Report prepared for

EUROCOLOR

Evaluation of the Hydro Pliolite™ paints « MUESTRA 2 / 3 / 4 »

Objective

In this report please find the evaluation of the Hydro Pliolite™ exterior masonry coating from Eurocolor "Muestra 2, Muestra 3 and Muestra 4". The paints have been tested according to the specifications for the use of the Hydro Pliolite™ logo. Properties that have been evaluated are aspect in can, specific gravity, high shear viscosity, fineness, contrast ratio, accelerated ageing (QUV), alkali resistance, minimal film formation temperature. We have made the thermal-gravimetric analysis of these paints.

Should you have any questions about this report, feel free to contact:

Sylvie BAERT
Resin Application & Technical Services
European Chemical Technical Center
Tel: 33 1 69 29 27 00
Fax: 33 1 69 29 27 01
E-mail: sylvie_baert @eliokem.com

Ref: SB47/ R-792
Date : 29/07/2004

Experimental part:

Specific gravity

Method : pycnometer Sheen 1501/100 according to ISO 2811.

Viscosity

Method: the viscosity is measured with the Brookfield ICI Cone and Plate viscometer according to our test method ECTC WI 0097.

Fineness of grind

Method : we use a North Gauge to evaluate the fineness.

Contrast ratio

Method : TM 03-49.

Accelerated ageing TEST (QUV)

Method: The white paint is tinted with approximately 2% of pre-dispersed phthalocyanine blue colouring agent (**Azul RS**) so as to adjust the clarity L* of the tint between 60 and 65. The pre-dispersed colouring agent used must be completely compatible with the paint to be tested and must not exhibit any floating; this characteristic will be checked by a thumb test on the paint while it is drying.
The white paint and the blue paint are applied using a Bird applicator to 300µm wet on aluminium plates (Q-Panel type A36). The plates are let to dry during 7 days before the test begins (20°C, 50% RH).
After 6 weeks of aging, alternating every 4 hours between UVB radiation at 70°C and wet condensation at 40°C, the integrity of the film must be intact, with no cracking, flaking, blistering, peeling, or other deterioration of the film. (every week colour change is measured).

Alkali resistance
NaOH immersion
Method: the paint is applied on an “Eternit” panel one coat with brush, drying during one week at room temperature.

Gloss @ 85°

Method: the paint is applied on a glass panel at 150µm wet, drying during 24 hours. The gloss is measured with a Byk Gardner gloss-meter.

Quantity determination and identification of Hydro Pliolite™

Method: thermal-gravimetric analysis.

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ELIOKEM
SAS au capital de 27 111 679 euros
14, avenue des Tropiques
ZA de Courtaboeuf 2 – Villejust
91955 Courtaboeuf Cedex – France
Tel : +33 1 69 29 27 00
Fax : +33 1 69 29 27 01
www.eliokem.com

Results:

Properties	Specifications	Muestra 2	Muestra 3	Muestra 4	FPS301
Specific gravity		1.62	1.63	1.62	1.54
ICI viscosity	≤ 0.3 Pa.s	0.3 Pa.s	0.33 Pa.s	0.29 Pa.s	0.2 Pa.s
Fineness	< 4	3	3	3	3
Contrast ratio	≥ 92%	93.8	92.9	**91**	94
Accelerated ageing (DE*) 6 weeks Blue White	 ≤ 8 ≤ 4	 4.15 1.87	 4.21 1.59	 6.13 2.26	 3.8 1.2
Alkali resistance D+1 D+3	A slight softening is accepted DE*<5	Blisters no color change	OK	OK	OK
Gloss @ 85°		1.1	1.1	0.8	0.8
Thermal-gravimetric analysis TGA	≥ 20%	> 20%	> 20%	> 20%	> 20%

