

BELSIL® PF 200

PEG/PPG-20/20 PHENYLISOPROPYL CAPRYLYL DIMETHICONE

Product description

BELSIL® PF 200 is a multifunctional phenyl modified polydimethylsiloxane, the chemical structure of which has been carefully designed to provide multiple attractive benefits such as high refractive index, amphiphilicity, soft feel and easy emulsifiability.

Special features

BELSIL® PF 200 comes with a clear advantage over conventional phenyl modified silicones currently available in the market in that it is compatible with wide varieties of polar and less polar solvents and is easily emulsifiable. Clear to translucent oil-in-water microemulsions can be made out of it, a feature that is usually not associated with standard phenyl silicones. BELSIL® PF 200 is also self-dispersible in water, and thus can be incorporated into the aqueous phase of a formulation if desired. It is an ideal phenyl silicone fluid for water-based formulations. Being an amphiphilic fluid, it is also compatible with many esters and oils, a feature that makes it attractive for oil based cosmetic formulations as well. At the same time, it has many attractive characteristics that phenyl silicones are associated with, such as high refractive index and pleasant feel.

Application

In hair shine spray and leave-on type hair styling applications, including clear to translucent water-based systems BELSIL® PF 200 imparts hair a shiny appearance and also provides a soft, pleasant feel. In shampoos and conditioners, BELSIL® PF 200 imparts gloss and softness to hair and also improves combing properties. Moreover, unlike standard phenyl fluids, water-clear shampoo formulations are possible with BELSIL® PF 200. In lip-care and color-cosmetics

applications, BELSIL® PF 200 provides good gloss and boosts the brilliance of color. In skin care applications such as facial fluids, body creams, body lotions, etc., BELSIL® PF 200 provides nice glow and soft, pleasant sensory feel to skin. BELSIL® PF 200 can also be used as a secondary emulsifier in water-in-oil type formulations.

Processing

Due to its low viscosity, BELSIL® PF 200 can be easily handled. It can be pumped to the formulation mixture and dispersed under ambient condition. Typical use level: 1-20%.

The drop in viscosity in some aqueous formulations after addition of BELSIL® PF 200 can be corrected by adjusting the thickener system.

Storage

The 'Best use before end' date of each batch is shown on the product label.

Storage beyond the date specified on the label does not necessarily mean that the product is no longer usable. In this case however, the properties required for the intended use must be checked for quality assurance reasons.

Safety notes

Comprehensive instructions are given in the corresponding Material Safety Data Sheets. They are available on request from WACKER subsidiaries or may be printed via WACKER web site <http://www.wacker.com>.

Product data

Typical general characteristics	Inspection Method	Value
Appearance and color		slightly yellow liquid
Refraction index at 20 °C		1,458
Flash point	ISO 2719	approx. > 94 °C
Density at 25 °C, at 1013 hPa	DIN 51757	approx. 1,02 g/cm ³
Viscosity, kinematic at 25 °C	DIN 51562	approx. 450 mm ² /s
INCI name		PEG/PPG-20/20 Phenylisopropyl Caprylyl Dimethicone

These figures are only intended as a guide and should not be used in preparing specifications.

Additional Information**Solubility**

Ingredient	BELSIL® PF 200	Ingredient	BELSIL® PF 200
Mineral Oils/Waxes		Alcohols and Water	
Mineral oil (high-visc)	I	Propylene glycol	I
Mineral oil (low-visc.)	P	Glycerol	I
Isododecane	I	Isopropanol	S
		Ethanol (absolute)	S
Ester Oils		Oleyl alcohol	S
Ethyl acetate	S	Octyldodecanol	S
C12-15 alkyl benzoate	S	Water	I*
Isopropyl myristate	S		
Isopropyl palmitate	S	Emulsifiers/ethoxylated oils	
Di- <i>n</i> -octylcarbonate	S	PEG-40 Hydrogenated Castor Oil	S**
Isodecyl oleate	S	Sorbitane trioleate	S
		PEG-7 Glyceryl Cocoate	S
Triglycerides		Polysorbate 80	S
Castor oil	S		
Lanolin oil	I	Silicone Fluids/Resins	
Olive oil	P	Cyclopentasiloxane	I
Caprylic/Capric triglycerides	S	Disiloxane (BELSIL® DM 0.65)	I
		Dimethicone (BELSIL® DM 5)	I
UV-Filters		Trimethylsiloxyphenyl Dimethicone (BELSIL® PDM 20)	S
Ethylhexyl Methoxycinnamate	S	Dimethicone copolyol (BELSIL® DMC 6031)	S
Benzophenone-3	S	Polyphenylsilsesquioxane (BELSIL® SPR 45 VP)***	S**
Ethylhexyl Salicylate	S		
S = soluble (> 10%) P = partially soluble (1 - <10%) I = insoluble			
*Self-emulsifiable **Requires heating ***used as the solute; BELSIL® PF200 is the solvent			

The data presented in this medium are in accordance with the present state of our knowledge but do not absolve the user from carefully checking all supplies immediately on receipt. We reserve the right to alter product constants within the scope of technical progress or new developments. The recommendations made in this medium should be checked by preliminary trials because of conditions during processing over which we have no control, especially where other companies' raw materials are also being used. The information provided by us does not absolve the user from the obligation of investigating the possibility of infringement of third parties' rights and, if necessary, clarifying the position. Recommendations for use do not constitute a warranty, either express or implied, of the fitness or suitability of the product for a particular purpose.

The management system has been certified according to DIN EN ISO 9001 and DIN EN ISO 14001

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