



## NeoResins

### NeoCryl XK-225

NeoCryl XK-225 is a 100% acrylic latex polymer designed for high gloss trade sales and DIY enamels. It can be formulated at low VOC levels without sacrificing adhesion, hardness and chemical resistance of paint films.

NeoCryl XK-225 is typically used for high performance trim, kitchen and bath enamels that require a good balance of high gloss, adhesion and resistance to food stains and household cleaners while meeting regulatory requirements.

#### Key Benefits

- 100% Acrylic
- <50 g/l VOC Application
- Excellent Block Resistance
- Outstanding Adhesion
- Superior Hardness & Mar Resistance
- Stain & Hand Cream Resistance

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#### Typical Properties

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Appearance	Milky-white liquid
Total solids, by weight, %	45.0
pH	8.8
Brookfield Viscosity (sp 2, 60rpm), cps	40
Weight per gallon, 25°C, as supplied, lbs	8.7
Volatile Organic Compounds	None
MFFT, °C	23

Bulletin XK-225  
October 2004



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### FORMULATING SUGGESTIONS

#### Coalescing

To obtain a good film formation balance at low VOC (<50 g/l), an addition of coalescing solvent (s) such as Texanol, DPM or Dalpad A at 5.0-6.0 % based on polymer solids is required. It has been found that the addition of 3.7 - 5.0 % of Dibutyl Phthalate plasticizer or Benzoflex 50 based on polymer solids further aids in film formation/low temperature coalescence with minimal effect to hardness.

#### Dispersants

Tamol 165A<sup>®</sup> or Tamol 1124 dispersant are recommended with NeoCryl XK-225. Good heat age stability has been demonstrated. Triton CF-10 wetting agent was also found to be useful in combination with the dispersant in improving grind efficiency

#### Rheology Modifiers

Acrysol RM-2020 and Acrysol RM-825 urethane associative thickeners are recommended to achieve optimum rheological properties. Acrysol RM-2020 at 25-30 lbs per 100 gallons will provide adequate ICI viscosity while Acrysol RM-825 should be post added to bring the low shear (KU) viscosity up to desired levels. Typically 1-3 lbs per 100 gallons Acrysol RM-825 is sufficient.

Both rheology additives are quite stable with NeoCryl XK-225 and will provide good long term in can shelf life.

#### pH Adjustment

Utilization of AMP-95 at 2 lbs per 100 gallons in the grind has been found to improve grind efficiency and improve the overall stability of the paint.

#### Preservative

Arch Chemical's Proxel GXL at 0.75 lbs per 100 gallons is recommended to provide adequate in can biocide protection.

#### Defoamers

Good anti-foam protection without sacrificing gloss has been found by using BYK-024 at 2 lb per 100 gallons in the grind and 2-3 lbs in the let down.

#### Pigments

High gloss grades of TiO<sub>2</sub> have been used successfully with NeoCryl XK-225 to achieve optimum gloss. Ti-Pure R700 and Ti-Pure R706 are recommended. TiONA RCS 596 slurry is also suitable.

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### Raw Material Suppliers

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#### Material

#### Supplier

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Proxel GXL

Arch Biocides  
(203) 271-4000

Texanol  
Dibutyl Phthalate  
DPM

ASHLAND, Inc.  
(606) 329-3333

Dalpad A  
AMP-95  
Triton CF-10

Dow Chemical  
(800) 447-4369

Benzolfex 50

Velsicol Chemical Corporation  
(847) 298-9000

BYK 024

BYK-Chemie, USA  
(203) 265-2086

Ti-Pure R700  
Ti-Pure R706

Dupont de Nemoir  
(800) 441-9485

TIONA RCS 596

Millennium Chemical  
(410) 229-5050

Acrysol RM-2020 NPR  
Acrysol RM-825  
Tamol 165A

Rohm and Haas Company  
(215) 592-3000

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