

Novemer™ EC-1 Polymer

Multifunctional Liquid Polymer for Skin and Sun Care in O/W Emulsions

INCI Name: Acrylates/Acrylamide Copolymer (and) Mineral Oil (and) Polysorbate-85

Quick Start Guide

Novemer™ EC-1 polymer is a novel easy to use multifunctional polymer designed to thicken, suspend, stabilize, emulsify and enhance skin feel. It offers a new way to formulate skin care products. For comprehensive information on Novemer EC-1 polymer, visit www.lubrizol.com/personalcare.

Description

- Pre-neutralized, crosslinked anionic polymer, dispersed in oil.
- Milky, opaque liquid.
- Contains 26-28% polymer solids.
- Contains less than 30% mineral oil.

Applications

Skin care and sun care O/W emulsions, creams and lotions that:

- Can be dispensed in many ways, including sprayable products.
- Are stable formulations even in the presence of electrolytes, natural ingredients and/or inorganic pigments such as Zinc Oxide.
- Provide differentiable skin feel.

Benefits

Novemer EC-1 polymer performs as a multifunctional ingredient that modifies rheology, stabilizes, emulsifies, co-emulsifies, and suspends while enhancing sensory properties:

- Performs efficiently in the presence of electrolytes.
- Demonstrates good rubout properties and an excellent afterfeel with a distinctive skin softness and absence of tack (sensory evaluation results available in TDS-299).

Is an easy to use, pre-neutralized liquid that can be formulated at cold temperatures. It can be added at any stage of the formulation, saving processing time.

- Can suspend inorganic pigments, such as Zinc Oxide.
- Is capable of emulsifying or co-emulsifying a broad range of oils (free from HLB calculations).
- Maintains product integrity under challenging conditions (temperature, shear stress).

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For further information, please visit: www.lubrizol.com/personalcare

Formulating Guidelines

- Effective as a primary or secondary emulsifier.
- Recommended use levels are 1-4 % as supplied.
- Polymer, if added directly to water phase, will rapidly thicken.
- Polymer added directly to oil phase will disperse.
- Post addition is feasible to adjust final viscosity.
- Neutralization is not required.
- Cold process formulating feasible.

Recommended for formulations between pH 5.5 to 11. To formulate at pH of 5 to 6, use low levels of Carbopol® polymers or add mild acid.

Formulations available:

- B-0007 – All Night Shimmer: A Sparkling Night Cream
- B-0008 – Blue Clouds: Smooth Body Emulsion
- B-0017 – Body Lotion With Sodium PCA
- B-0023 – Economy Cream with Mineral Oil
- B-0024 – Velvety Cream
- B-0030 – Skin Moisturizing Lotion
- B-0031(AP) – All Day Protective Hand Crème
- B-0032(AP) – Moisturizing Lotion with Soft & Light Afterfeel
- B-0033(AP) – Body Sculpting Crème
- B-0034(LA) – Hand Cream
- B-0035(LA) – Hand Cream
- B-0036(AP) – Non-Greasy Light Economy Lotion
- B-0037(AP) – Long-Lasting Velvety Economy Lotion
- B-0038(EU) – Ethereal Butter Cream
- B-0040 – Moisture Drench Body Lotion
- CC-E0006 – Moisturizing Eye Cream
- CL-B0006 – Body Wash
- CL-F0009 – Cleansing Lotion and Eye Make-up Remover
- CL-F0021(EU) – Gentle Purifying Gel
- F-0026 – Creamy Daytime Gel
- F-0028 – Light Day Cream with Physical Sunscreen
- F-0029 – Facial Moisturizer With Extracts
- F-0030B(EU) – "Stop the Hour Glass" - An Anti-Aging Cream
- F-0035B – Day Cream
- F-0036 – Moisturizing Day Lotion

- F-0037 – Anti-Aging Cream
- F-0049 – Anti-Aging Night Cream
- F-0052(AP) – Moisture Replenishing and Softening Cream
- F-0053(AP) – Non-Greasy Rich Economy Cream
- F-0054(AP) – Non-Greasy Extra Soft Moisturizing Cream
- F-0055(AP) – Velvety Economy Cream
- F-0056(AP) – Rich and Extra Soft Cream
- F-0057(AP) – Rich Economy Cream
- F-0058(AP) – Long-Lasting Velvety Economy Cream
- F-0061(AP) – Oasis Multiple Emulsion Facial Cream
- F-0063 – Transforming Smoothing Lotion
- O-0002 – Zit Zap! - An Anti-Acne Cream for Oily Skin
- O-0019(AP) – Soothing Skin Emulsion Toner
- O-0020(AP) – Asia Beauty Skin Lightening Day Cream
- S-SG0010 – Plumeria Youth Treatment Cream Gel
- S-X0023(LA) – Conditioning Hair Cream
- S-X0024(LA) – Conditioning Combing Hair Cream
- SU-0004 – Sprayable After Sun Moisturizer
- SU-0010 – Creamy Pre-Sun Gel
- SU-0012 – Soothing and Moisturizing After-Sun Cream Gel
- SU-0021 – After-Sun Moisturizer

Microbiology

Novemer EC-1 polymer has passed the test for Mixed Inoculum Preservative Efficacy (Challenge test). It does not contain preservative or anti-oxidant.

Toxicology

The toxicity profile of Novemer EC-1 polymer indicates that it has a low potential for causing irritation or sensitization in finished personal care products. These data indicate that it is suited for personal care applications where there is contact with skin or where there is a potential contact with the eyes.

Regulatory Status

Novemer EC-1 polymer is registered in the US, Japan, Canada, Korea, Australia, China and Philippines. Its components are listed on EINECS.

Novemer EC-1 polymer complies with cosmetics regulations in Europe and Japan.

Storage and Handling

- Packaging:
 - 40 lb (18 kg) pail
 - 250 lb (113 kg) open head plastic drum
- Shelf Life: 24 months. Mixing is recommended after 6 months.
- Storage: In cool and dry area – humidity can cause gel formation.
- Do not freeze during transportation.

Literature Available:

- Quick-Start Guide
- Technical Data Sheet
- Product Specification Sheet
- Test Procedures
- Material Safety Data Sheet
- Toxicology Studies
- Microbial Summary
- Sample Formulations

Other Information

- Application patent pending.

The Schedule B number for exports from USA is 3906.90.60.