



Freeze Thaw

Date 5/29/2003
 Test Method CCMC MasterFormat Number: 07483, section 6.5.5 (2001)
 Cladding Systems Using Adhered Manufactured
 Conditioning Damp cure for 7 days, then 21 days at 23 +/-2 degrees C, and
 50 +/-5% relative humidity
 Exposure cycle Water immersion for 7 days at 20 + or - 5 degrees C
 12 cycles, air temp. from 20 + or - 5 deg. C to -20 + or - 5%
 C in 2.5 +or- 1.5 hrs.
 12 cycles, air temp. from 20+/- 5 degrees C to -5 + or - 5 deg.
 C in 1.75+or-0.75 hrs.
 Equipment Ohaus balance Intertek ID D2733
 Cold Chamber Intertek ID C04583

Date	Measurement	Sample 1	Sample 2
5/29/03 11:00 AM	Initial Weight (lbs)	25.1	39.5
5/6/03 11:00 AM	Weight after 7 day immersion (lbs)	27.7	42.4
5/6/03 11:00 AM	Water Absorption (% by mass)	10.4	7.3
10/7/03 3:30 PM	Weight after freeze/thaw cycling (lbs)	28.6	43.1
7/28/03 3:30 PM	Weight after drying (lbs)	27.4	41.4
7/29/03 3:30 PM	Weight after drying (lbs)	27.4	41.4
9/9/03 15:30 PM	Weight after drying (lbs)	26.1	40.3
9/9/03 15:30 PM	Weight after drying (lbs)	26.1	40.3
	Loss of mass (% by mass)	3.98	2.03
	Allowable loss of mass = 3%	Pass	Pass

Note: There was no deleterious effect, such as delamination, crazing, spalling and or cracking. Samples have an actual weight gain. This must be due to trapped moisture within assembly.

