

ECODIS™ P 90

Dispersing Agent
for Water Based Systems



Dispersion paints are usually formulated with extenders, particularly the very fine calcium carbonates now available. The dispersion of these extenders in water based systems must be achieved easily with common stirrers and without forming agglomerates or causing a viscosity build up. The usual inorganic dispersants do not solve this problem satisfactorily:

- Either because their complexing and deflocculating action are limited by the fineness of the extenders used,
- Or because of their poor temperature stability which causes hydrolysis and limits their efficiency.

ECODIS™ P 90 has been especially developed to overcome these problems. It ensures the complete dispersion of the extenders and the inorganic pigments at high solids contents and in systems with high P.V.C.

• TYPICAL ANALYSIS

Nature: Polyacrylate ammonium salt

Appearance (20°C): Blue-green aqueous solution

Solids content (%): 40

pH (20°C): 7

Density (20°C): 1.16

Compatibility: Compatible with most extenders, pigments and polymer emulsions.

• ADVANTAGES

- Liquid product ready to use, easy to handle
- Low level of addition
- High efficiency for dispersion of mineral pigments and extenders, and consequently low grinding time required
- Very good stability of the manufactured products, in particular excellent viscosity stability
- No foaming is encountered with **ECODIS™ P 90**

• APPLICATIONS

ECODIS™ P 90 must be present during pigment and extender dispersion and should, therefore, be added before these products are blended in. The addition level is determined by plotting the graph of the viscosity of the dispersion in water, versus the amount of dispersant added. The level of dispersant corresponding to the minimum viscosity is selected as the addition level. The required amount varies from 0.1% to 0.5% of active ingredients based on the total weight of the pigments and fillers. It is recommended to disperse the pigments and fillers in a pH range of 7.5 to 9.5.

Besides dispersion paints, the main applications for **ECODIS™ P 90** are in adhesives and wall paper pastes

• STORAGE

ECODIS™ P 90 should be protected from the effects of weathering and stored between 5 and 40°C.

Once opened, packaging should be resealed immediately after use.

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

A small decrease in pH may be observed: it can be corrected by adding small quantities of ammonium hydroxide.

• STANDARD PACKAGING

- 220 litres drums
- litres containers
- Bulk

• HEALTH & ENVIRONMENTAL DATA

Please refer to the Material Safety Data Sheet.

• EXAMPLES

Dispersion of natural calcium carbonate into water at 75% solids

(0.1 and 5 µm particle size)

Level of dispersant (active content) needed to obtain a Brookfield viscosity of 2 000 mPa.s at 20 rpm:

ECODIS™ P 90	0.45%
Usual organic dispersant	0.70%
Inorganic dispersant	impossible to obtain

Dispersion into water of CaCO₃/Titanium dioxide blend at 80% solids

Titanium dioxide	7.7
Natural CaCO ₃ (1 to 10µm)	62.3
Natural CaCO ₃ (0.1 to 5µm)	30.0
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	100.0

Amount of dispersant needed to obtain a Brookfield viscosity of 2 000 mPa.s at 20 rpm:

ECODIS™ P 90	0.18%
Usual organic dispersant	0.48%
Inorganic dispersant	impossible to obtain

R 236		WEIGHT	VOLUME	CHARACTERISTICS
• CELANESE	Tylose MH 6000Xp (2% in water)	189.0	236.6	PVC (%) = 80
	Water	124.0	208.0	Solids content in weight (%) = 61.0 Solids content in volume (%) = 38.3
• COATEX	ECODIS™ P 90	3.0	4.3	
• TROY	Mergal K6N	3.0	4.8	Brookfield viscosity:
	Monoéthylèneglycol	9.8	14.7	After 24 h:
• BYK CHEMIE	Byk 073	0.5	0.9	10 tr/min = 14 000 mPa.s
• MILLENNIUM	Tiona RL 68	51.5	21.3	pH = 9,0
• OMYA	Durcal 2	302.5	187.9	
	Hydrocarb	198.0	123.0	After 28 days in stove:
	Dispersion for 20 minutes with a turbin stirrer			10 tr/min = 12 000 mPa.s
• HEXION	Axilat DS 910	108.0	175.5	pH = 8.8
	Ammonium hydroxide (28%)	0.3	0.6	
	White Spirit	10.4	22.4	
TOTAL		1 000.0 g	1 000.0 ml	

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