

General information:

INCI Name	Polyurethane-99
Ingredient category	Film former
Chemical description	Water- based polyurethane polymer (anionic) with 1.5% antimicrobial additive
Appearance	Milky dispersion
Solid content	40.0±2.0
pH	7.5±1.0
Viscosity	≤500 mPa.s



Sustainability profile:

- **Naturality:** 56% naturally-derived (ISO 16128)
- **Biodegradability:** Reached a mean biodegradation rate of 52% within 28 days (OECD 301 readily biodegradability test*).
- **Microplastics status:** derogated (2019 ECHA restriction proposal)

*Test performed on the polymer itself.

Applications:

- **Color cosmetics:** eye makeup, face makeup, lip makeup & nail polish

Technical benefits:

- Waterproofing
- Water resistance
- Rub-off resistance
- Sweat resistance
- Non-transferring
- Anti-smudge
- Good & even color coverage
- High wearer comfort
- Easy to remove

Others:

- Suitable for **vegan** products.
- Suitable for **cruelty-free** products.
- Suitable for **biodegradable** formulas.

Recommendations/Formulating tips:

Use level

- 3-10% as supplied



Covestro Deutschland AG
Kaiser-Wilhelm-Allee 60
51373 Leverkusen
Germany

cosmetics.covestro.com
info@covestro.com

Compatibility

- **pH:** Products with pH between 4.5-8.0 can be formulated; ideally, we recommend adjusting the pH to the 6.0-8.0 range.
- **UV filters:** Compatible with common used UV filters (mineral & organic).
- **Salts:** Supports low level of electrolytes. We recommend up to 0.5% of sodium chloride.
- **Chelating agents:** Compatible with state-of-the-art chelating agents.
- **Ethanol:** Limited compatibility with up to 20% ethanol; forms milky solutions.

Process

- Add Baycusan® eco E 1001 at the end of the formulation process below 40 °C.
- We recommend homogenizing before addition of Baycusan® eco E 1001.
- We recommend adjusting the pH before the addition of Baycusan® eco E 1001. If necessary, pH could be adjusted with a diluted solution (at 10%) of either citric acid or sodium hydroxide after the addition of Baycusan® eco E 1001.

The manner in which you use our products, technical assistance and information (whether verbal, written or by way of production evaluations), including any suggested formulations and recommendations, is beyond our control. Therefore, it is imperative that you test our products to determine suitability for your processing and intended uses. Your analysis must at least include testing to determine suitability from a technical, health, safety, and environmental and regulatory standpoint. Such testing has not necessarily been done by Covestro, and Covestro has not obtained any approvals or licenses for a particular use or application of the product, unless explicitly stated otherwise.

Any samples provided by Covestro are for testing purposes only and not for commercial use. Unless we otherwise agree in writing, all products are sold strictly pursuant to the terms of our standard conditions of sale which are available upon request.

All information, including technical assistance is given without warranty or guarantee and is subject to change without notice. It is expressly understood and agreed by you that you assume and hereby expressly release and indemnify us and hold us harmless from all liability, in tort, contract or otherwise, incurred in connection with the use of our products, technical assistance, and information. Any statement or recommendation not contained herein is unauthorized and shall not bind us. Nothing herein shall be construed as a recommendation to use any product in conflict with any claim of any patent relative to any material or its use. No license is implied or in fact granted under the claims of any patent.

For more information on Covestro products in Cosmetic Applications, please refer to https://solutions.covestro.com/-/media/Covestro/Solution%20Center/Brochures/PDF/COS_Disclaimer. These values are typical values only. Unless explicitly agreed in written form, they do not constitute a binding material specification or warranted values.

Edition: 2021 · Printed in Germany