

# BELSIL® EG 2

(INCI Name – Cyclopentasiloxane and Dimethicone/Vinyl Dimethicone Crosspolymer)

## Product description

BELSIL® EG 2 elastomer gel is a cross-linked high molecular weight silicone swollen in cyclopentasiloxane. It is a transparent gel that functions as a thickener in formulations while delivering smooth applications. Under shear stress BELSIL® EG 2 thins and allows easy incorporation of cosmetic ingredients like pigments.

## Special features and Key benefits

BELSIL® EG 2 is easy to distribute on skin and gives a nice, non-greasy, silky skin feel. Evaporation of the volatile silicones leaves a non-tacky film which improves the water resistance of formulations

## Application

BELSIL® EG 2 is a non-emulsifying elastomer gel that is supplied as a 14% active solution in cyclopentasiloxane.

- ▶ Sun care Products :Organic UV absorbers, Sun care, Oil-Free
- ▶ Emulsions: Moisturizers, Anti-aging Body Lotions and creams
- ▶ Color Cosmetics: Foundations, Lip Colors , Pressed Powders
- ▶ Anhydrous Products: Eye Serums /Shadows

## Processing

The viscosity may increase during storage, and agitation may be required before use if stored for an extended period of time. However the viscosity data

can vary significantly depending on how the product is stirred prior to measurement. WACKER recommends to thoroughly mix BELSIL® EG 2 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 Certificate of Analysis. Storage beyond the date specified on the Certificate of Analysis 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. The silicone product may deteriorate when it comes in contact with heat, light, acid, alkali. Seal the container tightly and store in cool place away from heat and flame.

## Safety notes

For specific information regarding safe handling of this material, please refer to the Material Safety Data Sheet.

## Specifications

Typical property values are not intended for use in the preparation of specifications. Please contact Wacker Silicones for assistance and recommendations before writing specifications on this product.

## Product data

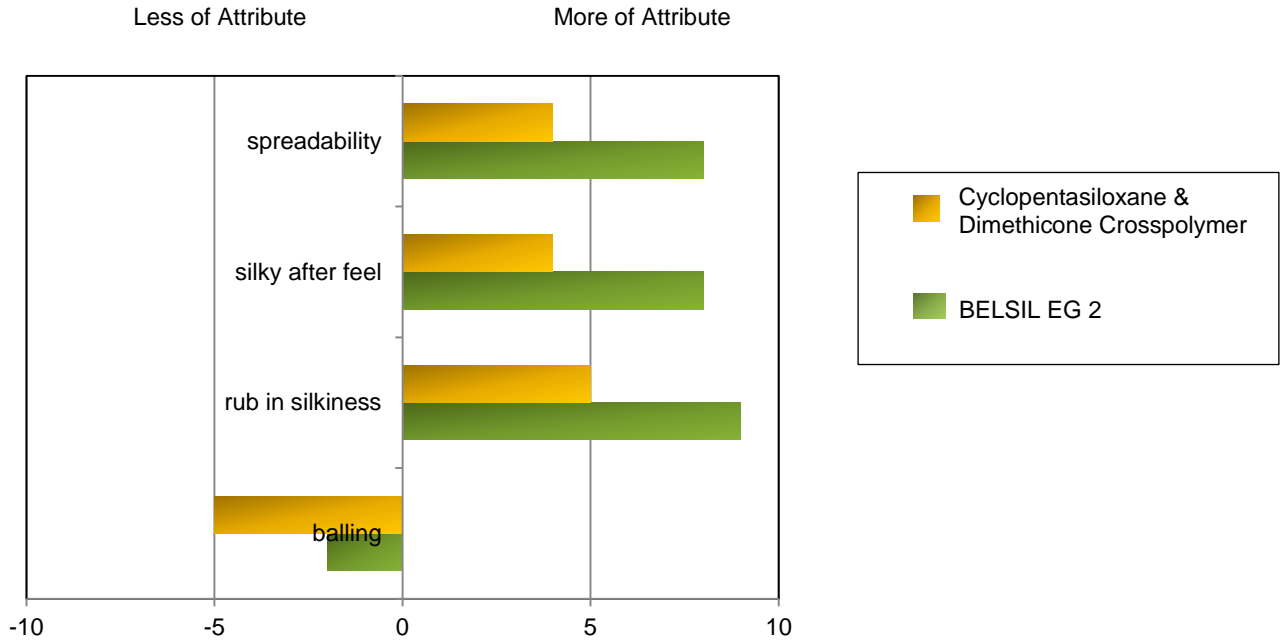
Typical general characteristics	Inspection Method	Value
Appearance		Clear to slightly translucent gel
Solid content		13-15%
Viscosity, dynamic at 25 °C		0.2-0.4 mio cps
INCI name		Cyclopentasiloxane and Dimethicone / Vinyl Dimethicone Crosspolymer

