Tronox Titanium Dioxide

Nanomaterial

Considerable effort is underway globally to develop a precise definition for nanomaterial. EU Commission Recommendation 2011/696/EU defines nanomaterial as “any natural, incidental or manufactured material containing particles, in an unbound state or as an aggregate or as an agglomerate and where, for 50% or more of the particles in the number size distribution, one or more external dimensions is in the size range 1nm-100 nm.”

The ISO technical committee on nanoparticles, ISO/TC 229[1], defines nanomaterial as “material with any external dimension in the nanoscale (size range from approximately 1nm-100nm) or having internal structure or surface structure in the nanoscale.”

Tronox titanium dioxide is a synthetic or manufactured product made by purifying and concentrating a naturally occurring titanium dioxide bearing ore. The average primary particle size for Tronox titanium dioxide pigment is between 200nm-300nm. As with all powder materials, Tronox titanium dioxide pigment contains a small fraction of particles within the nano range and well below 10% in composition. Furthermore, the primary particles in our titanium dioxide products are strongly bound or fused together by chemical bonds to form aggregates in the micron size range (µm). Therefore, Tronox titanium dioxide pigment should not be considered as nanoparticles, manufactured nanoparticles, nanostructured or nanomaterials.

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[1] ISO/TS 80004-1:2015 Nanotechnologies

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