STEPAN® 745 GC
Novel Water-Compatible Emollient for Clear Cleansing Products

STEPAN® 745 GC is a 100% active nonionic liquid emollient. STEPAN® 745 GC is an alkoxylated derivative of Glyceryl Cocoate. It is a naturally-derived, high HLB ingredient that offers enhanced multifunctionality.

**INCI Name:** PEG/PPG - 6/2 Glyceryl Cocoate  
**Physical Form:** Clear Liquid  
**Use Level:** 2-10%

### Unique Attributes
- Compatibility with aqueous systems
- Conditioning properties
- Good viscosity building properties in both Sodium and Ammonium-based surfactant systems
- Minimum effect on foaming
- Exhibits clarity and can be incorporated in a surfactant system via cold mix

### Skin Conditioning Properties

#### Applications
- Liquid soaps
- Bath and body washes
- Facial cleansers
- 2-in-1 and regular shampoos

### Viscosity Building Properties in Surfactant Systems (no salt added)

#### Sodium System

- **Graph**: Viscosity vs % STEPAN® 745 GC for CS-230/HCA and CS-230/HCG

#### Ammonium System

- **Graph**: Viscosity vs % STEPAN® 745 GC for CA-230/HCA and CA-230/HCG

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CS-230 = Sodium Laureth Sulfate  
CA-230 = Ammonium Laureth Sulfate  
HCA = Cocamidopropyl Betaine  
HCG = Cocamidopropyl Betaine*  
* contains glycerin
Clear Body Wash: Formulation #977

**STEPAN® 745 GC** provides nice after-feel on the skin

**Ingredients** % by Weight

**Phase 1**
- Deionized Water q.s. to 100.0

**Phase 2**
- Jaguar C-13S (Rhodia Inc.), Guar 0.2
- Hydroxypropyltrimonium Chloride

**Phase 3**
- STEOL® CS-130 55.0
- AMPHOSOL® HCA 10.0
- ALPHA-STEP® PC-48 5.0
- **STEPAN® 745 GC** 8.0

**Phase 4**
- Vitamin E Acetate (Roche), Tocopheryl Acetate 0.1
- Vitamin A Palmitate (Roche), Retinyl Palmitate 0.1
- Versene 100 (Dow Chemical), Tetrasodium EDTA 0.2
- Preservative, Dye, Fragrance q.s.

**Phase 5**
- Citric Acid (50%) q.s.
- Sodium Chloride q.s.

**Physical Properties**
- **Appearance**: Clear viscous liquid
- **pH**, as is: 5.5 - 6.0
- **Viscosity at 25°C, cps**: 3,000 - 5,000

**Mixing Procedure:**
1. In a suitable vessel equipped with agitation capabilities, charge Phase 1.
2. Add Phase 2. Mix well until dissolved.
3. Add ingredients of Phase 3 and Phase 4 while continue mixing.
4. Adjust pH and viscosity with ingredients in Phase 5, if necessary.

Clear Conditioning Shampoo: Formulation #1057

This clear shampoo provides cleansing as well as conditioning

**STEPAN® 745 GC** provides conditioning effect

**Ingredients** % by Weight

**Phase 1**
- Deionized Water q.s. to 100.0

**Phase 2**
- Versene NA (Dow Chemical), Disodium EDTA 0.1
- STEanol® AMV 25.0
- STEOL® CA-230 18.0
- AMPHOSOL® HCG 3.6
- **STEPAN® 745 GC** 3.0

**Phase 3**
- NINOL® COMFI 2.0

**Phase 4**
- Glydant (Lonza), DMDM Hydantoin 0.25

**Phase 5**
- DL-Panthenol (Roche), Panthenol 0.25
- Fragrance q.s.

**Phase 6**
- Citric Acid (50%) q.s.
- Sodium Chloride q.s.

**Physical Properties**
- **Appearance**: Clear viscous liquid
- **pH**, as is: 5.5 - 6.0
- **Viscosity at 25°C, cps**: 8,500 - 9,500

**Mixing Procedure:**
1. In a vessel equipped with heating and agitation capabilities, add Phase 1.
2. Add ingredients of Phase 2.
3. Heat to 60-65°C.
5. Cool to 40°C. Add Phase 4.
7. Adjust pH and viscosity with ingredients of Phase 6, if necessary.

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