

## MARINE FUEL

### BRITISH STANDARDS INSTITUTE SPECIFICATION FOR PETROLEUM FUELS FOR MARINE OIL ENGINES AND BOILERS

(EXCERPTS FROM BS MA 100 : 1982)

Inspection	Class	M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	M11	M12
Density at 15°C, g/ml, max.	—	—	0.9000	0.9200	0.9910	0.9910	0.9910	0.9910	0.9910	0.9910	—	—	—
Viscosity, kinematic at 40°C, cSt, min. max.	1.50	—	—	—	—	—	—	—	—	—	—	—	—
	5.50	11.00	14.00	—	—	—	—	—	—	—	—	—	—
Viscosity, kinematic at 80°C, cSt, max.	—	—	—	15.00	25.00	45.00	75.00	100.0	130.0	75.0	100.0	130.0	—
Cetane index, min.	45	35	—	—	—	—	—	—	—	—	—	—	—
Carbon residue, Ramsbottom, % (m/m), max.	—	0.25	2.5	—	—	—	—	—	—	—	—	—	—
Carbon residue, Ramsbottom on 10 % residue, % (m/m), max.	0.20	—	—	—	—	—	—	—	—	—	—	—	—
Carbon residue, Conradson, % (m/m), max.	—	—	—	12.0	14.0	20.0	22.0	22.0	22.0	—	—	—	—
Flash point, closed. Pensky-Martens, °C, min.	43.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0
Water content, % (V/V), max.	0.05	0.25	0.30	0.50	0.80	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Sediment by extraction, % (m/m), max.	0.01	0.02	—	—	—	—	—	—	—	—	—	—	—
Ash, % (m/m), max.	0.01	0.01	0.05	0.10	0.10	0.15	0.20	0.20	0.20	0.20	0.20	0.20	0.20
Sulphur content, % (m/m), max.	1.00	2.00	2.00	3.50	4.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
Cloud point, °C max.	-16	—	—	—	—	—	—	—	—	—	—	—	—
Pour point, upper, * °C, max. (1 December — 31 March) (1 April — 30 November)	—	0	0	24	30	30	30	30	30	30	30	30	30
	—	6	6	24	30	30	30	30	30	30	30	30	30
Vanadium content, mg/kg, as V, max.	—	—	100	250	350	500	600	600	600	600	600	600	600

\*The word "upper" does not apply to grades M2 and M3.

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