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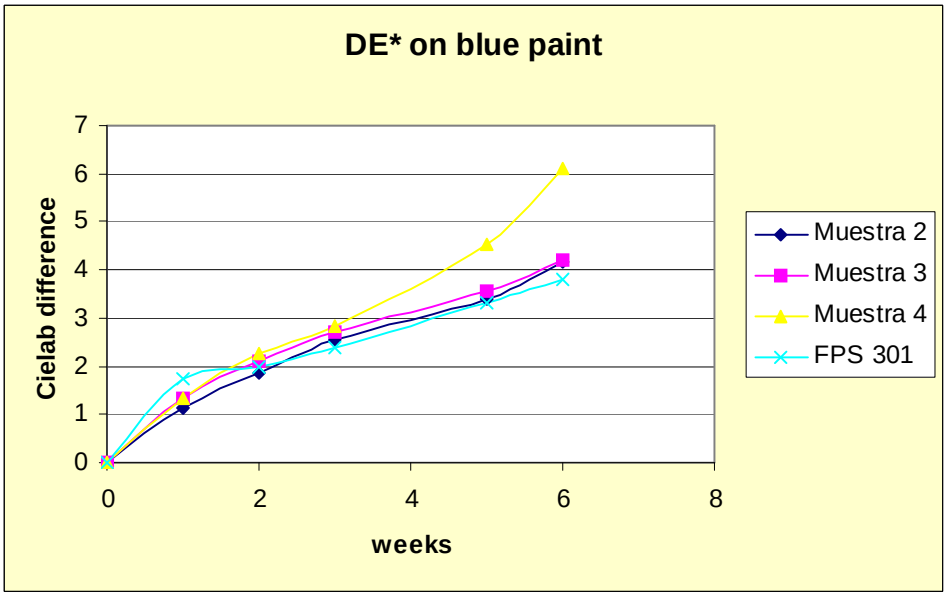

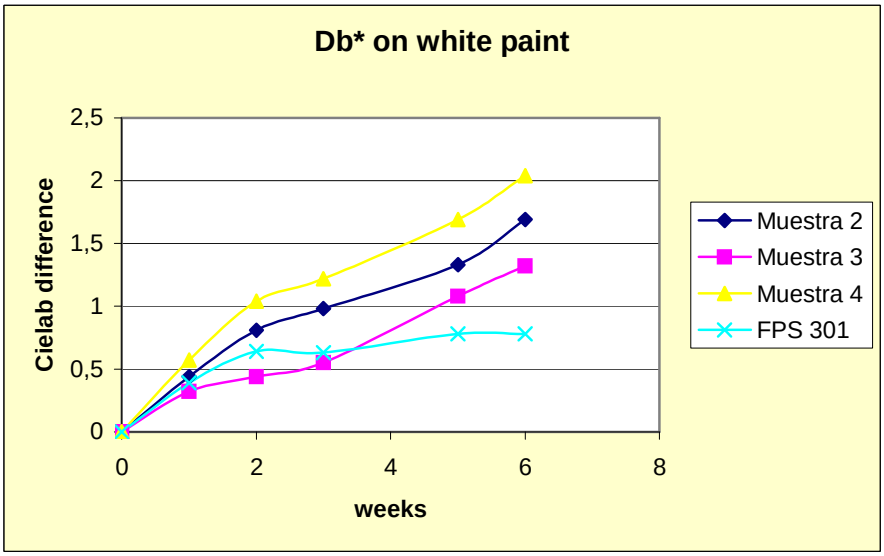

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Conclusion:

MUESTRA 2: this paint is in line with our expected specifications excepted the resistance to alkalinity which is borderline.

MUESTRA 3: this paint is in line with our expected specifications.

MUESTRA 4: the contrast ratio is under of our expected specifications and the resistance to accelerated ageing is worse than the paints Muestra 2 and Muestra 3.

*In a technical point of view the paint "**Muestra 3**" can be associated with the logo Hydro Pliolite™.*

Sylvie Baert
Technician
European Chemical Technical Center

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