



# केन्द्रीय भवन अनुसंधान संस्थान, रुड़की

**CENTRAL BUILDING RESEARCH INSTITUTE**  
(A CONSTITUENT ESTABLISHMENT OF CSIR)  
ROORKEE - 247 667, U.P. (INDIA)

Fax : (01332) 72272, 72543  
Phones : (01332) 72235  
72630, 72655  
Telex : 0597-203  
Gram : 'BILDSERCH'

## SUMMARISED TEST RESULTS OF BECK BOND PU EXCOAT 25..

Performance Parameters	Testing Method/Standard	Value/Observations & Remarks
Tensile Strength (N/mm <sup>2</sup> )	ASTM D-2370	16.8
Elongation (%)	ASTM D-2370	41.0
Impact	JIS A-6909 - 1984	No cracking, peeling off or remarkable deformation; conforms to JIS A-6909
Scratch hardness, 1500 g	BS:3900- Part 2	Passes
Abrasion Resistance a) Tabers, mg, film thickness 35-50 microns b) Dry abrasion scrub resistance (1000 cycles)	Load 500, Cycles 1000 Abrading wheel CS-10 JIS A-6909 - 1984	45 No cracking or peeling off of the coating; conforms to JIS A-6909 - 1984
Adhesion-Pull Out (N/mm <sup>2</sup> ) Steel Mortar	BS:3900 Pt E-10	Conforms to JIS A-6909 - 1984 1.5 1.5 (Bond Intact, failure in mortar)
Adhesion & flexibility, 3.18 mm dia. mandrel	JIS A-6909 - 1984	No cracking or peeling off of film (28% elongation of film attached to surface)
Wet adhesion scrub resistance (10000 cycles)	JIS A-6909 - 1984	No peeling, cracking or erosion of the coating; conforms to JIS A-6909 - 1984
Water Vapour Transmission (mg/cm <sup>2</sup> -mm/24h)	ASTM-E-96	0.213-0.270
Water Impermeability	IS:5913-1970	No drop of water level or dampness on the bottom side; conforms to JIS A-6909
Humidity test (95% at 40°C) (720 h)	ASTM D-2247	No blistering, cracking or disbonding of paint film
*Salt Spray test (720 h)	ASTM B-11764	No corrosion or blistering up to 500 h, test continued
Repeated warming & cooling test on 1:4 concrete mortar & steel panels	100 cycles, each cycle consists of : a) 12h at 60°C+12h at RT b) 12h at 60°C+6h at RT + 6h in water c) 18h at 60°C+6h in water	No film failure, i.e. no flaking, cracking or peeling of coating
Resistance to fungus & algae	ASTM G-21-70	No growth of fungus & algae
Ultraviolet Exposure	500h, 340 N wavelength, 60°C/4h+40°C/4h condensation cycle	No film failure, flaking, blistering, cracking, peeling & yellowing of coating
*Natural Weathering	Panels exposed at 45°C in South-East direction	No film failure for the last 7 months, test continued

\* Tests are underway and complete report from CBRI will be made available in due course.

*L. K. Aggarwal*

L K Aggarwal  
Head-DBM Division  
01 Sep 1997



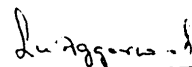
# केन्द्रीय भवन अनुसंधान संस्थान, रुड़की

**CENTRAL BUILDING RESEARCH INSTITUTE**  
(A CONSTITUENT ESTABLISHMENT OF CSIR)  
ROORKEE - 247 667, U. P. (INDIA)

Fax : (01332) 72272, 72543  
Phones : (01332) 72235  
72630, 72656  
Telex : 0597-203  
Gram : 'BILDSERCH'

## SUMMARISED TEST RESULTS OF BECK BOND PU Mcoat 28

PERFORMANCE PARAMETERS	TESTING METHOD/ STANDARD	VALUE/OBSERVATION & REMARKS
Tensile Strength, N/mm <sup>2</sup>	ASTM D- 2370	16.8
Elongation, %	ASTM D- 2370	41.0
Impact	BS:3900	No cracking, peeling off or remarkable deformation
Scratch hardness, 1500 g	BS :3900 Part 2	Passes
Abrasion resistance		
a) Tabers, mg, film thickness 35-50 microns	Load 500 g, Cycles 1000, Abrading wheel CS-10	45
b) Dry abrasion scrub resistance, 1000 cycles	ASTM D-2486	No cracking or peeling off of the coating
Adhesion pull out on steel panels, N/mm <sup>2</sup>	BS:3900 Pt E-10	1.5
Adhesion & Flexibility, 3.18 mm dia mandrel	IS 101	No cracking or peeling off of the film
Wet adhesion scrub resistance, 1000 cycles	ASTM D-2486	No peeling, cracking or erosion of the coating
Humidity test on steel panels, 95% at 40°C, 720 h	ASTM D - 2247	No blistering, corrosion or debonding of coating
Salt spray test on steel panels, 720 h	ASTM B-11764	No corrosion or blistering of the film
Repeated warming and cooling test on steel panels	100 cycles, each consist of a) 12h at 60°C + 12h at RT b) 12 h at 60°C +6h at RT + 6h in water c) 18h at 60°C + 6h in water	No film failure, i.e. no flaking, cracking or peeling off of the coating
Resistance to fungus and algae	ASTM G-21-70	No growth of fungus or algae
Ultra violet exposure on steel panels	500h, 340 N wavelength, 60°C/4h+40°C/4h condensation cycle	No film failure, flaking, cracking, peeling and yellowing of coating
Natural weathering on steel panels	Panels exposed at 45° at South- East direction	No film failure after 12 months exposure

  
(L.K. Aggarwal) 11-10-88