

	scintillator material	type	light output % anthracene [%]	wavelength of max emission [nm]	decay constant of main component [nSec]	loading element	attenuation length (typ) [cm]	H:C ratio	refractive index	softning or flash point [°C]	density	principal applications and features	commercial equivalents	
													Saint Gobain	NE
Plastics	plastic	EJ-200	64	425	2.1	.....	380	1.104	1.58	75	1.02	Best overall general properties TOF counters, Large detectors	BC-408	Pilot F
	plastic	EJ-204	68	408	1.8	.....	160	1.107	1.58	75	1.02	High speed and good attenuation rise = 0.7nsec / decay = 1.8nsec	BC-404	NE-104
	plastic	EJ-208	60	435	3.3	.....	400	1.104	1.58	75	1.02	Long optical attenuation, longer than 3m rise = 1.0ns / fall = 3.3ns / pulse w=4.2ns	BC-412	NE-110
	plastic	EJ-208B	38	434	4.0	.....	400	1.103	1.58	75	1.02	Lower cost variant of EJ-208.	BC-416	.....
	plastic	EJ-212	65	423	2.4	.....	250	1.103	1.58	75	1.02	Most common type, Thin film for alpha.	BC-400	NE-102A
	plastic	EJ-228	67	391	1.4	.....	n/a	1.103	1.58	75	1.02	Very fast timing with smaller dimension rise = 0.5nSec	BC-418	Pilot U
	plastic	EJ-230	64	391	1.5	.....	120	1.104	1.58	75	1.02	Very fast timing for longer (>10cm) use rise = 0.5nSec	BC-420	Pilot U2
	plastic	EJ-232	55	370	1.4	.....	n/a	1.102	1.58	75	1.02	Ultra fast timing, high pulse pair resolution rise = 0.35nSec.	BC-422	NE-111A
	plastic	EJ-240	41	435	~285	.....	380	1.109	1.58	75	1.02	Very long decay time constant for phoswich combination use with liquid for PSD	BC-444	NE-115
	plastic	EJ-244	51	435	3.3	.....	400	1.104	1.58	99	1.02	Elevated temperature use. analog to EJ-208.	BC-440	.....
	plastic	EJ-248	54	425	2.1	.....	380	1.104	1.59	100	1.049	Elevated temperature environment analog to EJ-200, general purpose.	BC-448	.....
	plastic	EJ-252	46	423	2.4	.....	n/a	1.098	1.58	75	1.037	Dosimetry ( general ) air equivalent	BC-470	NE-105
	plastic	EJ-256	32	425	2.1	5% Pb	n/a	1.134	1.58	75	1.08	Lead loaded, 5.0 w% Pb for standard. X-ray dosimetry use.	BC-452	NE-142
	plastic	EJ-299-07	n/a	435	~2.0	.....	n/a	1.11	~1.5	75	1.02	for very thin foil shape, beam pick-up, etc. 0.005mm (5um) as the thinnest	9,000 blue photons per 1 MeV electron	
	plastic	EJ-299-13	41	435	~285	.....	n/a	1.11	1.58	75	1.035	Long principal decay component. To use with Liquid, equivalent EJ-240	.....	.....
plastic	EJ-299-15	.....	425	1.9	.....	n/a	1.60	1.49	~80	1.21	Cherenkov counter (not scintillator) wave-shifting quantum efficiency = 84%	.....	.....	
Liquid	scintillator material	type	Light output % anthracene [%]	wavelength of max emission [nm]	decay constant of main component [nSec]	Loading element	attenuation Length (typ.) [meters]	H:C or D:H ratio	refractive index	softening or flash point [°C]	density	principal applications and features	commercial equivalents	
													Saint Gobain	NE
	Liquid	EJ-301	78	425	2.1	.....	.....	1.217	1.505	26	0.874	Fast neutron, neutron/Gamma PSD. primary decay = 3.16, 32.3 & 270nSec.	BC-501A	NE-213
	Liquid	EJ-305	80	424	2.5	.....	.....	1.331	1.505	47	0.877	High Light output	BC-505	NE-224
	Liquid	EJ-309	75	424	~3.5	.....	~1m	1.249	1.57	144	0.964	Low attackability to plastics, similar to EJ-301 neutron/gamma pulse shape discrimination	renamed type of former EJ-399-06	
	Liquid	EJ-313	20	424	3.1	F	.....	0.0035	1.377	10	1.61	Fast neutron and gamma ray Hydrogen free.	BC-509	NE-226
	Liquid	EJ-315	38	425	3.5	D	>3m	D:H ratio 141.5	1.498	-11	0.954	Deuterated Deuterated standard for neutron study.	BC-537	NE-230
	Liquid	EJ-315HD	38	425	3.5	D	>3m	D:H ratio 222	1.498	-11	0.954	High deuterated ratio D:H ratio = 222	.....	.....
	Liquid	EJ-315UHD	38	425	3.5	D	>3m	D:H ratio 1.651	1.498	-11	0.954	Ultra high deuterated ratio D:H ratio = 1,651	.....	.....
	Liquid	EJ-321L	39	425	2.0	.....	>5m	2.01	1.47	102	0.86	Mineral oil base, Large vessel detector use.	BC-517L	NE-235L
Liquid	EJ-321H	52	424	2.0	.....	>5m	1.89	1.48	81	0.86	High Light output type mineral oil base. also EJ-321P and EJ-321S available.	BC-517H	NE-235H	
Liquid	EJ-325	60	424	4.0	.....	.....	1.73	1.49	74	0.875	Mineral oil ase, for large vessel detector use. fast neutron - gamma discrim.	BC-519	NE-235C	
Liquid	EJ-399-08	42	428	3.5	.....	>1m	1.899	1.50	>150	0.86	Very low attackability to plastics. use with plastic scintillators.	.....	.....	
Loaded Liq.	scintillator material	type	light output % anthracene [%]	wavelength of max emission [nm]	decay constant of main component [nSec]	loading element	attenuation length (typ.) [meters]	H:C ratio	refractive index	softening or flash point [°C]	density	principal applications and features	commercial equivalents	
													Saint Gobain	NE
	Gd Loaded	EJ-331	68	424	3.6	Gd to 1%	>4m	1.32	1.50	44	0.90	Highest light output Gd Loaded	BC-521	NE-323
	Gd Loaded	EJ-335	55	424	3.8	Gd to 0.5%	>4.5m	1.57	1.49	64	0.88	Mineral Oil base for Large tanks Neutron spectrometry, neutrinos	BC-525	.....
B-10 Loaded	EJ-339	65	424	3.7	B-10 5%	.....	1.67	1.411	8	0.98	Pulse shape discrimination, neutron spectrometry, thermal neutron	BC-523A	NE-321A	
Dioxane based	EJ-351	65	425	3.8	.....	.....	1.65	1.44	12	1.036	Dioxane based cocktail for aqueous samples for Tritiated water assay.	BC-220	NE-220	

denotes: Plastics -- 1MeV of energy deposited in EJ-200 from an energetic electron produces approximately 10,000 blue photons.  
 Liquids -- 1MeV of energy deposited in EJ-301 from an energetic electron produces approximately 12,000 blue photons.  
 The mean decay times of the first 3 components are 3.16ns, 32.3ns and 270ns.