

RHEOLOGY CONTROL

QK4100 Liquid Rheological Agent

Positioned against BYK 410

Liquid polyurea thixotrope for solventborne and solvent-free coatings, PVC plastisol and air-drying resin systems.

Overview

QK4100 is the solventborne counterpart to QK4200. It is a liquid modified polyurea that builds a strong thixotropic structure in solvent-type and solvent-free systems, and it also works in PVC plastisol and natural-curing resin systems. The result is better anti-settling and anti-sag without a pre-gel step, and it can be post-added.

Typical Data

Property	Value
Chemical composition	Modified polyurea solution
Appearance	Yellow to brown liquid
Density (23C)	1.02-1.12 g/cm ³
Viscosity (25C)	200-700 cps
Non-volatile content (60 min, 150C)	50%
Solvent	N-methylpyrrolidone
Storage	Dry conditions, moisture sensitive
Shelf life	12 months maximum
Packing	50 kg / 180 kg

Recommended Dosage

Basis	Addition level
PVC, anti-settling and anti-float	0.2-0.5% on resin, as supplied
PVC, sag control	0.5-1% on resin, as supplied

Dispersant figures are percentages on pigment weight, not on the total batch. Published values are empirical; confirm the optimum with a dosage ladder in your own system.

Use Guide

- Add under medium shear to get even mixing and fast dispersion. No special temperature control is required.
- Can be added at the mill base stage or post-added to adjust viscosity.
- Evaluate the rheology 2 to 4 hours after mixing.
- Test storage stability first when using it in reactive, catalysed or nitrocellulose systems.
- Watch for discoloration if a drier is present, and for yellowing if the dosage is pushed too high.

Applications

- Solventborne anti-corrosive primers stored in drums for long periods
- PVC plastisol for coil and underbody applications
- Air-drying alkyd systems that settle in the can
- Solvent-free formulations where water-based thickeners cannot be used

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