

Test	Method	Unit	FAME 1	FAME 2	FAME 3	FAME 4	FO 1	FO 3	FO 4
Density @ 15°C	D4052	g/cm ³	0.881	0.882	0.875	0.881	1.010	0.963	0.987
Kinematic Viscosity (KV) @ 50°C	D445	mm ² /s	3.734	4.369	3.739	3.612	473.0	217.3	375.5
Distillation - Average Boiling Point	D1160	°C	348	351	341	50			
Distillation - Average Boiling Point	D7169	°C						483	492
CCAI	Calc.	-	825	821	819	827	868	830	848
Carbon Residue, Micro	D4530	wt%					19.20	6.16	9.84
BMC1	Calc.	-	39.1	39.4	37.3	39.9	83.4	64.1	74.8
Toluene Equivalence (TE)	AM-S 79-004	-	0	0	0	0	73	43	43
BMC1 - TE	-	-	39.1	39.4	37.3	39.9	10.9	21.1	31.8
Oil Compatibility Test	AM-S 1999-011								
Solubility blending number (S _{BN})		-	89			68	100	61	
Incompatibility number (I _N)		-	0			0	78	38	
S _{BN} - I _N		-	89			68	22	23	
Compatibility - Rofa Test	ASTM D7157								
S-value		-						1.82	1.93
S _a		-						0.66	0.59
S _b		-						0.63	0.8
R ²		-						1.000	0.998
Solubility blending number (S _{BN})		-	68	84	71			61	79
Incompatibility number (I _N)		-	0	0	0			34	41
S _{BN} - I _N		-	68	84	71			27	38
Total Sediment Potential (TSP)	ISO 10307-2 thermal aging	wt%						0.01	<0.01
Spot Test – Cleanliness Rating	D4740	-						1	

FIG. 1

			FO 1	FO 3	80% FO 1 + 20% FAME 4	80% FO 3 + 20% FAME 1	80% FO 3 + 20% FAME 2	80% FO 3 + 20% FAME 3
Test	Method	Unit						
Density @ 15°C	D4052	g/cm ³	1.010	0.963	0.969	0.947	0.947	0.945
Kinematic Viscosity (KV) @ 50°C	D445	mm ² /s	473.0	217.3		57.24	56.65	57.67
Distillation - Average Boiling Point	D7169	°C		483		463		
CCAI	Calc.	-	868	830	860	831	831	829
Carbon Residue, Micro	D4530	wt%	19.20	6.16		5.14		
BMI	Calc.	-	83.4	64.1	74.7	58.1	59.1	58.7
Toluene Equivalence (TE)	AM-S 79- 004	-	73	43	73	47	47	48
BMI - TE	-	-	10.9	21.1	2.2	11.1	12.1	10.7
Oil Compatibility Test	AM-S 1999-011							
Solubility blending number (S _{BN})		-	100	61	112	74		
Incompatibility number (I _N)		-	78	38	82	38		
S _{BN} - I _N		-	22	23	30	36		
Compatibility - Rofa Test	ASTM D7157							
S-value		-		1.82		1.88	1.85	1.74
S _a		-		0.66		0.66	0.64	0.64
S _o		-		0.63		0.63	0.66	0.62
R ²		-		1.000		0.999	0.999	0.999
Solubility blending number (S _{BN})		-		61		62	65	61
Incompatibility number (I _N)		-		34		34	36	36
S _{BN} - I _N		-		27		28	29	25
Total Sediment Potential (TSP)	ISO 10307- 2 thermal aging	wt%		0.01		<0.01	<0.01	<0.01
Spot Test -- Cleanliness Rating	D4740	-		1		1	1	1

FIG. 2

			FO 4	50% FO 4 + 50% FAME 1	50% FO 4 + 50% FAME 2	50% FO 4 + 50% FAME 3
Test	Method	Unit				
Density @ 15°C	D4052	g/cm ³	0.987	0.934	0.934	0.931
Kinematic Viscosity (KV) @ 50°C	D445	mm ² /s	375.5	17.12	16.76	16.19
Distillation - Average Boiling Point	D7169	°C	492	401	383	385
CCAI	Calc.	-	848	839	839	837
BMCi	Calc.	-	74.8	58.3	60.1	58.5
Toluene Equivalence (TE)	AM-S 79- 004	-	43	44	46	43
BMCi - TE	-	-	31.8	14.3	14.1	15.5
Compatibility - Rofa Test	ASTM D7157					
S-value		-	1.93	1.94	2.08	2
S _a		-	0.59	0.61	0.59	0.59
S ₀		-	0.8	0.76	0.84	0.81
R ²		-	0.998	0.969	0.996	1.000
Solubility blending number (S _{BN})		-	79	73	82	79
Incompatibility number (I _N)		-	41	39	41	41
S _{BN} - I _N		-	38	34	41	38
Total Sediment Potential (TSP)	ISO 10307-2 thermal aging	wt%	<0.01	0.01	<0.01	0.01

FIG. 3

			FO 3	75% FO 3 + 25% D 1	75% FO 3 + 5% FAME 1 + 20% D 1	75% FO 3 + 8% FAME 1 + 17% D 1	75% FO 3 + 10% FAME 1 + 15% D 1	50% FO 3 + 50% D 1	50% FO 3 + 20% FAME 1 + 30% D 1	50% FO 3 + 30% FAME 1 + 20% D 1
Test	Method	Unit								
Density @ 15°C	D4052	g/cm ³	0.963	0.941	0.941	0.941	0.942	0.919	0.920	0.921
Kinematic Viscosity (KV) @ 50°C	D445	mm ² /s	217.3	79.50	72.15	68.13	65.60	34.77	25.47	21.99
CCAI	Calc.	-	830	821	822	823	824	811	818	821
BMC1	Calc.	-	64.1	56.3	56.6	56.8	56.9	48.5	49.7	50.3
Toluene Equivalen ce (TE)	AM-S 79-004	-	43	43	43	43	43	43	43	43
BMC1 - TE	-	-	21.1	13.3	13.6	13.8	13.9	5.5	6.7	7.3
Oil Compat- ibility Test	AM-S 1999- 011									
Solubility blending number (S _{BN})		-	61	53.25	56.2	58.0	59.2	45.5	57.3	63.2
Incompa tibility number (I _N)		-	38	38	38	38	38	38	38	38
S _{BN} - I _N		-	23	15.3	18.2	20.0	21.2	7.5	19.3	25.2

FIG. 4