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**Delivery Specification R – 33**  
**Light Fuel Oil**



**1. Scope**

This document specifies requirements and test methods for the commercial product **Light Fuel Oil**. The product is designated to be used as heating oil. It is applicable to heating oil for use in heating systems designed to run on this type of heating oil. Due to minimum limit of density and viscosity, the product is fuel oil and cannot be used for driving.

**2. Normative references**

This document incorporates provisions from other publications, cited at the appropriate places in the text.

**3. Sampling** Samples shall be taken as described in EN ISO 3170.

**4. Requirements and test methods** Test methods are indicated in Table 1.

All test methods referred to in this standard include a precision statement.

In cases of dispute, the procedures for resolving the dispute and interpretation of the results based on test method precision, described in EN ISO 4259, shall be used.

In cases of dispute concerning density, EN ISO 3675 shall be used.

In cases of dispute concerning sulfur, ASTM D 2622 shall be used.

When tested at the refinery, **Light Fuel Oil** must be in accordance with the limits specified in **TABLE 1**.

In order to certify product quality, for each lot delivered from the refinery will be provided a Conformity Certificate, according to the internal regulations.

**TABLE 1 - Requirements and test methods**  
**Light Fuel Oil**

Property	Unit	Limits		Test method		
		Min.	Max.			
Density at 15 °C	kg/m <sup>3</sup>	970	990	EN ISO 3675 ASTM D 7042		
Sulfur content	% (m/m)	-	1.0	EN ISO 8754 ASTM D 2622		
Pour point	°C	-	15	ASTM D 97		
Flash point, PM	°C	66	-	EN ISO 2719		
Carbon residue	% (m/m)	-	15	EN ISO 10370		
Ash content	% (m/m)	-	0.1	EN ISO 6245		
Asphaltenes content	% (m/m)	-	5.0	ASTM D 6560		
Water content	% (m/m)	-	0.5	ASTM D 95		
Water and sediment	% (m/m)	-	1.0	ASTM D 95 + ASTM D 473		
Viscosity at 50 °C	cSt	50	180	ASTM D 7042		
Metals	mg/kg			ASTM D 5863		
➤ Nickel					-	50
➤ Vanadium					-	70
➤ Natrium	-	80				
Net caloric value	Kcal/kg	9500	-	ASTM D 240		

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