



DATA SHEET  
BurnEx™ DP5580 AND DP5580SD

## BurnEx DP5580 and BurnEx DP5580SD

BurnEx DP5580 and DP5580SD are a new development in antimony pentoxide flame-retardant synergists. DP5580 is a non-yellow, water-white aqueous dispersion of 5-10nm antimony pentoxide particles in water and is intended for use in emulsion or latex systems to achieve high clarity flame-retardant polymers and coatings.

DP5580SD is a spray-dried powder consisting of surface-modified 5nm antimony pentoxide. The product is hydrophobic and disperses in solvent and polymer systems to the original nano-size, enabling the production of clear FR coatings and polymers. The powder is designed to be used in extrusion compounding. The selection of halogen is critical to achieve a transparent FR polymer.

### TYPICAL PROPERTIES

|   | DP5580                     | DP5580SD               |
|---|----------------------------|------------------------|
| Total antimony expressed as antimony pentoxide, weight %: | 19-21                      | 65                     |
| Form:   | Liquid                     | White powder           |
| Agglomerate size, micron:                                 | N/A                        | 10 - 40                |
| Ultimate particle size, micron:                           | 0.005                      | 0.005                  |
| Surface treatment:  | Proprietary                | Proprietary            |
| Solvent compatibility:                                    | Highly polar, water        | Non-polar alkanes      |
| End uses:   | Emulsion and latex systems | Polyolefins, HIPS, ABS |

### APPLICATIONS: HANDLING AND COMPOUNDING

Stable and non-settling dispersions are formed in solvents with gentle mixing. Polymer solutions can be blended with such dispersions and will yield transparent films when dried.

DP5580SD can be blended into ABS, HIPS and polypropylene in compounding equipment such as a twin screw extruder.

Since DP5580SD contains some free and

chemically bonded water, it is important that the compounding equipment be vented. In hot melt adhesive applications, some foaming may occur during the initial melt blending.

Contact Nyacol Nano Technologies, Inc. for specific recommendations for compounding DP5580 and DP5580SD.

### FOR ADDITIONAL INFORMATION OR TO PLACE AN ORDER

|                                |            |                         |
|--------------------------------|------------|-------------------------|
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