Baycusan® C 1010

General information:

INCI Name	Polyurethane-35
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	7.0±1.0
Viscosity	<1000 mPa.s

Sustainability profile:

- **Biodegradability:** Reached biodegradation rate of 12% within 28 days (OECD 301 ready biodegradability test).
- **Microplastics status:** derogated (2019 ECHA restriction proposal).

Applications:

- **Hair styling:** styling pumpspray, lotion, cream, gel cream & aerosol mousse
- **Hair care:** hair treatment & leave-on conditioner

Technical benefits:

- Strong hold
- Long-lasting style
- High humidity resistance
- No tack & natural feel
- Fast drying
- Suitable for arid & humid climates

Others:

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

Recommendations/Formulating tips:

Use level

- 3-10% as supplied

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.
- **Salt:** We recommend the use of sodium chloride (up to 1.0%).
- **Ethanol:** Compatible with 30-100% ethanol; forms milky solutions.
- **Chelating agents:** Compatible with state-of-the-art chelating agents.
- **Cationics:** Limited compatibility depending on charge density. We recommend adding an amphoteric polymer (e.g. polyquaternium-39) to increase the compatibility with cationic polymers.
- **Non-ioninc polymers:** Compatible with non-ionic film formers such as PVP, VP/VA copolymer.
- **Anionic polymers:** Limited compatibility depending strongly on neutralization grade and charge density.
- **Propellants:** We recommend the use of DME.

Process

- Add Baycusan® C 1010 at the end of the formulation process below 40 °C.
- We recommend homogenizing before addition of Baycusan® C 1010.
- We recommend adjusting the pH before the addition of Baycusan® C 1010. 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 1010.

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