

EJ-442 ZnS:Ag PHOSPHOR PLATES FOR ALPHA COUNTING

This product consists of a very uniform deposit of blue-emitting P22 type silver activated zinc sulfide phosphor applied to one side of thick, non-flexible support material. This product is specifically intended for alpha particle detection, and the phosphor layer density is sufficient to completely absorb common alpha particles such as those from Am-241. Batch to batch uniformity of alpha sensitivity is constant within a $\pm 1.5\%$ range. The phosphor layer is smooth and sufficiently robust to withstand normal handling. It is identical to the phosphor coating used on our EJ-440 product which is in the form of a thin and flexible plastic sheet $\frac{1}{4}$ mm thick.

All EJ-442 products are custom-made to satisfy our customer's specific requirements. The most common support materials are acrylic plates ranging from $1\frac{1}{2}$ -5mm in thickness and having a maximum size of 300mm x 300mm. Metal support plates have also been used. These materials are very stable, and their shelf life at room temperature is at least two years.

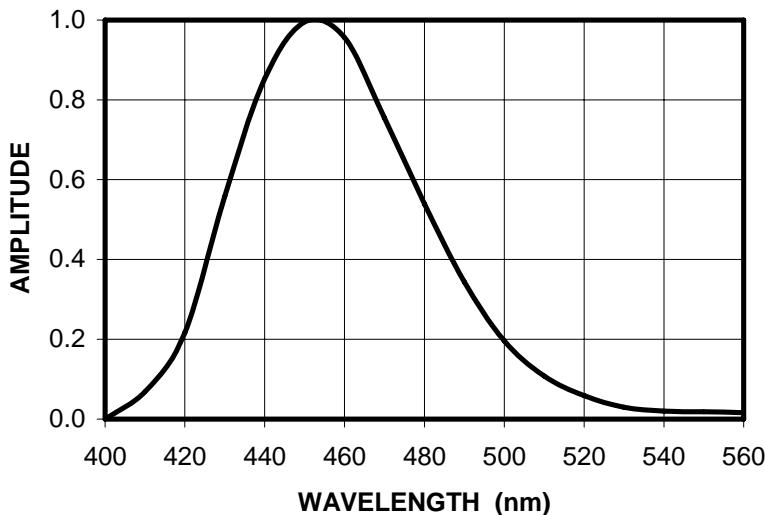
Eljen Technology also offers EJ-444 which consists of the same ZnS:Ag coating applied to thin plastic scintillator sheets typically 0.25mm thick for dual alpha-beta detection.

Physical and Scintillation Constants:

Light Output, % Anthracene.....	300
Wavelength of Max. Emission, nm	450
Decay Time, main component, ns	200
Phosphor Density, mg/sq.cm.	3.25
Phosphor Density range, mg/sq.cm.	± 0.25

Chemical Compatibility: The adhesive is soluble in common alcohols and other organic solvents. It is insoluble in water.

EJ-442 EMISSION SPECTRUM



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