-extinguishing* hydraulic fluids designed for steam turbine electro-hydraulic control system application. Visit www.fyrquel.com to view a short video demonstration of the self-extinguishing fire safety advantage of Phosphate Ester type fluids. This unique self-extinguishing property of phosphate ester fluids is the main reason that *only* phosphate ester fluids are specified for use by Steam Turbine OEMS. The latest edition of *NFPA 850 Recommended Practice for Fire Protection for Electric Generating Plants* was issued effective Jan 2010 and includes the 3.3.14.1 Definition *Fire Resistant Fluid: "*A listed hydraulic fluid or lubricant that is difficult to ignite and does not sustain combustion due to its low heat of combustion". Phosphate ester fluids satisfy this NFPA 850 definition, other type fluids do not. Fyrquel® fluids reduce risks of spray, lagging and pool fires when using petroleum based and other non self-extinguishing fluids. The fluids are optimally designed to protect from valve erosion, have non corrosive compatibility with all metals, have excellent lubricating properties for long pump life, are operationally stable for long fluid service life, maintain viscosity without shearing during service, have excellent air release and low chlorine contents. Other type fluids have 2-3 year limited service life. An advantage of phosphate ester fluids is that viscosity remains stable during service giving these fluids the longest service life.

**Fully intermixable and interchangeable with prior products**

Switching to the next generation Fyrquel® EHC Plus can be as simple as reservoir top-off. Contact your Fyrquel® Representative for a specific recommendation.

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