

## Multi Test Verification Materials (MTVM)

Produced in general accordance with the principles of ISO 17034 and ISO 33405, Seta MTVM's provide certified values for multiple test methods and have been characterised using a network of competent laboratories to provide international traceability. They are a highly cost effective solution to help meet verification requirements for audited laboratories and those which comply with ISO 17025.

Supplied with full documentation including Safety Data Sheet (SDS), in tamper evident packaging and a 2 year shelf life from date of manufacture.

MTVM - Kerosene 500 ml, 99850-0			
Test Name:	ASTM/Method:	Range:	Amount/Test:
Density 15 °C	D4052; IP 365; ISO 12185	0.798 to 0.807 kg/L	2 mL
Distillation IBP	D86; IP 123; EN ISO 3405	140 to 180 °C	100 mL
Distillation 10%	D86; IP 123; EN ISO 3405	159 to 188 °C	100 mL
Distillation 50%	D86; IP 123; EN ISO 3405	183 to 218 °C	100 mL
Distillation 90%	D86; IP 123; EN ISO 3405	220 to 252 °C	100 mL
Distillation FBP	D86; IP 123; EN ISO 3405	241 to 269 °C	100 mL
Distillation Residue	D86; IP 123; EN ISO 3405	1.1 to 1.3 %vol	100 mL
Distillation Loss	D86; IP 123; EN ISO 3405	0.4 to 0.8 %vol	100 mL
Flash Point	IP 170; EN ISO 13736	35 to 60 °C	85 mL
Freezing Point	D2386; D7153; D7154; IP 16	-62 °C to -43 °C	25 mL
Aromatics HPLC	D6379; IP 436	0.7 to 50 %vol	2.5 mL
Smoke Point	D1322; IP 57; ISO 3014	20 to 25 mm	20 mL
Kin Vis -20 °C	D445; IP 71; EN ISO 3104	2 to 8 mm <sup>2</sup> /s	20 mL
Acid Number	D3242; IP 354	<0.100 mg KOH/g	100 mL
Mercaptans	D3227; IP 342; ISO 3012	0.0003 to 0.0100% (m/m)	40 mL

MTVM - Gas Oil 500 mL, 99851-0			
Test Name:	ASTM/Method:	Range:	Amount/Test:
Density at 15 °C	D4052; IP 365; ISO 12185	0.83 to 0.854 g/mL	2 mL
Distillation IBP	D86; IP 123; EN ISO 3405	160 to 190 °C	100 mL
Distillation 10%	D86; IP 123; EN ISO 3405	198 to 242 °C	100 mL
Distillation 50%	D86; IP 123; EN ISO 3405	255 to 290 °C	100 mL
Distillation 90%	D86; IP 123; EN ISO 3405	319 to 350 °C	100 mL
Distillation 95%	D86; IP 123; EN ISO 3405	335 to 368 °C	100 mL
Distillation FBP	D86; IP 123; EN ISO 3405	347 to 385 °C	100 mL
Distillation Residue	D86; IP 123; EN ISO 3405	1.25 to 1.42 %vol	100 mL
Distillation Loss	D86; IP 123; EN ISO 3405	0.26 to 0.7 %vol	100 mL
FAME Content	IP 579; EN 14078	0.03 to 19.03 %(V/V)	-
Flash Point	D93; IP 34; EN ISO 2719	56 to 80 °C	75 mL
Cloud Point	D2500; D5771; D5772; D5773; IP 219; IP 444; IP 445; IP 446; ISO 3015; EN 23015	-17 to -4 °C	Up to 38 mL
CFPP	D6371; IP 309; EN 116	-30 to 0 °C	45 mL
Pour Point	D97; D5950; D5949; D6749; D6892; D5985; IP 15; EN 150 3016	-33 to 6 °C	Up to 45 mL
Kin Vis 40 °C	D445; IP 71; EN ISO 3104	2.3 to 3.5 mm <sup>2</sup> /s	Up to 40 mL
Lubricity HFRR	D6079; IP 450; ISO 12156-1	212 to 512 µm	2 mL
Water Karl Fischer	D6304 IP 438; EN ISO 12937	23.4 to 63.9 mg/kg	5 mL

## MTVM - Fuel Oil 500 mL, 99852-0

Test Name:	ASTM/Method:	Range:	Amount/Test:
Density at 15 °C	D4052; IP 365; ISO 12185	0.94 to 0.994 kg/L	2 mL
Pour Point	D97; IP 15; EN ISO 3016	-14 to 17 °C	Up to 45 mL
Kin Vis 50 °C	D445; IP 71; EN ISO 3104	150 to 1800 mm <sup>2</sup> /s	Up to 40 mL
Kin Vis 100 °C	D445; IP 71; EN ISO 3104	20 to 95 mm <sup>2</sup> /s	Up to 40 mL
Micro Carbon	D4530; IP 398; ISO 10370	0.10 to 30.0 %(m/m)	2 mL
Flash Point	D93 (b); IP 34 (b); EN ISO 2719 (b)	92.3 to 121.6 °C	75 mL

## MTVM - Motor Gasoline 500 mL, 99854-0

Test Name:	ASTM/Method:	Range:	Amount/Test:
Motor Octane No.	D2700; ISO 5163; IP 236	83 to 90 MON	-
Research Octane No.	D2699; ISO 5164; IP 237	90.5 to 101 RON	-
Density at 15 °C	D4052; IP 356; EN ISO 12185	0.763 kg/L	2 mL
Distillation IBP	D86; IP 123; EN ISO 3405	36 to 39 °C	100 mL
Distillation 70 °C	D86; IP 123; EN ISO 3405	5 to 44 %vol	100 mL
Distillation 100 °C	D86; IP 123; EN ISO 3405	36 to 70 %vol	100 mL
Distillation 150 °C	D86; IP 123; EN ISO 3405	75 to 95 %vol	100 mL
Distillation FBP	D86; IP 123; EN ISO 3405	175 to 205 °C	100 mL
Motor Gasoline Aromatics	D6839; ISO 22854; EN 14517	19.32 to 46.29 %vol	0.75 mL
Motor Gasoline Olefins	D6839; ISO 22854; EN 14517	0.40 to 26.85 %vol	0.75 mL
Motor Gasoline Saturates	D6839; ISO 22854; EN 14517	26.85 to 79.31 %vol	0.75 mL
Vapour Pressure	D5191; IP 394; EN 13016-1	50 to 95 kPa	1-10 mL

## MTVM - Bitumen 500 mL, 99856-0

Test Name:	ASTM/Method:	Range:	Amount/Test:
Softening Point	IP 58; EN ISO 1427	37 to 54 °C	7.5 mL
Needle Penetration	D1321; IP 49; EN ISO 1426	41 to 200 Pen	130 mL