

## Colloidal Performance Materials

### NYACOL<sup>®</sup> DP 5370 EG

#### Zinc Oxide in Ethylene Glycol

Nyacol DP5370EG is a unique dispersion of nano-scale zinc oxide suspended in ethylene glycol. The typical particle size of the zinc oxide is 50–80 nm with a narrow distribution. For use in PET synthesis it is strongly recommended that DP5370EG be diluted 2.0% to 4.0% before adding into the ester-exchange reactor or poly-condensation reactor.

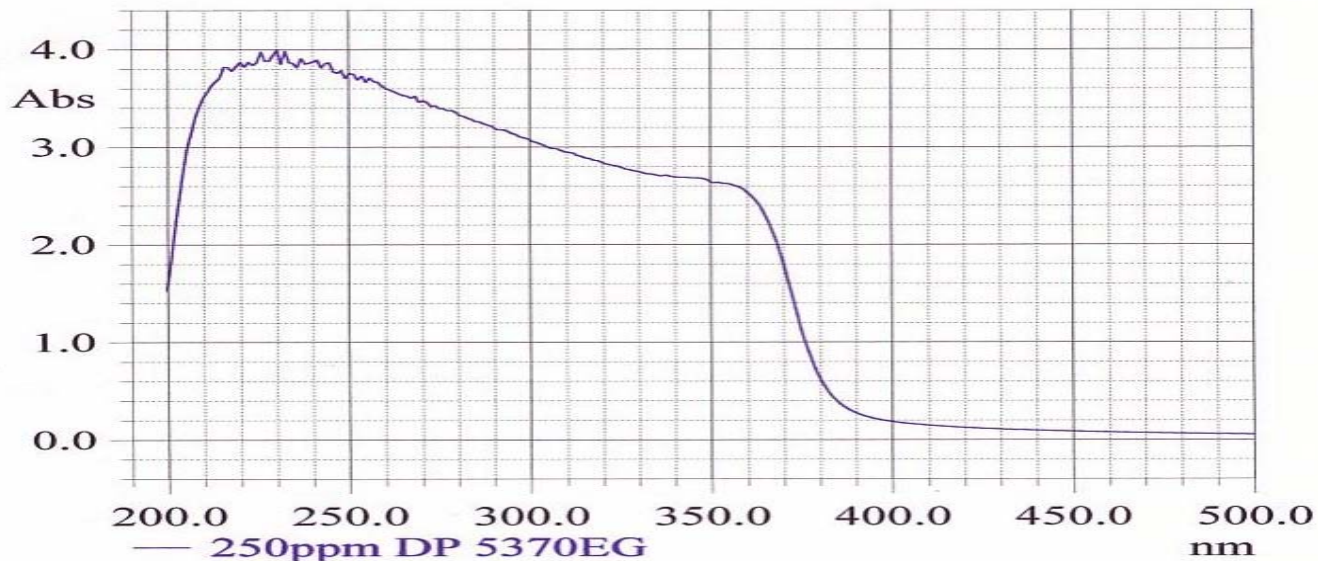
Nyacol DP5370EG is supplied pre-dispersed and is ready to use.

#### TYPICAL PROPERTIES

ZnO, %:	18
Carrier:	Ethylene Glycol
Water, %:	<1.0
Particle Size, nm:	50–80

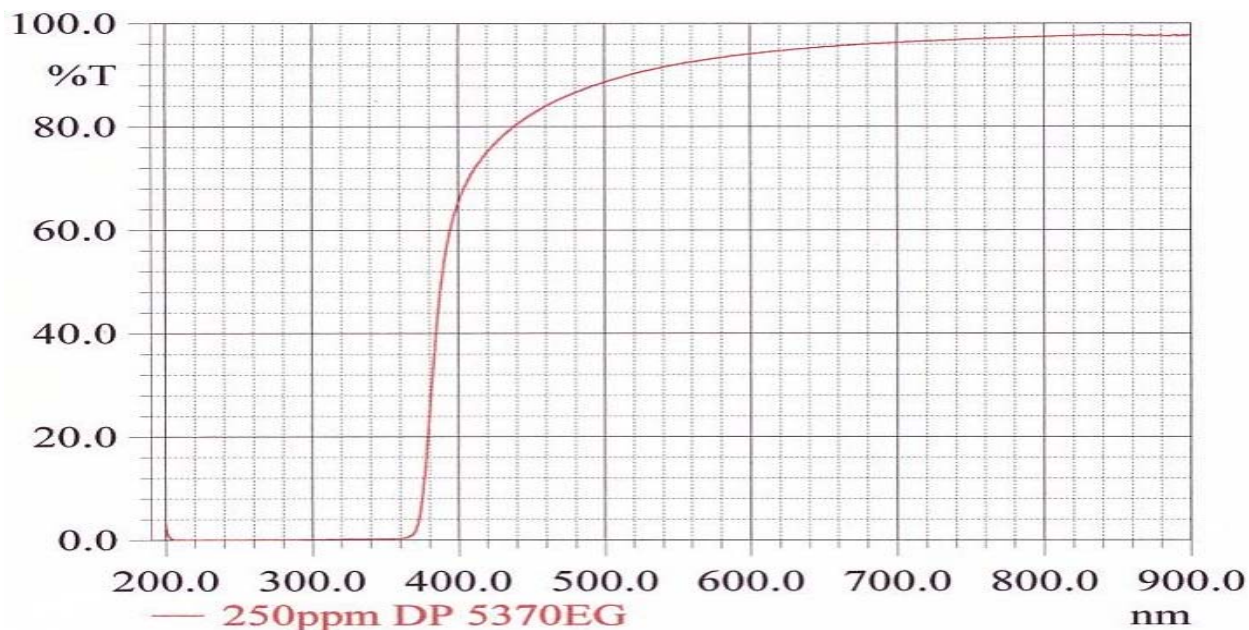
#### TYPICAL ABSORBANCE PROFILE OF DP5370EG

Nyacol DP5370EG has a broad absorbance of UV light, absorbing 90% or greater of UV light starting at 380 nm. This broad profile makes Nyacol DP5370EG an excellent choice for protection from both UVA and UVB.



## TYPICAL TRANSMITTANCE PROFILE OF NYACOL DP5370EG

Nyacol DP5370EG allows for high transmittance of light in the visible range and exhibits a smooth, quick transition to 0% transmittance in the UV range.



## SUGGESTED CONCENTRATION OF NYACOL DP5370EG FOR DESIRED ABSORBANCE OF UV LIGHT @ 365 nm

Based on the absorbance profile of Nyacol DP5370EG the following table should be used as a guideline for adding DP5370EG into PET during synthesis for a desired absorbance at a given thickness of film in micrometers.

PET FILM THICKNESS ( $\mu\text{m}$ )	ABSORBANCE			
	1.0	1.5	2.0	2.5
25	4.00%	6.00%	8.00%	10.00%
50	2.00%	3.00%	4.00%	5.00%
75	1.33%	2.00%	2.67%	3.33%
100	1.00%	1.50%	2.00%	2.50%

## TO ORDER MATERIAL OR FOR INFORMATION

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