



# ISO 8217 2017 Fuel standard for marine distillate fuels

## Marine Distillate Fuels

| Limit | Parameter   | DMX              | DMA    | DFA | DMZ    | DFZ | DMB   | DFB |  |
|-------|---|------------------|--------|-----|--------|-----|-------|-----|--|
| Max.  | Viscosity at 40°C (mm <sup>2</sup> /s)                        | 5.500            | 6.000  |     | 6.000  |     | 11.00 |     |  |
| Min.  | Viscosity at 40°C (mm <sup>2</sup> /s)                        | 1.400            | 2.000  |     | 3.000  |     | 2.000 |     |  |
| Max.  | Micro Carbon Residue at 10% Residue (% m/m)                   | 0.30             | 0.30   |     | 0.30   |     | -     |     |  |
| Max.  | Density at 15°C (kg/m <sup>3</sup> )                          | -                | 890.0  |     | 890.0  |     | 900.0 |     |  |
| Max.  | Micro Carbon Residue (% m/m)                                  | -                | -      |     | -      |     | 0.30  |     |  |
| Max.  | Sulphur (% m/m)   | 1.00             | 1.00   |     | 1.00   |     | 1.50  |     |  |
| Max.  | Water (% V/V)   | -                | -      |     | -      |     | 0.30  |     |  |
| Max.  | Total sediment by hot filtration (% m/m)                      | -                | -      |     | -      |     | 0.10  |     |  |
| Max.  | Ash (% m/m)   | 0.010            | 0.010  |     | 0.010  |     | 0.010 |     |  |
| Min.  | Flash point (°C)  | 43.0             | 60.0   |     | 60.0   |     | 60.0  |     |  |
| Max.  | Pour point in Winter (°C)                                     | -                | -6     |     | -6     |     | 0     |     |  |
| Max.  | Pour point in Summer (°C)                                     | -                | 0      |     | 0      |     | 6     |     |  |
| Max.  | Cloud point in Winter (°C)                                    | -16              | Report |     | Report |     | -     |     |  |
| Max.  | Cloud point in Summer (°C)                                    | -16              | -      |     | -      |     | -     |     |  |
| Max.  | Cold filter plugging point in Winter (°C)                     | -                | Report |     | Report |     | -     |     |  |
| Max.  | Cold filter plugging point in Summer (°C)                     | -                | -      |     | -      |     | -     |     |  |
| Min.  | Calculated Cetane Index                                       | 45               | 40     |     | 40     |     | 35    |     |  |
| Max.  | Acid Number (mgKOH/g)   | 0.5              | 0.5    |     | 0.5    |     | 0.5   |     |  |
| Max.  | Oxidation stability (g/m <sup>3</sup> )                       | 25               | 25     |     | 25     |     | 25    |     |  |
| Max.  | Fatty acid methyl ester (FAME)                                | -                | -      | 7.0 | -      | 7.0 | -     | 7.0 |  |
| Max.  | Lubricity, corrected wear scar diameter (wsd 1.4 at 60°C)(µm) | 520              | 520    |     | 520    |     | 520   |     |  |
| Max.  | Hydrogen sulphide (mg/kg)                                     | 2.00             | 2.00   |     | 2.00   |     | 2.00  |     |  |
|       | Appearance  | Clear and Bright |        |     |        |     |       | -   |  |

The above is a service for informational purposes only. Rotarec assumes no responsibility for any errors or omissions.



# ISO 8217 2017 Fuel standard for marine residual fuels

## Marine Residual Fuels

| Limit | Parameter  | RMA<br>10  | RMB<br>30 | RMD<br>80 | RME<br>180 | RMG   |       |       |       | RMK    |       |       |
|-------|--|--|-----------|-----------|------------|-------|-------|-------|-------|--------|-------|-------|
|       |  |  |           |           |            | 180   | 380   | 500   | 700   | 380    | 500   | 700   |
| Max.  | Viscosity at 50°C (mm <sup>2</sup> /s)   | 10.00  | 30.00     | 80.00     | 180.0      | 180.0 | 380.0 | 500.0 | 700.0 | 380.0  | 500.0 | 700.0 |
| Max.  | Density at 15°C (kg/m <sup>3</sup> )   | 920.0  | 960.0     | 975.0     | 991.0      | 991.0 |       |       |       | 1010.0 |       |       |
| Max.  | Micro Carbon Residue (% m/m)   | 2.50   | 10.00     | 14.00     | 15.00      | 18.00 |       |       |       | 20.00  |       |       |
| Max.  | Aluminium + Silicon (mg/kg)  | 25   | 40        |           | 50         | 60    |       |       |       |        |       |       |
| Max.  | Sodium (mg/kg)   | 50   | 100       |           | 50         | 100   |       |       |       |        |       |       |
| Max.  | Ash (% m/m)  | 0.040  | 0.070     |           |            | 0.100 |       |       |       | 0.150  |       |       |
| Max.  | Vanadium (mg/kg)   | 50   | 150       |           |            | 350   |       |       |       | 450    |       |       |
| Max.  | CCAI   | 850  | 860       |           |            | 870   |       |       |       |        |       |       |
| Max.  | Water (% V/V)  | 0.30   | 0.50      |           |            |       |       |       |       |        |       |       |
| Max.  | Pour point (upper) in Summer (°C)  | 6  |           |           | 30         |       |       |       |       |        |       |       |
| Max.  | Pour point (upper) in Winter (°C)  | 0  |           |           | 30         |       |       |       |       |        |       |       |
| Min.  | Flash point (°C)   | 60.0   |           |           |            |       |       |       |       |        |       |       |
| Max.  | Sulphur (% m/m)  | To comply with statutory requirements as defined by purchaser  |           |           |            |       |       |       |       |        |       |       |
| Max.  | Total Sediment, aged (% m/m)   | 0.10   |           |           |            |       |       |       |       |        |       |       |
| Max.  | Acid Number (mgKOH/g)  | 2.5  |           |           |            |       |       |       |       |        |       |       |
|       | Used lubricating oils (ULO):<br>Calcium and Zinc; or Calcium and<br>Phosphorus (mg/kg) | The fuel shall be free from ULO, and shall be considered to contain ULO<br>when either one of the following conditions is met:<br>Calcium > 30 and zinc > 15; or Calcium > 30 and phosphorus > 15. |           |           |            |       |       |       |       |        |       |       |
| Max.  | Hydrogen sulphide (mg/kg)  | 2.00   |           |           |            |       |       |       |       |        |       |       |

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