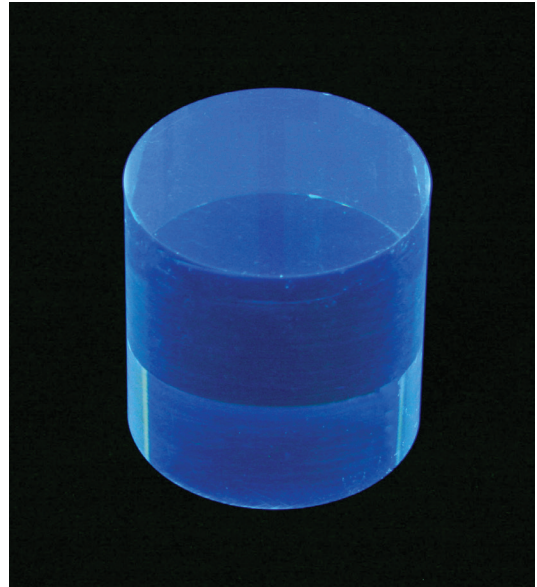


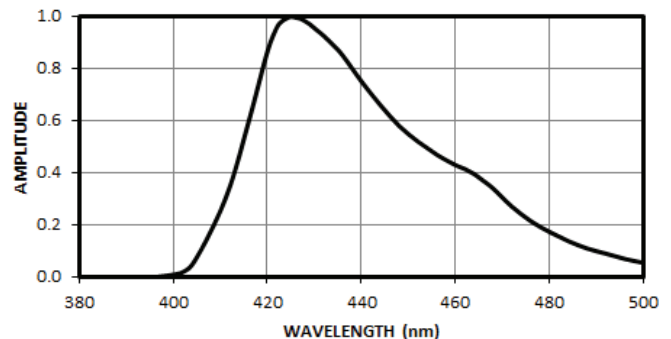
⁶LITHIUM LOADED PSD PLASTIC SCINTILLATOR EJ-270

This new plastic scintillator contains the element Lithium-6 at an isotopic enrichment of 95.5+ atom%. It is also formulated to provide classical pulse shape discrimination (PSD) for identification of scintillation pulses from fast neutrons, gammas and thermal neutrons. It is presently available as cylinders up to 60 mm diameter x 60 mm long and cubes up to 51 mm per side. At this time, EJ-270 is available with a ⁶Li loading level of 0.5% by weight. Initial performance information of the Eljen product is presented on the second page of this data sheet. Page 2 is part of a larger presentation at the 2016 SPIE Conference by permission from Lawrence Livermore National Laboratory (LLNL) where the scintillator was invented. [Cherepy, N.J., Martinez, H.P., Sanner, R.D., Beck, P.R., Drury, O.B., Swanberg, E.L., Payne, S.A., Hurlbut, C.R., & Morris, B. (2017). New Plastic Scintillators for Gamma Spectroscopy, Neutron Detection and Imaging. 2017 IEEE Nuclear Science Symposium and Medical Imaging Conference (NSS/MIC), 1-3.]



PROPERTIES	EJ-270
Light Output (% Anthracene)	31
Scintillation Efficiency (photons/1 MeV e ⁻)	4,800
Electron Energy Equivalence of n-Capture Peak (keV)	350
Wavelength of Max. Emission (nm)	425
Rise Time (ns)	TBD
Decay Time (ns)	TBD
Pulse Width, FWHM (ns)	TBD
No. of H atoms per cm ³ (×10 ²²)	4.74
No. of C atoms per cm ³ (×10 ²²)	4.55
No. of ⁶ Li atoms per cm ³ (×10 ²⁰)	5.75
No. of O atoms per cm ³ (×10 ²¹)	4.79
No. of N atoms per cm ³ (×10 ²⁰)	9.31
No. of Electrons per cm ³ (×10 ²³)	3.67
Density (g/cm ³)	1.14

EJ-270 EMISSION SPECTRUM



CHEMICAL COMPATIBILITY

Attacked By: Aromatic solvents, Chlorinated solvents, Ketones, Solvent bonding cements, etc.

Stable In: Water, Dilute acids and alkalis, Lower alcohols, Silicone greases.

Compatible with most epoxies and “super glues”.

Revision Date: Jan 2025



ELJEN TECHNOLOGY

1300 W. Broadway, Sweetwater, TX 79556

www.eljentechnology.com • eljen@eljentechnology.com

Toll Free (USA): (888)-800-8771 • Tel: (325)-235-4276 • Fax: (325) 235-0701



Eljen ^6Li loaded PSD Plastics 2"x1.5"

