

# PHOSPHATE ESTERS

GRADE SPECIFICATION	UNIT	TEST METHOD	KANATOL Flameguard C 100	KANATOL Flameguard C 70	KANATOL Flameguard C 40	KANATOL Flameguard P 100	* KANATOL Flameguard I 100	* KANATOL Flameguard B 100
			TRI CRESYL PHOSPHATE	TRI CRESYL PHOSPHATE-70	TRI CRESYL PHOSPHATE-40	TRI PHENYL PHOSPHATE	TRI ISO PROPYL PHENYL PHOSPHATE	TRI BUTYL PHOSPHATE
APPEARANCE		VISUAL	CLEAR LIQUID			WHITE CRYSTALLINE FLAKES	CLEAR LIQUID	
COLOUR (Max.)	HAZEN	ASTM-D-1045-86	150	150	150	25	150	40
SPECIFIC GRAVITY at 25°C		ASTM-D-1045	1.17 ± 0.01	1.19 ± 0.01	1.210 ± 0.010	1.208 (at 60°C)	1.145 - 1.160	0.97 - 0.98
REFRACTIVE INDEX at 27°C		ASTM-1807	1.5500 - 1.5650	1.5500 - 1.5650	1.5500 - 1.5650	-	1.500 - 1.5550	1.4220 - 1.4260
MOISTURE CONTENT (Max.)	% By weight	Karl FisCher ASTM-E-203-01	0.10	0.10	0.10	0.10	0.10	0.10
ACIDITY as H <sub>3</sub> PO <sub>4</sub> (Max.)	% By weight	ASTM-D-1613	0.01	0.01	0.01	0.01	0.01	0.01
RESIDUAL/FREE ALCOHOL (Max.)	% By area	KOR/QCD/FP-3.4	0.05	0.05	0.05	0.05	0.05	0.20
ESTER CONTENT (Min.)	% By weight	GLC KOR/QCD/FP-4.7	99.00	99.00	99.00	99.00	99.00	98.00
CRESOLIC ESTER CONTENT (Min.)	% By area	GLC KOR/QCD/FP-4.7	99.00	70.00	40.00	-	-	-
O-ISOMER CONTENT (Max.)	% By area	GLC KOR/QCD/FP-4.7	0.50	0.50	0.50	-	-	-
VISCOSITY at 25°C	Cps	BROOK FIELD VISCOMETER ASTM-D-445	55 - 70	50 - 60	40 - 55	17.0 (at 60°C)	60 - 90	3.0 - 4.0
MELTING POINT	°C	IS - 5762 : 1970	-	-	-	47.5 -- 49.5	-	-
WATER SOLUBLE IMPURITIES (Max.)	Ppm	BS : 1998 : 1970	10	10	10	10	10	10
P CONTENT	%	KOR/QCD/FP-3.8	8.40 -- 8.50	8.70 -- 8.80	8.90 -- 9.10	9.40 -- 9.50	7.70 -- 7.90	11.60