



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).

The product derives from a solvent extraction of de-asphalted vacuum residues, has a high viscosity and a dark green colour.

PROPERTIES

Properties	Unit	Values		Typical	Method
		Min	Max		
Colour	-			D8	ASTM D 1500 ASTM D 6045
Density at 15°C	kg/m ³	970	1005	973	ASTM D 1298 ASTM D 4052
Viscosity at 100°C	mm ² /s	50	75		ASTM D 445
Flash point (COC)	°C	230			ASTM D 92
Flash point (PM)	°C	220			ASTM D 93
Pour point	°C		20		ASTM D97 ASTM D6892 ASTM D7346 ISO3016
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 (calculated with VCG ASTM D2501 at 100°C)	% m/m			28/5/67	ASTM D 2140
Ca/Cn/Cp (calculated with VCG ASTM D2501 at 100°C no sulfur correction)	% m/m			34/22/44	ASTM D 2140
Glass transition temperature DSC	°C			- 35	ASTM E 1356 ISO 28343
Refractive index at 20°C	-	1.5350	1.5600		ASTM D 1747
Class of hydrocarbons by Clay gel chromatography	% m/m				ASTM D 2007
Saturates	-			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% volume	-			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)pyrene (BaP)	-			-	
- Benzo(e)pyrene (BeP)	-			-	
- Benzo(a)anthracene (BaA)	-			-	
- Chrysene (CHR)	-			-	
- Benzo(b)fluoranthene (BbFA)	-			-	
- Benzo(j)fluoranthene (BjFA)	-			-	
- Benzo(k)fluoranthene (BkFA)	-			-	
- Dibenzo(a,h)anthracene (DBAhA)	-			-	
Mutagenicity Index (mod. Ames test)	-		<0.4		ASTM E 1687

PHAs 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.





APPLICATIONS

- **Eni Clematis RL** is used as process and extender oil in the production of rubbers, in the manufacturing of tyres and other rubber goods. Moreover, given his chemical and physical characteristics is used in the bitumen sector as viscosity modifier and binder.

