

## TEGO® Acid S 40 P

- Emulsifier for the formulation of cosmetic O/W emulsions
- Compatible with higher concentrations of electrolytes
- Based on vegetable raw materials

Personal Care

## INCI names (CTFA names)

PEG-40 Stearate

Chemical and physical properties (not part of specifications)	TEGO® Acid S 40 P
Form	Pellets
HLB value	approx. 17

## Properties

- TEGO® Acid S 40 P is based on vegetable raw materials.
- The amount used, referred to the emulsion, is 2.0 – 3.0 %.
- Creams based on TEGO® Acid S 40 P show good application and stability properties, if they contain 25 – 30 % of oil phase; lotions should contain 15 – 25 % of oil phase.
- TEGO® Acid S 40 P should be used in combination with consistency-providing substances for the formation of viscosity-enhancing gel structures in the external water phase. Blends of TEGIN® M Pellets (glyceryl stearate), stearic acid, TEGO® Alkanol 16 (cetyl alcohol), TEGO® Alkanol 18 (stearyl alcohol) or TEGO® Alkanol 1618 (cetearyl alcohol) have proved most effective.
- Depending on the formulation 0.1 – 0.3 % TEGO® Carbomer 134 or TEGO® Carbomer 141 are necessary to improve the freeze stability of the emulsions.

## Application

TEGO® Acid S 40 P is suitable for the formulation of O/W creams and lotions in products for

- Facial care
- Hand and body care
- Decorative cosmetics

## Recommended usage concentration

2.0 – 3.0 % TEGO® Acid S 40 P

## Packaging

600 kg pallet (24 x 25 kg bag)

## Preparation

We recommend melting TEGO® Acid S 40 P together with the oil phase.

We recommend to heat oil and water phases separately to approx. 70 – 75 °C.

The oil phase is added to the water phase with stirring. The coarsely dispersed pre-emulsion is then homogenized.\*

If necessary because of production considerations the water phase can be added to the oil phase **without stirring** (to avoid the building of the water-in-oil form) and then homogenized.\*

After homogenization the dispersion of TEGO® Carbomer 134 or TEGO® Carbomer 141 in oil – at 20 % in Mineral Oil or ester oils such as TEGOSOFT® OS (Ethylhexyl Stearate) – is added and the emulsion is homogenized again for a short time. Avoid the use of triglyceride based esters for dispersion of the Carbomer.

During cooling, a constant horizontal and vertical movement of the emulsion has to be ensured. The viscosity of the liquid emulsion increases to a creamy consistency, as the hydrated consistency promoters solidify.

Perfume, temperature-sensitive substances or electrolyte containing ingredients should be added at 35 – 45 °C.

Neutralization of the emulsion is completed at approx. 35 °C.

\*The homogenizer must be placed in the water phase.

## Hazardous goods classification

Information concerning

- classification and labelling according to regulations for transportation and for dangerous substances
- protective measures for storage and handling
- measures in case of accidents and fires
- toxicity and ecological effects

is given in our material safety data sheets.

B 10/09

This information and all further technical advice is based on our present knowledge and experience. However, it implies no liability or other legal responsibility on our part, including with regard to existing third party intellectual property rights, especially patent rights. In particular, no warranty, whether express or implied, or guarantee of product properties in the legal sense is intended or implied. We reserve the right to make any changes according to technological progress or further developments.

The customer is not released from the obligation to conduct careful inspection and testing of incoming goods. Performance of the product described herein should be verified by testing, which should be carried out only by qualified experts in the sole responsibility of a customer. Reference to trade names used by other companies is neither a recommendation, nor does it imply that similar products could not be used.  
(Status: April, 2008)