

Analysis	100% JET-A1	JET-A1 / 30% IPB-1	JET-A1 / 70% IPB-1	100 % IPB-1	JET-A1 passing value	JET- A1 Spec
Appearance	C&B	C&B	C&B	C&B	C&B	C&B ¹
Acidity, mg KOH/g	0.010	0.010	0.010	0.015	0.015 max	D3242
Aromatics, vol %	23.8	17.0	8.3	0.245 mM	25.0 max	D1319
Sulfur, total, wt. %	0.0363	0.0255	0.0114	<0.0010	0.30 max	D2622
Naphthalenes, vol %	1.98				3.0 max	D1840
Distillation, °C	-	-	-	-	-	D86
IBP	160.1	164.3	171.1	176.2	Report	"
10%	191.6	189.7	187.7	187.5	205 max	"
20%					Report	"
50%	220.7	215.8	210.9	206.8	Report	"
90%	251.8	253.4	257.8	265.3	Report	"
FBP	269.4	281.8	293.3	303.9	300 max	"
Distill. Resid., vol %	1.0	1.0	1.0	1.2	1.5 max	"
Distill. Loss, vol %	0.6	0.3	0.8	1.2	1.5 max	"
Flash Pt., °C	48.9	53.3	54.4	58.8	38 min	D56
Density, kg/m ³	823.8	806.8	784.8	767.0	775 - 840	D4052
Freeze Pt., °C	-63.0	-64.0	-57.0	-56.0	-47 max	D2386
Heat of Comb, MJ/kg	43.08	43.21	43.61	43.73	42.8 min	D3338
Smoke Pt., mm	22.0*	28.0	39.0	45.0	25.0 min	D1322
Copper Corrosion	1a	1a	1a	1a	1 max	D130
JFTOT breakpoint, °C	270	270	285	295	260 min	D3241
Ext gum mg/100mL	2	1	2	2	7 max	D381
Hydrogen Cont, wt %	13.57	13.85	14.53	14.51	13.40 min	D3343
MSEP	96	93	96	100	90 min	D3948

1 – C&B refers to “clear and bright”

* - Smoke point below 25 meets specification when the naphthalene content is less than 3.0 vol%

FIG. 1

Analysis	100% JET-A1	JET-A1 / 30% IPB-2	JET-A1 / 70% IPB-2	100 % IPB-2	JET-A1 passing value	JET- A1 Spec
Appearance	C&B	C&B	C&B	C&B	C&B	C&B ¹
Acidity, mg KOH/g	0.010	0.014	0.011	0.010	0.015 max	D3242
Aromatics, vol %	23.8	16.8	7.2		25.0 max	D1319
Sulfur, total, wt. %	0.0363	0.0286	0.0114	<0.0010	0.30 max	D2622
Naphthalenes, vol %	1.98	1.42			3.0 max	D1840
Distillation, °C	-	-	-	-	-	D86
IBP	160.1	155.4	151.1	151.9	Report	"
10%	191.6	177.9	169.3	164.6	205 max	"
20%					Report	"
50%	220.7	213.4	205.8	197.1	Report	"
90%	251.8	250.7	253.3	250.1	Report	"
FBP	269.4	276.6	284.6	293.1	300 max	"
Distill. Resid., vol %	1.0	1.3	1.0	1.1	1.5 max	"
Distill. Loss, vol %	0.6	1.3	1.5	1.0	1.5 max	"
Flash Pt., °C	48.9	47.8	45.6	43.3	38 min	D56
Density, kg/m ³	823.8	804.8	778.7	758.2	775 - 840	D4052
Freeze Pt., °C	-63.0	-60.0	-58.0	-62.0	-47 max	D2386
Heat of Comb, MJ/kg	43.08	43.28	43.62	44.01	42.8 min	D3338
Smoke Pt., mm	22.0*	23.0*	40.0	41.0	25.0 min	D1322
Copper Corrosion	1a	1a	1a	1a	1 max	D130
JFTOT breakpoint, °C	270	275	285	>315	260 min	D3241
Ext gum mg/100mL	2	2	1	1	7 max	D381
Hydrogen Cont, wt %	13.57	13.85	14.63	15.12	13.40 min	D3343
MSEP	96	97	96	99.0	90 min	D3948

1 – C&B refers to "clear and bright"

* - Smoke point below 25 meets specification when the naphthalene content is less than 3.0 vol%

FIG. 2

	A	B	C	D
on aromatic rings	Ha	0.17	0.13	0.17
on olefinic carbons	Ho	0.03	1.29	3.03
alpha to aromatic rings	H(alpha)	0.16	0.51	1.07
beta to aromatic rings, naphthenic & paraffinic CH	Hc ₁	4.94	10.97	19.4
paraffinic CH ₂ , CH ₃ beta to and CH ₂ >= gamma from aromatic ring	Hc ₂	43.3	38.8	32.59
paraffinic CH ₃ , CH ₃ >=gamma from aromatic ring	Hd	51.4	48.29	43.74
	Hc ₁ / Hc ₂	0.11	0.28	0.60
	Hc ₁ / Hd	0.10	0.23	0.44
	Hc ₂ / Hd	0.84	0.80	0.75
	Hd / (Hc ₁ + Hc ₂)	1.07	0.97	0.84
	Hd / Hc ₂	1.19	1.24	1.34
				0.15
				4.38
				1.49
				26.06
				27.69
				40.24

FIG. 3