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

Performance Data

**Sensory**

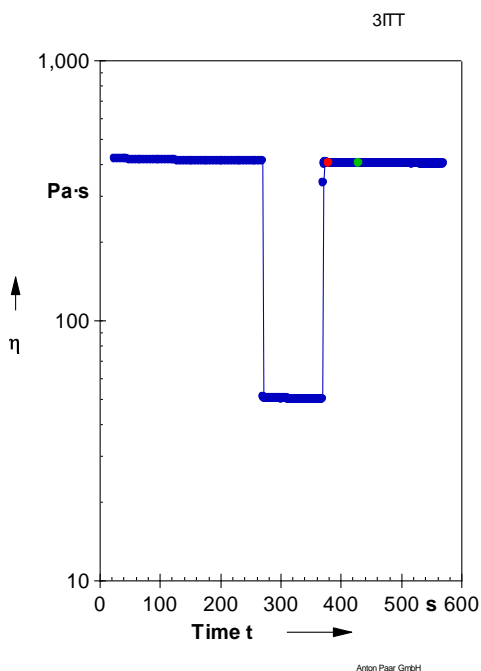
During an expert skincare evaluation, BELSIL® EG 2 was compared to a standard elastomer gel. The baseline was set to a value zero. Every panelist were given a small quantity of the two materials to rate on a scale of -5 to +5 against the control for various attributes that are necessary in personal care market.



The data clearly demonstrates that BELSIL® EG 2 can provide an enhanced sensory experience since it achieved a higher attribute rating compared to the standard.

**Rheology**

Rheology measurements can be a good indicator for predicting performance characteristic of a given material. For silicone gels, rheology has been used to study structure behavior during the application of shear. Thixotropy is a property exhibited by Non-Newtonian liquids they return to their original viscosity only with a delay after the shear force ceased to act.



Recovery Delta%=89.4 after t=60 s

Three transitional areas can be easily identified in the viscosity-time curve shown above. A gel is quickly transformed into a sol at a constant shear force. During the period of rest the material specific network structures are re-established i.e. the sol turns back into a gel.

### Solubility/Compatibility

#### Blending ratio 1:1

Ingredient	EG 2
<b>Mineral Oils/Waxes</b>	
Mineral Oil	I
<b>Ester oils</b>	
C12-15 Alkyl Benzoate	I
Isopropyl Myristate	I
<b>Triglycerides</b>	
Castor Oil	I
Lanolin Oil	I
Caprylic/Capric Triglycerides	I
<b>UV filters</b>	
Ethylhexyl Methoxycinnamate	I
Ethylhexyl Salicylate	I

Ingredient	EG 2
<b>Alcohols and Water</b>	
Propylene Glycol	I
Glycerol	P
Ethanol	P
Water	I
<b>Silicone Fluids</b>	
Cyclopentasiloxane(Belsil®CM 040)	S
Disiloxane( Belsil®DM 0.65)	S
Dimethicone( Belsil®DM 10)	S
Dimethicone( Belsil®DM 100)	P
Trimethylsiloxyphenyl Dimethicone ( Belsil®PDM 20)	P
C26-28 Alkyl Dimethicone( Belsil®CDM 3526 VP)	D

I= Insoluble

P=Partially soluble

S=Soluble

D=Dispersible

The data presented in this leaflet 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 conditions within the scope of technical progress or new developments. The recommendations made in this leaflet 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 recommendations do 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.

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