



Inver

Automotive Gas Oil

Meets IS 251:2012 BS 2869 2011

Table 1 — Characteristics of Class A2 marked gas oil for use in agricultural equipment, trains and off-road vehicles

Property	Unit	Limits		Test method
		Minimum	Maximum	
Kinematic viscosity at 40 °C Summer (16 March to 15 November) Winter (16 November to 15 March)	mm ² /s mm ² /s	2,0 1,5	5,5 5,5	I.S. EN ISO 3104
Density at 15 °C	kg/m ³	820,0	—	I.S. EN ISO 3675 or I.S. EN ISO 12185
Cetane number (See Note 1) or Derived cetane number		45,0 45,0	—	I.S. EN ISO 5165 BS 2000-498
Cetane index		45,0	—	I.S. EN ISO 4264
Carbon residue (on 10 % distillation residue) (See Note 2)	% (m/m)	—	0,30	I.S. EN ISO 10370
Distillation (See Note 3) recovery at 250 °C recovery at 350 °C	% (V/V) % (V/V)		65 85	I.S. EN ISO 3405 I.S. EN ISO 3405
Flash point °C (See Note 4)	°C	56	—	I.S. EN ISO 2719
Water content	mg/kg	—	200	I.S. EN ISO 12937
Particulate content	mg/kg	—	24	IP 415
Ash content	% (m/m)	—	0,01	I.S. EN ISO 6245
Sulfur content (See Note 5) At point of manufacture At point of final distribution	mg/kg mg/kg	— —	10,0 20,0	I.S. EN ISO 20846 I.S. EN ISO 20884
Copper strip corrosion (3 h at 50 °C)	rating	—	Class 1	I.S. EN ISO 2160
Cold filter plugging point Summer (16 March to 15 November) Winter (16 November to 15 March)	°C °C	— —	-4 -12	I.S. EN 116 I.S. EN 116
Lubricity, corrected wear scar diameter (wsd 1.4) at 60 °C	µm	—	460	BS 2000-450
Fatty acid methyl ester (FAME) content	%(V/V)	—	7,0	I.S. EN 14078
Oxidation stability (See Note 6) 0.0% - 7.0% FAME 2.0% - 2.0% FAME	g/m ³ h	— 20	25 —	I.S. EN ISO 12205 I.S. EN 15751
Strong acid number	mg KOH/g	zero	—	ISO 6618

NOTE 1 As an alternative to cetane number, for quality purposes, the cetane index (calculated in accordance with I.S. EN ISO 4264) may be used for fuels that do not contain additives to improve ignition quality.

NOTE 2 The limiting value for carbon residue is based on product prior to the addition of ignition improver, if used. If a value exceeding the limit is obtained on a finished fuel, alkyl nitrate presence should be calculated in accordance with

I.S. EN ISO 13759. If an ignition improver is present, the limit value for carbon residue of the product shall not be applied. Use of additives does not exempt fuels from conforming to the maximum 0,30 % (m/m) carbon residue prior to addition.



NOTE 3 Irish Revenue Commissioners requirements are as follows:

	Minimum	Maximum
Recovered at 240 °C [% (v/v)]	_____	50
Recovered at 340 °C [% (v/v)]	50	_____

NOTE 4 Where relevant, attention is drawn to the Dangerous Substances (Petroleum Bulk Stores) Regulations 1979, S.I. No. 313 of 1979, which define "petroleum Class III" as "petroleum when tested at normal atmospheric pressure in accordance with regulations under Section 20 of the Act (Dangerous Substances Act, No.10 of 1972) gives off a flammable vapour at a temperature exceeding 60° celsius".

NOTE 5 Sulfur measurement includes Revenue Commissioners approved marker.

NOTE 6 Oxidation stability under I.S. EN ISO 12205 is required for all fuels. I.S. EN 15751 is an additional requirement for fuels containing FAME at concentrations at, or, exceeding 2,0 % (V/V).

Table 2 — Characteristics of Class D marked gas oil for use in stationary applications

Property	Unit	Limits		Test method
		Minimum	Maximum	
Kinematic viscosity at 40 °C Summer (16 March to 15 November) Winter (16 November to 15 March)	mm ² /s mm ² /s	2,0 1,5	5,5 5,5	I.S. EN ISO 3104
Density at 15 °C	kg/m ³	820,0	—	I.S. EN ISO 3675 or I.S. EN ISO 12185
Cetane number (See Note 1) or Derived cetane number		45,0 45,0	—	I.S. EN ISO 5165 BS 2000-498
Cetane index		45,0	—	I. S. EN ISO 4264
Carbon residue (on 10 % distillation residue) (See Note 2)	% (m/m)	—	0,30	I.S. EN ISO 10370
Distillation (See Note 3) recovery at 250 °C recovery at 350 °C	% (V/V) % (V/V)		65 85	I.S. EN ISO 3405 I.S. EN ISO 3405
Flash point °C (See Note 4)	°C	56	—	I.S. EN ISO 2719
Water content	mg/kg	—	200	I.S. EN ISO 12937
Particulate content	mg/kg	—	24	IP 415
Ash content	% (m/m)	—	0,01	I.S. EN ISO 6245
Sulfur content	% (m/m)	—	0,10	I.S. EN ISO 8754
Copper strip corrosion (3 h at 50 °C)	rating	—	Class 1	I.S. EN ISO 2160
Cold filter plugging point Summer (16 March to 15 November) Winter (16 November to 15 March)	°C °C	— —	-4 -12	I.S. EN 116 I.S. EN 116
Lubricity, corrected wear scar diameter (wsd 1.4) at 60 °C	µm	—	460	BS 2000-450
Fatty acid methyl ester (FAME) content	%(V/V)	—	7,0	I.S. EN 14078
Oxidation stability (See Note 5) 0.0% - 7.0% FAME 2.0% - 2.0% FAME	g/m ³ h	— 20	25 —	I.S. EN ISO 12205 I.S. EN 15751
Strong acid number	mg KOH/g	zero	—	ISO 6618

NOTE 1 As an alternative to cetane number, for quality purposes, the cetane index (calculated in accordance with IS EN ISO 4264) may be used for fuels that do not contain additives to improve ignition quality.

NOTE 2 The limiting value for carbon residue is based on product prior to the addition of ignition improver, if used. If a value exceeding the limit is obtained on a finished fuel, alkyl nitrate presence should be calculated in accordance with IS EN ISO 13759. If an ignition improver is present, the limit value for carbon residue of the product shall not be applied. Use of additives does not exempt fuels from conforming to the maximum 0,30 % (m/m) carbon residue prior to addition





