

CELOCELL 100 H & CELOCELL EM 100 H BIO-STABLE TEST

AIM:- To check enzyme resistance and viscosity stability characteristics of Celocell 100 H & Celocell EM 100 H in water emulsion application.

PLACE:- Research & Development Laboratory, Yillong chemical Group

DATE:- Wednesday, 6th June 2007.

DOSAGE:- Normally a dose of 0.5 – 0.6% on w/w of total paint formulation is recommended and used by paint manufacturers.

OBSERVATIONS:-

S/N ^o .	PARAMETER	CELOCELL 100H	CELOCELL EM100H
1.	Physical appearance	Powder	Powder
2.	Colour (Visual)	Off-white	Off-white
3.	pH (1% solution)	7.2	7.1

RESULT ON APPLICATION / USAGE IN PAINT FORMULATION

PARAMETER	C CELOCELL 100 H 0.6%	D CELOCELL EM 100H 0.6%
Viscosity	100,000cps	99,000 cps
Rheology (brushability)	Good flow	Good flow
pH	7.2	7.1
Drying	25 – 30 mins.	25 – 30 mins.

WATER EMULSION FORMULATION USED

<i>Material (KG)</i>	<i>(A) – COMPETITOR</i>	<i>(B)</i>	<i>(C) – CELOCELL</i>	<i>(D) – CELOCELL</i>
Water	500	500	500	500
Defoamer	8	8	8	8
Dispersant	5	5	5	5
Coalescing agent	5	5	5	5
Thickener (1 st stage)	4	4	4	4
pH Adjuster	1	1	1	1
Extender	600	600	600	600
Pigment	185	185	185	185
Emulsifier	8	8	8	8
Thickener (2 nd stage)	5	5	3	1
In-can preservative	6	6	6	6
Dry-film preservative	10	10	10	10
Binder	<u>225</u>	<u>225</u>	<u>225</u>	<u>225</u>
TOTAL =	1,562	1,562	1,560	1,558

Viscosity changing trend in certain period

Viscosity changing after some time	3 hours after hydration	24 hours (mPa.s)	48 hours	7 days	14 days	30 days
Celocell 100H	100,000	99,200	98,900	98,100	97,600	97,400
COMPETITOR	100,000	99,500	99,200	98,850	98,750	98,700
Celocell EM100H	100,000	99,000	98,500	97,800	97,100	96,500

Conclusion :

Celocell 100H has better viscosity stability after long time storage in comparison with Celocell EM100H. Both grades has non smell of funky, and no obviously pigment sedimentation. Celocell 100H has almost similar stability features in comparison with COMPETITOR solution. Celocell 100H has less viscosity loss, and also has better stability after 7 days.

Liu Ping

Yillong Chemical Group Co.,ltd