

TOPAZ ENERGY LTD PRODUCT SUPPLY SPECIFICATION

IRISH INDUSTRIAL GAS OIL

BS2869-2006 Class A2 & D / IS225 1998			Winter	Summer	Spec test	IP / ASTM	Note
Applicable period			1/10 - 15/03	16/03- 30/09	Method	EquivMethod	(a)
Appearance			C & B, free from visible water and sediment at 15°C or at ambient whichever is higher.		Visual	D 4176	
Density at 15°C	kg/m ³		820.0 - 875.0	820.0 - 875.0	BS EN ISO 3675 BS EN ISO 12185	IP160 IP365	
Colour ASTM		max	3	3		D 1500	
Odour			Marketable	Marketable			
Cetane Number		min	45	45	BS 5580	D 613	(b)
Cetane Index		min	45	45	BS EN ISO 4264	IP380	
Viscosity at 40 °C	mm ² /s		1.5-5.5	1.5-5.5	BS EN ISO 3104	IP71	
Cloud Point	°C	max	-2	+3		IP219	
CFPP	°C	max	-12	-4	BS EN 116	IP309	(a)
Sulphur	%m	max	0.1	0.1	BS EN ISO 8754	IP336	
Copper Corrosion (3 hrs at 100 °C)			1	1	BS EN ISO 2160	IP154	
Hydrogen Sulphide			Pass	Pass		SMS231	
Carbon Residue (on 10% bottoms)	%m/m	max	0.3	0.3	BS EN ISO 10370	IP398	
Water	mg/kg	max	200	200	ASTM D 1744	UK 3367 IP438	
Sediment	ppm	max	24	24	BS EN ISO 3735	IP53	
Ash	%m/m	max	0.01	0.01	BS EN ISO 6245	IP4	
Flash Point	°C		60	60	BS EN 22719	IP404 / IP34	(c)
Strong Acid Number	mgKOH/g		Nil	Nil	BS 2000-139	IP139	
Total Acid Number	mgKOH/g	max	0.5	0.5		IP177	
Distillation					BS 7392	IP123 / D 86	
Recovered at 250 °C	%v	max	65	65	BS 7392		
Recovered at 350 °C	%v	min	85	85	BS 7392		
50% recovered	°C	max	240-305	240-305	BS 7392		
<i>Stability:</i>							
<i>Existent sludge</i>	mg/100ml	max	3	3		SMS2708	
<i>Potential – Existent sludge</i>	mg/100ml	max	2	2		SMS2709	
FAME	V/V	max	5	5		BS EN14078	
Lubricity-wear scar at 60 °C	U/m	max	460	460		HFRR	
Static Dissipator	mg/l	max	6	6			(d)

Tests in italics do not appear in the above specification but are additional tests required by Topaz Energy

Notes

- (a) Applicable periods refer to the distribution of fuel from the refinery. Distribution location's stocks should be managed such that from October 1st fuel supplied to end customers' meet the Winter Quality requirements Cold flow improvers are permitted to achieve the CFPP specification.
- (b) Cetane Number (CN) determination need not be carried out if the Calculated Cetane Index (CCI) is a minimum of 51. This figure is higher than that set in EN590. But until evidence of a correlation of CN to CCI in low Sulphur fuels can be demonstrated satisfactorily the higher CCI will be required.
- (c) Min 60°C applies ex refinery, min 60 °C for supplies ex terminal.
The figure of min 60°C is higher than that set in BS 2869 (min 58 °C) but is commonly agreed minimum within the UK Oil industry for many reasons. Eg. safety, switch loading, and most importantly the ability to market this fuel in the marine market where a minimum of Flash Point of 60°C is required
- (d) Static dissipator additive to be added. Target conductivity is 200 pS/m with an absolute minimum, in refinery tankage of 50 pS/m.