

HERCULES[®] PE-200

Fine particle-size Technical Pentaerythritol

HERCULES[®] PE-200 fine-particle-size, high-quality technical pentaerythritol is a mixture of mono- and poly-pentaerythritols with an average mono-PE content of 88% and no significant ash. This special grade of PE is used in applications where fine particle size is required for rapid and complete dispersibility and smooth final compounds. Where finely ground pentaerythritol is not required, the more economical, essentially dust-free, Hercules improved technical PE and mono-PE are used.

Product Specifications^(a)

Monopentaerythritol content, wt%	88 ± 2
Hydroxyl content, wt%	48 ± 1
Ash (calculated as Na ₂ SO ₄), wt%, max	0.01
Total solids, wt%, min	99.5
Color, ASTM Pt-Co, max	35
Particle size	
Retained on 200 mesh, wt%, max	0.05

^(a) Hercules test methods are available by request.

Typical Properties (Not Specifications)

Equivalent weight, average	35.4
Specific gravity at 25/4°C	1.4
Bulking value, gal/lb	0.086
Packing density (bulk), lbs/gal	4.0
Particle size	
Retained on 200 mesh, wt%	0.01
Retained on 325 mesh, wt%	0.5

Outstanding Characteristics

The neopentyl structure of PE provides a high concentration of primary hydroxyl groups in a nonvolatile compound. This is important where PE-200 is used to contribute heat stability or to promote the curing of elastomers at elevated temperatures.

Typical Uses

Hercules[®] PE-200 pentaerythritol is a vital ingredient in many fire-retardant coatings owing to the intumescent properties it contributes to the coating. It is used as a component in vinyl stabilizers and is recommended for use with magnesia in the vulcanization of Hypalon⁽¹⁾ synthetic rubber. The fine particle size provides the rapid and complete dispersion required in many new uses where it is present as a solid phase.

Cautions

Hercules PE-200 has a very fine particle size and, like other finely divided organic materials, will form explosive air-dust mixtures. In any use of PE-200, especially in large volume, care must be taken to minimize suspension of dust in the air and to avoid possible sources of ignition. Any electrical equipment, including mixers, should be of proper design and construction. (Refer to the National Electrical Code.) Hercules improved technical PE and mono-PE, comparatively dust-free, should be used in chemical reaction processes where finely ground PE-200 is not required. PE-200 should not be used in alkyd manufacture; the comparatively dust-free improved technical PE and mono-PE should be used.

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Shipping

Hercules PE-200 is shipped in 25-kg bags from the Hercules plant in Louisiana, Missouri, where it is manufactured.

FDA Status

Hercules PE-200 is in compliance with requirements of the U.S. Food and Drug Administration for use as a reactant in polymers and resins according to Title 21 of the Code of Federal Regulations subject to the limitations and requirements of each regulation under the following Sections:

175.105	Adhesives
175.300	Resinous and polymeric coatings
175.320	Resinous and polymeric coatings for polyolefins
175.380	Xylene-formaldehyde resins condensed with 4,4'-isopropylidenediphenolepichlorohydrin epoxy resins
175.390	Zinc-silicon dioxide matrix coatings
176.170	Components of paper and paperboard in contact with aqueous and fatty foods
176.180	Components of paper and paperboard in contact with dry foods
176.210	Defoaming agents used in the manufacture of paper and paperboard
177.1210	Closures with sealing gaskets for food containers
177.2420	Polyester resins, crosslinked
178.3120	Animal glue
178.3870	Rosin and rosin derivatives

CASRN: 115-77-5

CAS Name: 2,2-bis(hydroxymethyl)-1,3-propanediol

Product Safety

Read and understand the Material Safety Data Sheet (MSDS) before using this product.

⁽¹⁾E. I. du Pont de Nemours & Co.

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