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## Technical Information

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# Cremophor® GS 32

® = Registered trademark  
of BASF Aktiengesellschaft

**Nonionic emulsifiers for the manufacture of cosmetic O/W emulsions.**

**cosmetic**  
SOLUTIONS

- Hair Care
- Skin Care
- Oral Care

 **BASF**  
The Chemical Company

<b>Chemical nature</b>	Cremophor® GS 32 is a nonionic emulsifier, manufactured by reacting polyglycerin of defined composition (with an average of 3 glycerin units) with stearic acid.
<b>INCI name</b>	Polyglyceryl-3 Distearate
<b>CAS-No.</b>	94423-19-5
<b>Description</b>	Cremophor® GS 32 is a white or slightly yellowish powder. It has a faint fatty acid odour.
<b>HLB value</b>	9±1

**Specification**

Parameter	Specification Limits	Method
Peroxide value	≤ 1.0 meq/kg	07/0174.00
Saponification value	140-180 mg/g	07/0175.00
Iodine value	≤1.0 g/100 g	07/0180.00
Water (K. Fischer)	≤ 1.0 g/100 g	07/0178.00
Colour (Gardner)	≤ 4	07/0179.00

**Application**

Cremophor® GS 32 is characterized by excellent physiological compatibility (PEG free). It can be used in face and body creams for dry and greasy skin as well as in sun protection preparations.

Solubility (9 g Cremophor® GS 32 + 30 g solvent)

Solvent/Temperature	65°C	20°C
Water	dispersible	liquid crystals
Ethanol	clear soluble	liquid crystals
Glycerin	turbid soluble	liquid crystals
propylene glycol	insoluble	insoluble
wheat germ oil	clear soluble	solid wax
avocado oil	clear soluble	solid wax
Squalane	clear soluble	solid wax
paraffin oil, visc.	clear soluble	solid wax

**Solubility**

It can be used with solvents with a wide range of polarities, though it is particularly suitable for use with vegetable oils, e. g., peanut oil, sunflower oil and avocado oil. Depending on the type and quantity of oil phase used, stable preparations can be produced with 2-5% emulsifying agent. The concentrations of oils and fats tested range from 10% to 40%.

**Processing notes**

To achieve the desired fine distribution of the oily phase in the aqueous phase, it is recommended to homogenize the emulsion, as with W/O emulsions. The time and temperature depend on the emulsifying additives used.

Formation of liquid crystals

- dissolve Cremophor® GS 32 into the oil phase or water phase
- homogenize at 80-70°C (water phase and oil phase together)
- cool down under stirring below 30°C

The use of a high-speed homogenizer is particularly recommended when the final preparation is to have a low viscosity.

<b>Consistency modifiers</b>	Neutral fats, GMS, Cetylalcohol etc. can be usefully incorporated in the emulsion to provide consistency and, if required, to improve the stability. If more than 5% Cremophor® GS 32 is used in a product, there is no need to add extra consistency modifiers.
<b>Preservation</b>	Emulsion preparations must be preserved. Preservation must take further additives and production conditions into account.
<b>Stability/Storage</b>	Cremophor® GS 32 is stable for at least 2 years if stored in the original sealed containers in a dry place at room temperature.
<b>Toxicity</b>	An investigation of the raw material gave no indication of harmful effects to health if the substance is used for the stated applications and concentrations. Due to the large variety of applications and possible combinations with other products, users are responsible for their own safety assessment of their products
<b>Safety Data Sheet</b>	A safety data sheet is available
<b>Note</b>	<p>„While the descriptions, designs, data and information contained herein are presented in good faith and believed to be accurate, it is provided for your guidance only. Because many factors may affect processing or application/use, we recommend that you make tests to determine the suitability of a product for your particular purpose prior to use.</p> <p>NO WARRANTIES OF ANY KIND, EITHER EXPRESS OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, ARE MADE REGARDING PRODUCTS DESCRIBED OR DESIGNS, OR THAT DATA OR INFORMATION MAY BE USED WITHOUT INFRINGING THE INTELLECTUAL PROPERTY RIGHTS OF OTHERS. IN NO CASE SHALL THE DESCRIPTIONS, INFORMATION, DATA OR DESIGNS PROVIDED BE CONSIDERED A PART OF OUR TERMS AND CONDITIONS OF SALE.</p> <p>Further, you expressly understand and agree that the descriptions, design, data and information furnished by BASF hereunder are given gratis and BASF assumes no obligation or liability for the description, designs, data and information given or results obtained, all such being given and accepted at your risk.“</p>

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