
Technical Information

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Poligen[®] WE 6

® = Registered trademark of BASF group

Polyethylene wax emulsion

Chemical nature

Aqueous emulsion of an oxidized polyethylene wax with a high melting point

Properties

	Test method		
	DIN	ASTM	
Solids content	EN ISO 3251		33 – 36%
pH-value (23 °C)	EN 1262		7.5 – 9.5
	19268		
Flow time (cup 4 mm, 23 °C)	EN ISO 2431		20 – 60s
Density (Aräometer, 23 °C)	51757	D-1298	ca. 1.0 g/cm ³
Melting point of the wax (DSC)	51007	D-3418	126 – 133 °C
Emulsifier system			nonionic/anionic APEO-free

The above information is correct at the time of going to press. It does not necessarily form part of the product specification.

A detailed product specification is available from your local BASF representative.

Poligen WE 6 is an aqueous, finely divided emulsion of a very hard poly-ethylene wax with a high melting point. It is manufactured under pressure by means of a special BASF process.

Poligen WE 6 conforms to the requirements of various FDA regulations on account of its chemical composition and the process by which it is manufactured.

PRD-No.*

30057498

* BASF's commercial product numbers.

Microbial attack

Poligen WE 6 is fully protected against microbial attack during transport, but biocides need to be added in order to prevent problems with microorganisms from occurring during storage and processing. Careful attention has to be paid to the hygiene of storage facilities.

Low-temperature stability

It is not advisable to store Poligen WE 6 in the open during winter. Measures should be taken to prevent it from freezing. If it does freeze, the best course of action is to thaw it gradually by leaving it to stand at room temperature. It should not be heated directly. It is advisable to filter reconstituted dispersions before use.

Shelf life

Poligen WE 6 has a shelf life of one year in its sealed original packaging, provided it is stored properly. Drums should be tightly resealed each time material is taken from them. We would recommend filtering this product before use if it has been left in storage for long periods or if a crust has formed on the surface due to the evaporation of water.

Applications

Poligen WE 6 is particularly versatile on account of the balanced combination of hardness, toughness and elasticity of the polyethylene wax on which it is based.

Overprint varnishes

The wax contained in Poligen WE 6 is very hard, which makes it very effective in overprint varnishes applied to paper and plastic film in the packaging industry, etc. It usually needs to be applied at a rate of 8 – 10%, expressed as a proportion of the overall formulation.

Paper and board

Because of the hardness of the wax on which it is based, Poligen WE 6 can be used in combination with film-forming agents to increase the resistance of paper to scratching and mechanical action.

Poligen WE 6 conforms to the requirements of various FDA regulations concerning coatings applied to paper and board for food-contact applications.

Polyurethane coatings

Poligen WE 6 is very effective for improving the scratch resistance of water-based polyurethane coatings, such as those applied to parquet floors.

Printing inks

Poligen WE 6 can be added to water-based printing inks to improve their abrasion resistance. It also reduces the sliding friction of printed surfaces.

Textile finishing

The high hardness and the low friction of the wax contained in Poligen WE 6, combined with the very high stability of dilute emulsions, makes it very effective in finishes applied to textile fabrics in order to improve their sewability, abrasion resistance and tear resistance, etc.

Floor polishes

Dry-bright polishes can be formulated with Poligen WE 6 in combination with styrene-acrylic polymer dispersions. The wax contained in Poligen WE 6 is very hard and tough, and this enables dry-bright films with exceptionally hard-wearing films with high traffic resistance to be obtained.

Poligen WE 6 is compatible with all conventional polymer dispersions, resin solutions, plasticizers, film-forming agents and surfactants.

Food-contact applications

The composition of Poligen WE 6 conforms to the requirements of the following FDA regulations.

FDA Paragraph 21 CFR

175.105	Adhesives
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 food
177.1390	Laminate structures for use at temperatures of 250 °F and above.

Safety

We know of no ill effects that could have resulted from using Poligen WE 6 for the purpose for which it is intended and from processing it in accordance with current practice. According to the experience that we have gained over many years and other information at our disposal, Poligen WE 6 does not exert any harmful effects on health, provided that it is used properly, due attention is given to the precautions necessary for handling chemicals, and the information and advice given in our safety data sheet are observed.

Note

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