

General information:

INCI Name	Polyurethane-34
Ingredient category	Film former
Chemical description	Water-based polyurethane polymer (anionic) including 1.5% antimicrobial additive
Appearance	Milky dispersion
Solid content	40.0±2.0
pH	7.5±1.0
Viscosity	≤500 mPa.s

Sustainability profile:

- **Biodegradability:** Reached a mean biodegradation rate of 60% within 60 days (OECD 301 ready biodegradability test*).
- **Microplastics status:** out of scope (2019 ECHA restriction proposal).

*Test performed on the polymer itself.

Applications:

- **Sun care:** sun protection lotion/-milk & cream
- **Skin care:** face care, body care, foot-/hand cream & primer
- **Color cosmetics:** eye makeup & face makeup

Technical benefits:

Sun care

- SPF boosting
- Water resistance
- Helps to reduce eye irritation
- Enhanced stabilization
- Good skin feeling
- Non-greasy
- Not sticky

Color cosmetics

- Water resistance
- Comfortable wear

Skin care

- Anti-pollution barrier
- Facilitates longer-lasting retention of active ingredients on the surface of the skin
- Enhances efficacy of active ingredients
- Good rub-off resistance
- Excellent sensory properties
- Skin breathability

Others:

- Suitable for **vegan** products.
- Suitable for **cruelty-free** products.
- Suitable for **biodegradable** formulas.
- Marketable in China*.

*Newly filed cosmetic ingredient under monitoring period.



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Recommendations/Formulating tips:

Use level

- 3-20% as supplied

Compatibility

- **pH:** Products with pH between 4.5-8.0 can be formulated; ideally, we recommend adjusting pH to the 6.0-8.0 range.
- **UV filters:** Compatible with common used UV filters (mineral & organic).
- **Salts:** Supports only low level of electrolytes; we recommend the use of maximum 0.5% of sodium chloride.
- **Ethanol:** Compatible with up to 50% ethanol; forms milky dispersions.
- **Chelating agents:** Compatible with state-of-the-art chelating agents.

Process

- Add Baycusan® C 1000 at the end of the formulation process below 40 °C.
- We recommend homogenizing before addition of Baycusan® C 1000 process below 40 °C.
- We recommend adjusting the pH before the addition of Baycusan® C 1000. If necessary, pH could be adjusted with a diluted solution (at 10%) of either citric acid or sodium hydroxide after the addition of Baycusan® C 1000.

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