



# MAKER COMANDER BLUE EHC

## Description

Fire-resistant, high-performance hydraulic fluid, designed for use in electric-hydraulic control (EHC) systems in steam turbines, including systems that use fine-tolerance servo valves. As it is synthetic, any change from a universal fluid to a product of this nature must be subject to consultation as its compatibility with joints is notably different.

Used in steam turbine control systems in conventional or nuclear thermal power plants as a lubricant in gas turbines, and in combined-cycle plants meeting the high safety levels required for these uses.

This lubricant is classified as easily biodegradable, meaning it is much more environmentally friendly than mineral-based fluids. Additional benefits include: Self-extinguishing properties; high thermal, oxidation, and hydrolytic stability; and excellent lubrication properties.

## Properties

- Fire resistance (Mutual-Standard-6930)
- Heated circuit test – without ignition.
- Spray ignition (maximum burning persistence) 8 seconds.

## Hazardous substances classification:

- WHMIS Classification: not classified.
- Carcinogenic, mutagenic, and neurotoxic classification: not classified.
- Mutation testing: Negative for cells L5178 and BALB/c3T3.

## Quality levels, approvals and recommendations

- SIEMENS: TLV 9012 03\*
- GEK: 46357J
- ALSTOM: HTGD 690 149
- MUTUAL STANDARD: 6930

\*Formal approval



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## Technical specifications

	UNIT	METHOD	VALUE
ISO Viscosity Grade			46
Density at 20 °C	g/cm <sup>3</sup>	ASTM D4052	1,17
Kinematic viscosity at 100 °C	cSt	ASTM D445	5.5
Kinematic viscosity at 40 °C	cSt	ASTM D445	44,5
Pour point	°C	ASTM D97	-24
Flash point, open cup	°C	ASTM D92	262
Auto-ignition temperature	°C	ASTM D2155	565
Air release at 50 °C	min	IP 313	5
Foams: Sec I, II, III, stability	mL	ASTM D892	0/0/0
Biodegradability - 28 days	%	OECD 301B	61%

The above mentioned characteristics are typical values and should not be considered product specifications.