



**Eni Clematis RL**, classified as RAE LA (Residual Aromatic Extract Low Aromatic), is a safe oil, not carcinogenic, with a low content of polycyclic aromatic hydrocarbons (PAHs) and a low value of mutagenicity index (MI).

**Eni Clematis RL** is a high viscosity, dark green oil manufactured from a solvent extraction of de-asphalted vacuum residue. It is used as extender oil in the production of rubbers and in the manufacturing of tyres and other rubber goods.

## PROPERTIES

Properties	Unit	Values		Typical	Method
		Min	Max		
Colour	-			D8	ASTM D 1500 ASTM D 6045
Density at 15°C	kg/m <sup>3</sup>	970	1005	973	ASTM D 1298 ASTM D 4052
Viscosity at 100°C	mm <sup>2</sup> /s	50	75		ASTM D 445
Flash point (COC)	°C	230			ASTM D 92
Flash point P.M.	°C	220			ASTM D 93
Pour point	°C		20		ASTM D 97 ISO 3016
Aniline point	°C	45	75	59	ASTM D 611
VGC (calculated with viscosity at 100 °C)	-	0.87	0.94		ASTM D 2501
Ca/Cn/Cp	% m/m			30/10/60	ASTM D 3238
Ca/Cn/Cp (calculated with VCG ASTM D2501 at 100°C)	% m/m			26/9/65	ASTM D 2140
Ca/Cn/Cp (calculated with VCG ASTM D2501 at 100°C no sulfur correction)	% m/m			32/28/40	ASTM D 2140
Glass transition temperature DSC	°C			- 35	ASTM E 1536
Refractive index at 20 °C	-	1.5350	1.5600		ASTM D 1747
Class of hydrocarbons by Clay gel chromatography	% m/m				ASTM D 2007
Saturated	-			20	
Polars	-			15	





Properties	Unit	Min	Max	Typical	Method
Aromatics	-			65	
Asphaltenes	-			Nil	
Sulphur	% m/m		6		ASTM D 1552; 4294; 2622
Distillation at 760 mmHg	°C				EN 15199-2
5% volume	-			435	
10% volume	-			460	
20% vol.	-			500	
50% volume	-			540	
Polycyclic Aromatic Hydrocarbons	mg/kg				EN 16143
-Benzo(a)pyrene(BaP)	-		<1		
Total sum of the following PAHs:	-		<10		
-Benzo(a)pirene(BaP)	-			-	
-Benzo(e)pirene(BeP)	-			-	
-Benzo(a)antracene(BaA)	-			-	
- Crisene (CHR)	-			-	
-Benzo(b)fluorantene(BbFA)	-			-	
-Benzo(j)fluorantene(BjFA)	-			-	
-Benzo(k)fluorantene(BkFA)	-			-	
- Dibenzo(a,h)antracene(DBAh A)	-			-	
Mutagenicity Index (mod. Ames test)	-		<0.4		ASTM E 1687

PAHs Legal limits – Reg. REACH, Annex XVII, Point 50 regarding the extender oils used for the production of tyres or part of tyres. It does not apply to other uses.

Mutagenicity Index - Limit value correlated with lack of classification as carcinogenic – see REACH Registration dossier.

