PHYSICAL CONSTANTS OF LIQUID SCINTILLATORS

Scintillator	Light Output, % Anthracene[1]	Wavelength of Maximum Emission (nm)	Decay Time (ns)	H:C Atomic Ratio	Refractive Index	Flash Point (°C)	Specific Gravity	Description and Applications
EJ-301	78	425	3.2[2]	1.211	1.505	26	0.874	PSD liquid, Fast neutron and gamma discrimination
EJ-309	80	424	3.5	1.248	1.57	144	0.959	PSD liquid, Fast neutron and gamma discrimination, High flash point, Low chemical toxicity, Compatible with acrylic plastics
EJ-309B (5%)	57	424	3.5	1.308	1.57	144	0.963	Variant of EJ-309 with natural boron loading (1% - 5%)
EJ-313	20	425	3	0.0032	1.38	10	1.619	Hydrogren-free, Neutron studies
EJ-315	60	425	3.5	0.99 (D:C)	1.498	- 11	0.954	Deuterated benzene, Neutron studies
EJ-321L	39	425	2.0	2.014	1.47	102	0.86	Mineral oil based, Large tanks, Fast neutron and gamma, Cosmics
EJ-321H	52	425	2.0	1.890	1.48	81	0.86	Mineral oil based, Large tanks, High light output, PSD, Fast neutron and gamma discrimination
EJ-321P	28	425	2.2	2.058	1.47	115	0.85	Mineral oil based, High flash point, Safe to use with gray PVC plastic
EJ-321S	66	425	2.0	1.692	1.49	74	0.87	Mineral oil based, Highest light output of the EJ-321 series
EJ-325A	62	425	3.5	1.717	1.55	146	0.954	Mineral oil based, PSD, Fast neutron and gamma discrimination
EJ-331 (0.5%)	68	424	-	1.318	1.50	44	0.90	Gd loaded (0.1% - 1.5%), High light output, Fast neutrons, Neutrinos
EJ-335 (0.25%)	55	424	-	1.567	1.49	64	0.89	Gd loaded (0.1% - 0.5%), Mineral oil based, Large tanks, Fast neutrons, Neutrinos
EJ-339	65	425	-	1.734	1.415	- 8	0.92	^{10}B loaded, Neutron spectrometry, PSD
EJ-351	65	425	3.8	1.647	1.442	12	1.036	Dioxane based cocktail for aqueous samples

1. 1 MeV of energy deposited in EJ-301 from an energetic electron produces approximately 12,000 blue photons.
2. The approximate mean decay times of the first 3 components for gamma excitation are 3.16, 32.3, and 270 ns.

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