

# BC-436 Deuterated Plastic Scintillator

BC-436 is based on deuterated styrene and has scintillation and physical properties very similar to those of standard premium quality scintillators. It is manufactured on special order and is usually supplied as thin discs ranging in thickness from 0.5mm to 3mm and in diameters up to 125mm. Other shapes also are available, but the material is limited to relatively small sizes.

BC-436's principle use is for (n,d) studies.

## Scintillation Properties –

Light Output, %Anthracene .....	52
Decay Time, ns .....	~2.2
Wavelength of Maximum Emission, nm .....	425

## Atomic Composition –

No. of C Atoms per cc .....	$4.8 \times 10^{22}$
No. of D Atoms per cc .....	$4.6 \times 10^{22}$
No. of H Atoms per cc .....	$2.3 \times 10^{21}$
Ratio D:H Atoms .....	20.4
Ratio D:C Atoms .....	0.96
No. of Electrons per cc .....	$3.4 \times 10^{23}$

## General Technical Data –

Density .....	1.13 g/cc
Refractive Index .....	1.60
Softening Point .....	100°C

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Emission Spectrum –

