

July 2020

TECHNICAL DATA SHEET
FURNACEFLAME
BS2869:2017 - Class D - Middle distillate fuel for heating applications.

| Property | Unit | Limits | | Test Method | Typical |
|---|-----------------------|---------|-----------|----------------------------|------------|
| | | Min. | Max. | | |
| Kinematic viscosity at 40°C | mm ² /s | 2.00 | 5.00 | IP 71 | 2.30 |
| Density at 15°C | kg/m ³ | 820.0 | — | IP 365 | 824.0 |
| Carbon residue (micro) [10 % (V/V) distillation bottoms] | % (m/m) | — | 0.30 | ASTM D 4530 | <0.01 |
| Distillation: | | | | | |
| recovery at 250°C | % (V/V) | — | | | 65 |
| recovery at 350°C | % (V/V) | | 85 | — | |
| Flash point | °C | 45 | — | IP 34 | 55 |
| Water content | % (m/m) | — | 0.020 | IP 438 | 0.004 |
| Particulate content | mg/kg | — | 24 | IP 415 | <5 |
| Ash content | % (m/m) | — | 0.01 | IP 4 | <0.001 |
| Sulfur content | % (m/m) | — | 0.10 | IP 336 | 0.03 |
| Copper corrosion (3h at 50°C) | class | — | 1 | BS EN ISO 2160 | 1a |
| Cold filter plugging point (CFPP) ^{a)} Summer (16 March to 15 November) Winter (16 November to 15 March) | °C | — — | -4 -12 | IP 309 | -22 -22 |
| Strong acid number | mg KOH/g | — | Zero | IP 139 | Zero |
| Lubricity, corrected mean wear scar diameter (wsd 1.4) at 60 °C | µm | — | 460 | BS 2000-450 | 340 |
| Oxidation stability: 0.0-7.0% FAME ^{b)} 2.0-7.0% FAME ^{c)} | g/m ³ h | - 20 | 25 - | BS 2000-388 BS EN 15751 | 8 - |

Specifications that are additional to BS2869:2017 are listed below

| | | | | |
|-------------|--------|----------------|--------|----------------|
| Appearance | Visual | Clear & Bright | D 4176 | Clear & Bright |
| Cloud Point | °C | | -4 | IP 219 |
| Odour | | Marketable | | Marketable |

Ultra35 heating Gas oil can only be used in heating applications, it is not to be used as a fuel for any engine, motor or other machinery.

- a) Ultra35 exceeds winter grade all year round
b) Oxidation stability by BS 2000-388 is a requirement for all fuels. BS EN 15751 is an additional requirement for fuels containing FAME at concentrations at/or exceeding 2.0% (V/V)
c) For diesel fuel containing FAME above 2 % (V/V) this is an additional requirement. Not relevant for this specification as zero FAME added

Additional Data:

| | | |
|---|----------------|------------------|
| Specific Energy (calorific value), MJ/kg of Oil | Gross - 45.74 | Net - 42.84 |
| Gross Heat of Combustion, Cal/g | Gross - 10925 | Net - 10235 |
| Carbon / Hydrogen (% m/m) | Carbon - 86.4% | Hydrogen - 13.6% |
| Equivalent to MJ / kg of CO2 produced | <0.1% | |