BYK
Additives & Instruments

OPTIFLO-T 1010

Liquid VOC-free Rheology Control Additive to Adjust High Shear Viscosity in Water-borne Coatings

Modern coating systems and their resins require specific, tailor-made additives that provide the optimum performance. Rheology additives have seen a loss in efficiency, especially when it comes to high shear development. At the same time, more and more environmentally sound coating systems are in demand and consequently the raw materials have to follow these requirements.

BYK offers a broad range of high-performance polyurethane thickeners that are:
- VOC-free
- APEO-free
- Tin-free

Beside the well-known OPTIFLO-T 1000 and OPTIFLO-L 1400 there is a new addition to BYK's product portfolio, OPTIFLO-T 1010. The additive provides enhanced syneresis, spatter resistance and shows a significant improvement in brushability. BYK's new OPTIFLO-T 1010 is further proof that environmentally friendly solutions and high performance do not contradict.

OPTIFLO-T 1010 – Excellent Syneresis Resistance

Test system: High gloss alkyd emulsion paint
Dosage: % as supplied on total formulation

Benefits

Performance
- Newtonian flow behavior
- High shear rate viscosity with negligible influence on low- and mid-shear viscosity
- Improvement of roller spatter resistance
- Excellent syneresis resistance
- Provides excellent brushability with improved leveling
- No negative influence on gloss
- Excellent color acceptance and rub-out stability

Environmentally friendly
- VOC-free (< 1.500 ppm)
- APEO-free
- Tin-free

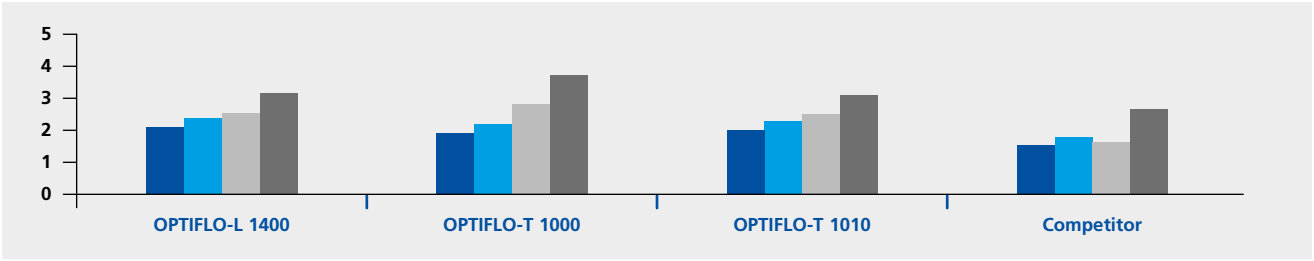
Applications

- Architectural coatings
- General industrial coatings
- Wood & furniture coatings

Technical Properties

- Chemical composition: Solution of a polyurethane
- Active substance: 22.5 %
- Solvent: Water

OPTIFLO-T 1010 – Viscosity of Different Emulsions Measured by ICI Viscosimeter

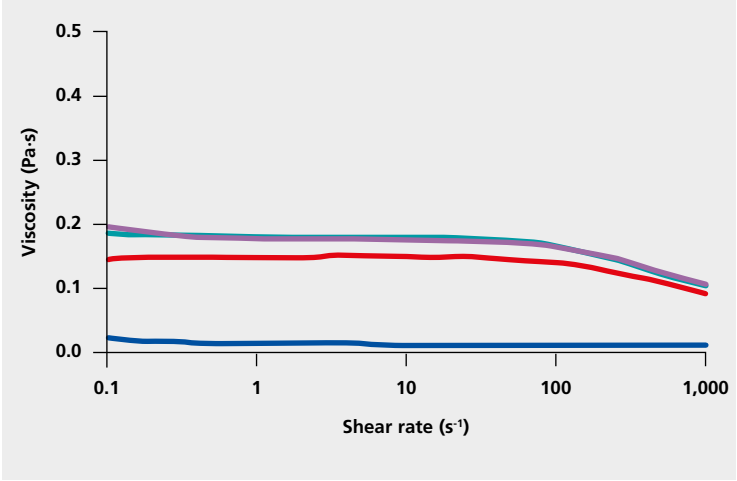


■ Alberdingk® AC 2025 0.3 %* ■ Alberdingk® AC 2523 0.5 %* ■ Alberdingk® AC 3630 0.65 %* ■ NeoPac® PU 480 0.5 %*

Test equipment: ICI Viscosimeter, Speed 10,000 1/s

*Dosage: % active substance on total formulation

OPTIFLO-T 1010 – Viscosity Profile of a Water-borne UV-curing Wood and Furniture Coating



	Flow time (sec.)	Dosage (% as supplied on total formulation)	Leveling*	Gloss (60°)
Control	12	-	4–5	82
OPTIFLO-L 1400	26	1.0	5	83
OPTIFLO-T 1000	26	1.0	5	84
OPTIFLO-T 1010	24	1.3	4	82

■ Control ■ OPTIFLO-L 1400 ■ OPTIFLO-T 1000 ■ OPTIFLO-T 1010

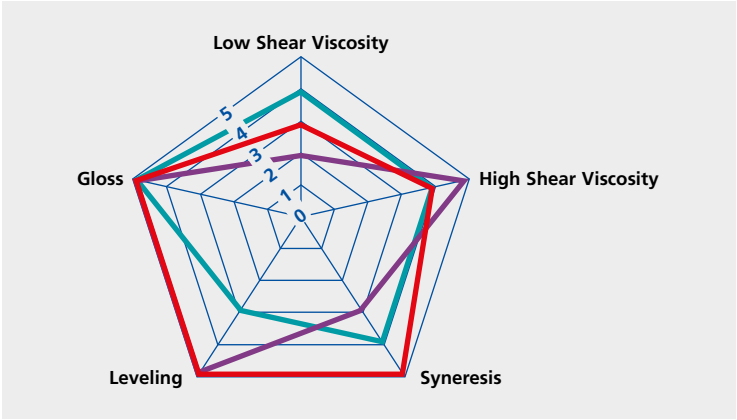
Test system: Glossy water-borne UV-curing coating based on urethane/acrylic copolymer (NeoRad® R-452).

Dosage needed to adjust flow time (flow cup DIN 4) to 26 sec.

Viscosity measurement: RHEOPLUS/32 V3.62, CP25-1, 0.1 – 1,000 s^{-1}

*5 = Excellent, 3 = Moderate, 1 = Unacceptable

OPTIFLO-T 1010 – Benefits Compared to Other OPTIFLO Additives



0 = poor

5 = excellent

■ OPTIFLO-L 1400

■ OPTIFLO-T 1000

■ OPTIFLO-T 1010

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BYK Additive Guide

Available on the App Store

Google play

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This issue replaces all previous versions – Printed in Germany

12/2016