



Hercules Incorporated
 Aqualon Division
 Hercules Plaza
 1313 North Market Street
 Wilmington, DE 19894-0001
 (800) 345-0447
 www.aqualon.com

Product Data

NUMBER 4156
 (Supersedes 404-1)

AQUALON® Improved Technical PE

AQUALON® improved technical PE is mono- and poly-pentaerythritol with an average mono-PE content of 88% and with an absolute minimum ash content. In physical form, it is a white, crystalline solid, comparatively dustfree. Since PE compounds are noted for their resistance to moisture, heat, and light, improved technical PE has found widespread use in the manufacture of alkyd resins, plasticizers, rosin esters, and similar products.

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

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

Typical Properties (Not Specifications)

Capillary melting point, °C	188-240
Specific gravity at 25/25°C	1.39
Packing density, lbs/gal	6.1
Packing density, g/ml	0.73

Outstanding Characteristics

Aqualon improved technical PE is a crystalline, white, high-purity mixture of mono-PE and poly-PE with minimum ash content that is comparatively dustfree. Chemically, the neopentyl structure with all four hydroxyls in primary position promotes excellent initial color and color retention and builds resistance to moisture, heat, and light into compounds. Absence of ash increases purity of end products, with greater stability and better final colors.

(over)

The products and related information provided by Hercules are for **manufacturing use only**. Hercules makes no express, implied, or other representation, warranty, or guarantee concerning (i) the handling, use, or application of such products, whether alone, in combination with other products, or otherwise, (ii) the completeness, definitiveness, or adequacy of such information for user's or other purposes, (iii) the quality of such products, except that such products are of Hercules' standard quality. Users are advised to make their own tests to determine the safety and suitability of each such product or product combination for their own purposes. Read and understand the Material Safety Data Sheet (MSDS) before using this product. Hercules does not recommend any use of its products that would violate any patent or other rights.



Typical Uses

Improved technical PE is widely used in the manufacture of alkyds for use in protective coatings where initial color and color retention, high gloss and gloss retention, speed of dry, durability, and resistance to moisture, heat, and light are imperative. Rosin esters based on PE have become standard for use in paints, varnishes, lacquers, adhesives, and printing inks because of the many qualities PE can contribute to these esters.

PE-based plasticizers for vinyl compositions are well known for their stability to heat- and light-aging, as evidenced by their excellent retention of properties. PE is finding a growing market in fire-retardant paints and as an intermediate for specialty chemicals.

Shipping

Improved technical PE is available in 25-kg bags and selected semibulk packages from Aqualon's Louisiana, Missouri, plant, where it is manufactured. In addition, stocks of most grades of PE are warehoused at convenient locations throughout the continental United States for fast delivery service.

FDA Status

Aqualon® improved technical PE 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'-isopropylidenediphenol-epichlorohydrin epoxy resins
175.390	Zinc-silicon dioxide matrix coatings
176.170	Components of paper and paperboard in contact with aqueous and fatty foods
176.210	Defoaming agents used in the manufacture of paper and paperboard
177.1210	Closures with sealing gaskets for food containers
178.3120	Animal glue

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.

10-01

© Aqualon, 2001.

MARKETED BY
**HARWICK STANDARD
DISTRIBUTION CORPORATION**
60 S. Seiberling Street • Akron, Ohio 44305