BASF
The Chemical Company

JONCRYL® 2560

Key features and benefits

- good appearance and grain definition on wood
- very high gloss and exterior durability
- excellent pigment wetting
- no (or very low) coalescing solvent demand needed

a rheology controlled acrylic emulsion used for exterior and interior stains, high gloss brushing enamels, and industrial applied timber coatings

General information

Typical physical characteristics (not to be considered specifications)

appearance	semi translucent emulsion
solids by weight	48%
solids by volume	44%
viscosity at 25°C (Brookfield)	600 mPa.s
specific mass as supplied	1,050 kg/m^3
specific mass solids	1,120 kg/m^3
pH	7.9
acid value (on solids)	68
glass transition temperature Tg (DSC)	<0 °C (32 °F)
minimum film-forming temperature	<5 °C (41 °F)
freeze/thaw-stable	yes

C J 2560e/01-01-2007/B5
supersedes C J 2560e/02-03-2004/B5

Applications

JONCRYL® 2560 is a versatile polymer which can be utilized to produce high quality exterior wood stains, decorative pigmented brushing enamels for exterior/interior use, and dip or spray applied timber joinery (e.g. window frame) coatings. This applies to exterior wood stains as well as high gloss decorative brushing enamels.

In the wood stain market, JONCRYL® 2560 can be formulated to produce penetrating transparent stains, as well as semi-transparent and solid color and higher solids stains.

High quality applications include wooden building panels, trim, window and door frames, doors, etc. for exterior and/or interior use.

JONCRYL® 2560 can also be employed as a modifier for interior gloss enamels or industrial wood coatings to lower coalescing solvent content while improving block resistance.

Performance

In exterior exposures JONCRYL® 2560 has demonstrated excellent flexibility and dimensional stability. JONCRYL® 2560 also exhibits excellent transparency for clear interior joinery coatings.

In the exterior/interior pigmented brushing enamel market, JONCRYL® 2560 features a unique combination of good block resistance, very low VOC potential and high gloss capability. Excellent “hot” block resistance (despite a low Tg and MFT).

In pigmented coatings for dip or spray applied exterior timber joinery, JONCRYL® 2560 exhibits a combination of quick development of high temperature block resistance, adhesion and flexibility.

Formulation guidelines

Coalescing
Exterior durability, resistance properties and gloss development depend on the proper level and selection of coalescent. For optimum properties at low temperature a coalescent level of appr. 2% texanol, butyldiglycol or butylglycol is recommended for JONCRYL® 2560 (on delivered form). Applications above 10°C can be formulated without the use of coalescing solvents with excellent film formation properties.

Foam control
JONCRYL® 2560 is a low foaming polymer.

The following defoamers are recommended when necessary:
- Tego[1] Foamex 805, 810 and 825
- BYK[2] 024 and 028
- Agitan[3] 260 and 315

Thickening
For optimal flow and leveling along with good brush loading, combinations of high and low shear effective polyurethane associative thickeners are recommended and/or combinations with acrylic associative thickeners like Coatex[4] Rheo 2100 and 3000.

Examples of high medium shear effective PUR thickeners are:
- Bermodol[5] PUR 2110 and 2130
- Rheolate[6] 278

Examples of low shear effective PUR thickeners is:
- Tafigel[3] PUR 60
- Tafigel[3] PUR 50

For higher gel structures, titanium chelating thickeners like Tilcom[7] AT23 (Tioxide) can be used, or silica's like Aerosil[8] 200.

Pigment dispersion
JONCRYL® 2560 is a Rheology Controled emulsion providing the excellent shear stability needed for grinding pigment directly into the polymer. Pigment wetting will be further improved e.g. by addition of Metolat[3] FC 514.

Scratch resistance
JONCRYL® WAX 35 is recommended to improve scratch resistance and additionally room temperature and high temperature block resistance. JONCRYL® WAX 120 is recommended to improve water beading effect. Addition level JONCRYL® WAX 35 is appr. 2-3%.

Open time
In solvent free formulations the open time will be very short and in practice can only be used for spray applications. Solvents like PPG can be added for lower VOC formulations. Other possibilities for formulating 0-VOC systems and improved open time with JONCRYL® 2560 include the addition of:
- plasticizers like Kodaflex[9] TXIB
- cellulose thickeners
- waxes
- alkali soluble resins like JONCRYL® 8078 and JONCRYL® 8082
- amines like AMP 90 and DMEA
- aromatic free white spirits like Isopar[10] H

Safety

When handling these products, advice and information given in the safety data sheet must be complied with. Further, protective and workplace hygiene measures adequate for handling chemicals must be observed.

Note

[1] registered trademark of Tego Chemie Service
[2] registered trademark of BYK Chemie
[3] registered trademark of Münzing Chemie
[4] registered trademark of Coatex North America Inc.
[5] registered trademark of Akzo Nobel
[6] registered trademark of Elementis Specialties
[7] registered trademark of Huntsman Polyurethanes
[8] registered trademark of Degussa
[9] registered trademark of Eastman Kodak
[10] registered trademark of Exxon Mobil Corporation

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