

COATINGS ADDITIVES

COAPUR™ 830 W

Solvent free liquid
polyurethane thickener



COAPUR™ 830 W is a solvent and Alkyl Phenol Ethoxylate (APE) free polyurethane thickener designed for all types of water based formulations, especially the solvent free formulations.

COAPUR™ 830 W can be used sole or in combination either with other polyurethane thickeners or with other types of rheology modifiers such as acrylic or cellulosic thickeners.

COAPUR™ 830 W provides excellent coating properties due to its high associative effectiveness with every kind of binder.

COAPUR™ 830 W increases specifically the viscosities at medium and high shear rates in order to improve tool load, film build, levelling and brush drag. Thanks to its exclusive rheological features, **COAPUR™ 830 W** also prevents from settling and sagging tendency in low PVC formulations.

• TYPICAL ANALYSIS

Nature: Water soluble non ionic polyurethane

Appearance (20°C): Whitish liquid

Active content (%): 30

Solvent: Water + polymeric compound system,
VOC free

pH (25°C): 6.5

Specific gravity (20°C): 1.06

Brookfield viscosity (100 rpm, 25°C): About
6 000 mPa.s

• ADVANTAGES

COAPUR™ 830 W is:

- Solvent free,
- Alkyl Phenol Ethoxylate (APE) free,
- Cost-effective due to its high reactivity towards most of the solvent free and solvent containing binders,
- Liquid, easy-to-handle and highly concentrated,
- Easy to use sole or in combination with every kind of low shear effective thickener.

• APPLICATIONS

COAPUR™ 830 W is very easy to handle thanks to its low viscosity and to its progressive thickening effect. Its use is also very economical thanks to remarkable effectiveness and to a high active content (30%).

The incorporation of **COAPUR™ 830 W**, as sole thickener in semi-gloss and satin dispersion paints, improves storage stability and coating yield.

It reduces the need for tool re-load and repeated layers, and ensures excellent levelling without any sag.

Combined with low shear effective thickeners such as **THIXOL™ 53 L** or **VISCOATEX™ 730**, **COAPUR™ 830 W** optimizes the coating properties of high PVC formulations. In particular, **COAPUR™ 830 W** is able to compensate the poor film build and levelling encountered when cellulosic ethers are used sole in matt dispersion paints.

Water and scrub resistance of dry films can be significantly improved if part or whole of the cellulosic ether amount is replaced by **COAPUR™ 830 W**.

COAPUR™ 830 W should be preferably added after the binder incorporation, at the end of formulation. Such a post-addition allows a better control of the final viscosity.

The effectiveness of **COAPUR™ 830 W** can slightly differ according to the type and to the concentration of binder used.

COAPUR™ 830 W is a ready-to-use designed thickener, and should not be pre-diluted in water.

Recommended dosages are as follows (% on total formulation weight):

- As sole thickener in semi-gloss and satin dispersion paints: 0.1 to 0.6%, as sole thickener in one-coat matt dispersion paints: 0.3 to 1%, both based on active content.
- Combined with a low shear effective thickener in high PVC matt dispersion paints: 0.05 to 0.4% based on active content.

• STORAGE

COAPUR™ 830 W should be protected from the effects of weathering; stored between 5 and 40°C and sheltered from direct sun exposure. This product can be altered by frost.

Once opened, packaging should be resealed immediately after use.

In these conditions, products should be used within 12 months after delivery.

To be easily pumpable, **COAPUR™ 830 W** should be used about 20°C

The appearance of **COAPUR™ 830 W** evolves within time, progressively and from the bottom to the top, from a whitish appearance to a translucent yellowish appearance, the surface showing at the end a whitish phase. Such a change in appearance has no impact on the properties and use of the product.

• STANDARD PACKAGING

- 220 l plastic drums,
- 1 000 l containers,

• HEALTH & ENVIRONMENTAL DATA

Please refer to the Material Safety Data Sheet.

• EXAMPLES

SEMI-GLOSS DISPERSION PAINT

Hexion Dispersion / Axilat DS 910

RG 12202		WEIGHT	VOLUME	CHARACTERISTICS
	Monopropylène glycol	20.0	26.3	PVC (%) = 33.4
	Water	75.5	103.0	Solids content in weight (%) = 58.7
• COATEX	COADIS™ BR 3 (40%)	5.1	5.7	Solids content in volume (%) = 43.8
• TEGO CHEMIE	Tego Foamex 1488	2.0	1.7	Specific gravity = 1.37
• TROY	Mergal K6N	3.1	4.0	pH = 8.4
• HUNSTMAN	TiO2RHD2	203.9	68.7	ICI viscosity after 24 h (P) = 1.8
				Brookfield viscosities (mPa.s)
• OMYA	Hydrocarb	152.9	77.3	After 24 h = 10 rpm = 8 400
• HEXION	Axilat DS 910	448.5	588.4	100 rpm = 4 100
	Butyldiglycol	40.0	57.3	After 1 month at 50° = 10 rpm = 10 700
• COATEX	COAPUR™ 830 W (30%)	4.7	6.1	100 rpm = 4 600
	Water	44.3	61.5	Specular gloss after 1 week =
				20° = 2.7 / 60° = 13.1
TOTAL		1 000.0 g	1 000.0 ml	

RG 12402		WEIGHT	VOLUME	CHARACTERISTICS
	Water	220.5	295.6	PVC (%) = 30.8
• COATEX	COADIS™ BR 3 (40%)	3.5	3.8	Solids content in weight (%) = 54.2
	NaOH (20%)	2.0	2.2	Solids content in volume (%) = 41.3
• TEGO CHEMIE	Tego Foamex 1488	2.0	2.7	Specific gravity = 1.34
• TROY	Mergal K6N	2.0	2.5	pH = 8.7
• HUNSTMAN	TiO2RHD2	190.0	62.9	ICI viscosity après 24 h (P) = 2.1
				Brookfield viscosities (mPa.s)
• OMYA	Hydrocarb	130.0	64.5	After 24 h = 10 rpm = 8 300
• CELANESE	Mowilith LDM 1871	400.0	500.9	100 rpm = 4 600
• COATEX	COAPUR™ 830 W (30%)	21.0	26.8	After 1 month at 50° = 10 rpm = 11 500
	NaOH (20%)	3.0	3.3	100 rpm = 5 600
	Water	26.0	34.8	Specular gloss after 1 week =
				20° = 4.1 / 60° = 22.4
TOTAL		1 000.0 g	1 000.0 ml	

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