TBF Environmental Technology

Solvent Comparison – ShiraSol™

Property	Unit	ShiraSol	Mineral Spirits	Aromatic 100	MAK	BuAc
Initial BP	*°C*	147.5	148	156	150	125
Vapour Pressure	*torr @ 20°C*	3.5	2.5	6	2.14	10
Evaporation rate	*n-BuAc = 1*	0.1	0.13	0.29	0.4	1
Viscosity	*cP*	1.18	1	0.9	0.81	0.74
Specific Gravity	*@ 20°C*	1.19	0.79	0.88	0.82	0.88
Flash Point	*°C*	43.5	38	42.2	39	27.2
Kb value		54.5	33	93	-	-
MIR	*(g O_3 / g organics)*	0.097	0.9-2.47	7.51	2.80	0.89
VOC	*g/L @ 20°C*	0.0	880	780	820	870
Global Warming Potential	*100 yr GWP*	5.4				
Surface Tension	*dynes/cm*	24.5	24.7	29	26.1	25.1
Heat of Combustion	*btu/lb*	8046.8	NA	NA	12898.2	13130.0
	kcal/kg	4473.2	NA	NA	7170.1	7298.9
	kJ/mol	4129.7	NA	NA	3425.3	3547.4
δ (Hansen Solubility Parameters)	*$(MPa)^{1/2}$*	17.2	15.8	17.8	17.6	17.4
δH *(Hydrogen-Bond)*	*$(MPa)^{1/2}$*	3.4	0.2	0	4.1	6.4
δP *(Polar)*	*$(MPa)^{1/2}$*	8.3	0.1	1.0	5.74	3.69
δ *(Dispersion)*	*$(MPa)^{1/2}$*	13.9	15.8	17.8	16.2	15.8
Hildebrand	*$(MPa)^{1/2}$*	18.2	15.4	17.8	17.4	17.4
δ (Hansen Solubility Parameters)	*$(cal/cm^3)^{1/2}$*	8.4	7.7	8.7	8.6	8.5
δH *(Hydrogen-Bond)*	*$(cal/cm^3)^{1/2}$*	1.7	0.1	0	2.0	3.1
δP *(Polar)*	*$(cal/cm^3)^{1/2}$*	4.1	0.1	0.5	2.8	1.8
δ *(Dispersion)*	*$(cal/cm^3)^{1/2}$*	6.8	7.7	8.7	7.9	7.7
Hildebrand	*$(cal/cm^3)^{1/2}$*	8.9	7.5	8.7	8.5	8.5

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