

BELSIL® REG 1102

DIMETHICONE, DIMETHICONE/ VINYLTRIMETHYLSILOXYSILICATE CROSSPOLYMER

Product description

BELSIL® REG 1102 resin elastomer gel is a non-emulsifying silicone copolymer network blended with a non-volatile, low viscosity dimethicone. It is a transparent gel, which provides a very pleasant sensory property both during application and afterwards. BELSIL® REG 1102 can act as a thickener in formulations while delivering a smooth application. In addition it exhibits shear-thinning behavior. This attribute allows for formulation of cosmetic products that spread easily during application and facilitates the incorporation of pigments into a formulation.

Special features

BELSIL® REG 1102 is easy to distribute on skin and gives a unique silky feel. The incorporation of a silicone resin into the elastomer structure of BELSIL® REG 1102 provides a long lasting non-tacky film, which improves the water and transfer resistance of formulations. BELSIL® REG 1102 acts as a carrier for fragrances and allows a slow release of the fragrance.

Application

BELSIL® REG 1102 is added to the oil or silicone phase of a formulation or most preferably to an already formed emulsion. The product should be dispersed to yield optimum results, but short times of stirring are sufficient. When BELSIL® REG 1102 is diluted with solvents, the viscosity of the product decreases significantly and hence can be easily adjusted. The performance properties of BELSIL® REG 1102 make it a versatile ingredient for various skin care, color cosmetic and hair care products. It provides a substantive hydrophobic film, making it ideal for use in sun care formulations. In lipsticks and foundations, it improves transfer resistance. BELSIL® REG 1102 also imparts a cushiony feel to moisturizing creams, sunscreens lotions, eye gels, foundations, concealers

and BB creams. BELSIL® REG 1102 can be used to thicken the oil phase of emulsions or anhydrous cosmetic formulations. In pressed powder cosmetics it acts as binder. Other typical applications of BELSIL® REG 1102 include mascara, cleansing products, styling products, conditioners, deodorants and much more.

Processing

BELSIL® REG 1102 is a high viscosity material and is highly shear-thinning, so it is easy to pump with suitable equipment. Upon storage, the apparent viscosity BELSIL® REG 1102 may increase. However, the viscosity data can vary significantly depending on how the product is stirred prior to measurement. WACKER recommends to thoroughly mix BELSIL® REG 1102 before any viscosity measurement. If the product is stored for an extended period of time, it should be re-mixed prior to use.

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		transparent gel
Solid content		100 %
Elastomer Content		~ 16 %
Flash point	ISO 2592	> 140 °C
Density at 20 °C, at 1013 hPa	EN/ISO 1183	0,93 g/cm ³
Viscosity, dynamic at 25 °C	DIN 53018	75000 - 125000 mPa.s

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

Anhang / appendix
Additional information

Miscibility BELSIL® REG 1102

blending ratio: 1:1

 propeller stirrer
 shear rate : 1000 UpM

Cosmetic Ingredient mixed with BELSIL® REG 1102	1 part 1 part	Cosmetic Ingredient mixed with BELSIL® REG 1102	1 part 1 part
Mineral oils		Emulsifiers / ethoxylated oils	
Mineral oil	V**	Sorbitan Trioleate	-
Hydrogenated Polydecene	V**	Polyglyceryl2 - Sesquiosterate	-
C9-C13 Isoparaffin	V	PPG-2 Myristyl Ether Propionate	V**
		Caprylic/Capric Triglyceride	V**
Ester oils			
C12-15 alkyl benzoate	V**		
Isopropyl myristate	V		
Decyl oleate	V**	Alcohols & water	
Oleyl oleate	-	Propylene glycol	-
Dicaprylyl Ether	V	Glycerol	-
Ethylhexyl stearate	V**	Isopropanol	V*
Diethylhexyl carbonate	V	Ethanol	-
Diisobutyl adipate	V*	Water	-
UV-Filter			
Ethylhexyl Salicylate	-		
		Silicone fluids	
		Disiloxane (BELSIL® DM 0.65)	V*
Triglycerides		Dimethicone (BELSIL® DM 1 Plus)	V*
Castor oil	-	Dimethicone (BELSIL® DM 5)	V*
Lanolin oil	V**	Dimethicone (BELSIL® DM 10)	V*
Wheat germ oil	-	Trimethylsiloxyphenyl Dimethicone	
Olive oil	-	(BELSIL® PDM 20)	V*

V = miscible clear

V* = miscible, slightly turbid

V** = miscible, turbid

- = not miscible

Additional information

Miscibility BELSIL® REG 1102

blending ratio: 9:1

 propeller stirrer
 shear rate : 1000 UpM

Cosmetic Ingredient mixed with BELSIL® REG 1102	9 parts 1 part	Cosmetic Ingredient mixed with BELSIL® REG 1102	9 parts 1 part
Mineral oils		Emulsifiers / ethoxylated oils	
Mineral oil	-	Sorbitan Trioleate	-
Hydrogenated Polydecene	-	Polyglyceryl2 - Sesquiosterate	-
C9-C13 Isoparaffin	V	PPG-2 Myristyl Ether Propionate	-
		Caprylic/Capric Triglyceride	-
Ester oils			
C12-15 alkyl benzoate	-		
Isopropyl myristate	V*		
Decyl oleate	-	Alcohols & water	
Oleyl oleate	-	Propylene glycol	-
Dicaprylyl Ether	V*	Glycerol	-
Ethylhexyl stearate	-	Isopropanol	-
Diethylhexyl carbonate	V*	Ethanol	-
Diisobutyl adipate	-	Water	-
UV-Filters			
Ethylhexyl Salicylate	-		
		Silicone fluids	
		Disiloxane (BELSIL® DM 0.65)	V*
		Dimethicone (BELSIL® DM 1 Plus)	V*
Triglycerides		Dimethicone (BELSIL® DM 5)	V
Castor oil	-	Dimethicone (BELSIL® DM 10)	V
Lanolin oil	-	Trimethylsiloxyphenyl Dimethicone (BELSIL® PDM 20)	V*
Wheat germ oil	-		
Olive oil	-		

V = miscible clear

V* = miscible, slightly turbid

V** = miscible, turbid

- = not miscible

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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