



YT-617 High-Hardness Water-Resistant Polycarbonate Waterborne Polyurethane Dispersion

OVERVIEW

YT-617 is an anionic polycarbonate-based waterborne polyurethane dispersion (PUD) offering high film hardness together with outstanding water and solvent resistance. The film is transparent, with good scratch and abrasion resistance and reliable low-temperature film formation — suited to waterborne coating systems that demand high film hardness, water and solvent resistance and surface gloss.

KEY SPECS

Appearance	Transparent to semi-transparent liquid	Solid content	30 ± 1%
pH value	6.0 – 8.0	Film pencil hardness	2H
Viscosity (30 °C)	≤ 200 mPa·s	Water absorption (24 h, 25 °C)	< 3%

KEY FEATURES

- ✓ High hardness: film pencil hardness up to 2H with good scratch and abrasion resistance
- ✓ Outstanding water resistance: low film water absorption, suited to coatings demanding high water resistance
- ✓ Good solvent resistance: helps improve coating durability after film formation
- ✓ Transparent and high-gloss: with a suitable film-forming aid, delivers a smooth, slippery and high-gloss finish
- ✓ Low-temperature film formation: reliable film formation across a range of application conditions
- ✓ Waterborne and eco-friendly: water as the dispersion medium, free of formaldehyde, nonylphenol, heavy metals, PAHs and DMF

APPLICATIONS

- ✓ Waterborne wood coatings
- ✓ Waterborne metal coatings
- ✓ Waterborne plastic coatings
- ✓ Waterborne glass coatings
- ✓ Waterborne industrial coatings
- ✓ Other high-hardness waterborne coatings

APPLICATION NOTES

Depending on the formulation and application requirements, a suitable amount of film-forming aid can be added to improve film condition, surface smoothness and gloss. When higher water resistance and durability are required, about 1%–5% of a curing agent may be added to build a two-component system; stir thoroughly after addition and use within the specified pot life. Formulation trials are recommended according to substrate, application process and target performance to determine the optimal ratio of resin, film-forming aid and curing agent. Do not mix directly with incompatible adhesives or resins in order to avoid affecting system stability.

STORAGE

Store at 5–30 °C in a cool, dry place; avoid freezing, high temperature and direct sunlight. Shelf life: 12 months under the specified storage conditions. Packaging 50 kg / 125 kg / IBC tote