

Curran® Granules

Your Biobased Solution for improved Water based coatings

Description and General information

CelluComp's Curran® performance additive, based on novel fibre technology and derived from root crops, provides a unique set of properties for water based coatings. High technical performance combined with the renewable nature of Curran®, helps solve many of the challenges faced by the paints & coatings industry today.

Curran® is both green and multifunctional; using it as a film enhancer provides improved crack resistance and reduces film defects. It can also provide improved opacity and in some cases extended open time. There can be other benefits, such as enabling solvent reduction. With careful formulating, Curran® can bring improved performance and result in cost savings. Curran® also retains stability in a wide range of pH levels to make formulating easier.

Physical Properties

Composition	Form	Colour	Active Content	Volatile Component	pH	Viscosity	Density
Cellulosic Platelet	Granules	Beige	20±2%	Water	4.5-7	500-2000cPs*	1.07

*Brookfield RV, 10rpm, 1%, 20°C

Applications

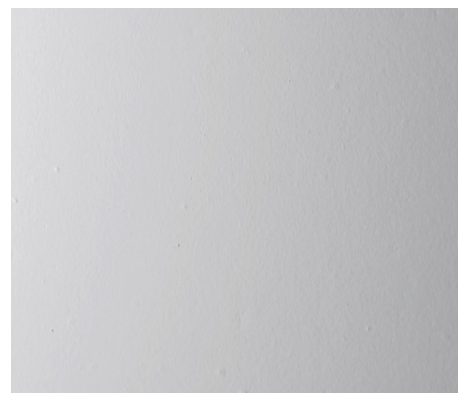
- Interior and exterior architectural paints
- Industrial coatings
- Plaster-type materials, including stucco

Key Properties

- Up to 90% reduction of coalescing solvents resulting in reduced odour and VOC
- Up to 50% reduction of micro cracking
- Up to 200% improvement of mud crack resistance
- Improved opacity resulting in up to 6% reduction in Titanium Dioxide



Introduction of
Curran®




Process Guidelines

Curran® Granules should be added at the dispersion/grind phase, ensuring there is sufficient water present for dispersion and rehydration (most common formulae will have sufficient water). For further information please request a copy of our incorporation video.

Formulating and incorporation guidance for adding Curran® Granules

In this example, we are using a simple high PVC matt wall paint based on Styrene Acrylic. As Curran® imparts some viscosity, it is necessary to reduce part of any existing cellulosic thickeners. Here we have replaced part of the Bermocoll 320FQ® with Curran®, based on its active content. For dispersion, we are using a Dispermat mixer with a 5.5cm diameter saw tooth blade and 10cm diameter container at 1500rpm.

Description	Ingredient	Solids	1000g Formula
			
	Water	0%	221.87
Dispersing Additive	Dispex AA4040®	45%	4.00
Defoamer	Dapro 7010®	100%	1.50
Biocide	Acticide FI(N)®	0%	1.40
Cellulosic Thickener	Bermocoll 320FQ®	100%	2.00
Performance Additive	Curran®	20%	15.00
Titanium Dioxide	Tiona 595®	100%	75.00
Calcium Carbonate	Snowcal 70®	100%	450.00
Magnesium Silicate	Talc OXO®	100%	50.00
Disperse fully for a minimum of 15 minutes			
Coalescing Agent	Texanol®	0%	20.00
	Water	0%	52.73
Styrene Acrylic Binder	Acronal S790®	50%	100.00
Defoamer	Dapro 7010®	100%	1.50
pH Modifier	NaOH Solution 10%	10%	2.00
Associative Thickener	Acrysol TT-935®	30%	3.00

	Viscosity
Brookfield RV @10 rpm	9400cP
Rotothinner	7.6P

Total Weight (g)	1000.00
Solids by Volume	41.29%
PVC	79.33%

Addition Levels

Recommended addition levels of Curran® Granules are between 1-3% (based on supplied form), optimum levels are determined through a series of laboratory tests. The ratios of Curran® to HEC may be altered for optimisation depending on the required key properties of the formulation.

Handling & Storage

Before using this product please consult the Material Safety Data Sheet (MSDS) for information on safe handling and storage. Recommended storage conditions are a cool and dry environment. Once open, containers containing Curran® Granules should be re-sealed to avoid moisture loss. Commercially, Curran® is supplied in 15 Kg boxes.