



## Multi Test Verification Materials

MTVM - Kerosine 500ml, 99850-0			
Test Name:	ASTM/Method:	Range:	Amount/Test:
Distillation IBP	D86-IP 123; EN ISO 3405	140 to 180°C	100ml
Distillation 10%	D86-IP 123; EN ISO 3405	159 to 188°C	100ml
Distillation 50%	D86-IP 123; EN ISO 3405	183 to 218°C	100ml
Distillation 90%	D86-IP 123; EN ISO 3405	220 to 247°C	100ml
Distillation FBP	D86-IP 123; EN ISO 3405	244 to 268°C	100ml
Distillation Residue	D86-IP 123; EN ISO 3405	1.1 to 1.3 %vol	100ml
Distillation Loss	D86-IP 123; EN ISO 3405	0.4 to 0.8 %vol	100ml
Flash Point	IP 170; EN ISO 3405	35 to 60°C	85ml
Freezing Point	D2386-IP 16	-62°C to -44°C	25ml
Aromatics FIA	D1319-IP 156	16 to 22 %vol	0.75ml
Smoke Point	D1322-IP 57; ISP 1322	20 to 25mm	20ml
Kin Vis -20°C	D445-IP 71; EN ISO 3104	2 to 8mm <sup>2</sup> /s	20ml
Acid Number	D3242-IP 354	<0.100mg KOH/g	100ml
Mercaptans	D3227-IP 342; ISO 3012	0.0001 to 0.0100% (m/m)	40ml
Density at 15°C	IP 365/D4052	0.8045	2ml

MTVM - Gas Oil 500ml, 99851-0			
Test Name:	ASTM/Method:	Range:	Amount/Test:
Distillation at 15°C	D4052-IP365	0.8367	200ml
Distillation IBP	D86-IP 123; EN ISO 3405	160 to 190°C	100ml
Distillation 10%	D86-IP 123; EN ISO 3405	200 to 242°C	100ml
Distillation 50%	D86-IP 123; EN ISO 3405	260 to 290°C	100ml
Distillation 90%	D86-IP 123; EN ISO 3405	320 to 350°C	100ml
Distillation 95%	D86-IP 123; EN ISO 3405	335 to 368°C	100ml
Distillation FBP	D86-IP 123; EN ISO 3405	350 to 385°C	100ml
Distillation Residue	D86-IP 123; EN ISO 3405	1.25 to 1.42 %vol	100ml
Distillation Loss	D86-IP 123; EN ISO 3405	0.26 to 0.7 %vol	100ml
Flash Point	D93-IP 34; EN ISO 2719	56 to 80°C	75ml
Cloud Point	D2500; D5771-IP 444; D5772-IP 445; D5773-IP 446; IP 219; ISO 3015; EN 23015	-17 to -4°C	Up to 38ml
CFPP	D6371; IP 309; EN 1166	-30 to 0°C	45ml
Pour Point	D97-IP 15; D5950; D5949; D6749; D6892; D5985; EN 150 3016	-33 to 6°C	Up to 38ml
Kin Vis 40°C	D445-IP 71; EN ISO 3104	2.3 to 3.5mm <sup>2</sup> /s	Up to 40ml
Lubricity HFRR	D6079; IP 450; ISO 12156-1	271 to 512µm	2ml
Water Karl Fischer	D1744; IP 438; EN ISO 12937	23.4 to 63.9mg/kg	5ml
FAME Content	IP579/EN14078	8.07	

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

Test Name:	ASTM/Method:	Range:	Amount/Test:
Density at 15°C	D1298-IP 160; EN ISO 3675	0.94 to 0.994 kg/l	200ml
Pour Point	D97-IP 15; D5985; D5950; D5949; D6749; D6892; EN ISO 3016	-14 to 17°C	Up to 38ml
Kin Vis 50°C	D445-IP 71; EN ISO 3104	150 to 1800mm <sup>2</sup> /s	Up to 40ml
Kin Vis 100°C	D445-IP 71; EN ISO 3104	20 to 95mm <sup>2</sup> /s	Up to 40ml
Micro Carbon	D4530; IP 398; ISO 10370	0.10 to 30.0 %(m/m)	2ml
Flash Point	D93 (b) - IP 34 (b); EN ISO 2719 (b)	92.3 to 121.6°C	75ml

## MTVM - Lubricating Oil 500ml, 99853-2

Test Name:	ASTM/Method:	Range:	Amount/Test:
Kin Vis 40°C	D445-IP 71; EN ISO 3104	70 to 160 mm <sup>2</sup> /s	Up to 40ml
Kin Vis 100°C	D445-IP 71; EN ISO 3104	10 to 19 mm <sup>2</sup> /s	Up to 40ml
Viscosity Index	D2270-IP 226; ISO 2909	139 to 180/s	Up to 80ml
Pour Point	D97-IP 15; D5985; D5950; D5949; D6749; D6892; EN ISO 3016	-49.1 to -33.9°C	Up to 38ml
Flash Point	D93-IP 34; EN ISO 2719	196 to 231°C	75ml

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

Test Name:	ASTM/Method:	Range:	Amount/Test:
Motor Octane No.	D2700; ISP 5163	83 to 90 MON	-
Research Octane No.	D2699; ISO 5164	96 to 101 RON	-
Density at 15°C	D1298-IP 160; EN ISO 3675	0.721 to 0.763kg/l	Up to 200ml
Distillation IBP	D86-IP 123; EN ISO 3405	32 to 39°C	100ml
Distillation 70°C	D86-IP 123; EN ISO 3405	15 to 36 %vol	100ml
Distillation 100°C	D86-IP 123; EN ISO 3405	36 to 58 %vol	100ml
Distillation 150°C	D86-IP 123; EN ISO 3405	75 to 90 %vol	100ml
Distillation FBP	D86-IP 123; EN ISO 3405	175 to 205°C	100ml
Aromatics FIA	D1319; IP 156	19 to 42 %vol	0.75ml
Olefins FIA	D1319; IP 156	1.5 to 15 %vol	0.75ml
Saturates FIA	D1319; IP 156	42 to 72 %vol	0.75ml
Vapour Pressure	D5191; IP 394; EN 13016-1	50 to 85kPa	3ml

## MTVM - Bitumen 200ml, 99856-0

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

## Multi Test Certified Reference Material, SP9000-0

Test Name:	Certified Value:
Cold Filter Plugging Point	-16.9°C
Cloud Point Standard	-5.8°C
Density Standard	0.8355 g/ml @ 15°C
Flash Point Pensky Martens	57.3°C