

**Technical Center** 

The Euclid Chemical Company 19320 Redwood Road Cleveland, OH 44110-2799

Phone: 800-321-7628 Fax: 216-531-9399

www.euclidchemical.com

Customer: Bilco Brick
Submitted By: Jerry Miller
Location: Lancaster, TX

**Request**: Masonry Testing, (Water Repellency)

TSR# 18-04-23-02

**Dates:** 4/30/2018

#### **RELATED DOCUMENTS:**

Water Repellency Test Methods (NCMA TEK 19-7)

**CMU – WR1** Standard Test Method for Water Droplet and Water Bottle Tests of Concrete Masonry Units

CMU - WR2 Standard Test Method for Spray bar Test of Concrete Masonry Units

**PRODUCTS TESTED:** 1 set of eight inch, hollow core, normal weight block, were submitted as follows:

Sample Set A – Eucon Blocktite (24.0 oz/c wt.), admixture

# **Physical Requirements:**

### Performance measures for water repellency test methods

Test Method Time Scale Excellen		Excellent	Good	Marginal	Poor	
Water Bead 1 hours		15 drops remaining	10-14 drops	5-9 drops	0-4 drops	
			remaining	remaining	remaining	
Spray Bar	4 hours	No dampness or pinholes observed	Avg. of 20 % or less dampness, and for each unit 5 pinholes or less	Avg. of 20-60 % dampness, and for each unit 6-10 pinholes	Avg. greater than 60 % dampness, and for each unit greater than 11 pinholes	
		Pa	ass	F	ail	

## **Summary of Test Results:**

Physical Properties	Sample
-	Set A
Water Bead Test @ 1 hour	Excellent
Spray Bar Test @ 4 hours	Good

**Water Bead Test Report** NCMA CMU-WR1-09

**Test Method:** 

Water Bead Test

(per NCMA Method CMU-WR1-09)

Unit Specification: NCMA TEK 19-7

**Unit Description:** 

8x8x16 inch Concrete Masonry Units

# **Summary of Test Results**

Physical Properties	Specified Values	Test Results
Average Water Drops Remaining at 5 Minutes	min. 9	15
Average Water Drops Remaining at Conclusion of Testing	***	15

	Drops Remaining					
Unit	1	5	15	30	60	
ID	Minute	Minues	Minutes	Minutes	Minutes	
Α	5	5	5	5	5	
В	5	5	5	5	5	
C	5	5	5	5	5	
Total	15	15	15	15	15	



Water Bead @ 1 Hour

Note: These Units Comply With NCMA TEK 19-7 Water Bead Criteria

**Spray Bar Test Report** NCMA CMU-WR2-09

Test Method:

Spray Bar Test

(per NCMA Method CMU-WR2-09)

Unit Specification:

NCMA TEK 19-7

Unit Description:

8x8x16 inch Concrete Masonry Units

#### **Summary of Test Results**

	Specified	Test
Physical Properties	Values	Results
Average Total Face Shell Area	***	91.6 in.²
Average Total Web Area	****	151.4 in.2
Average Dampness Inside Face Shell at Conclusion of Testing	20% max.	5.7%
Maximum Pinholes per Unit at Conclusion of Testing	5 max.	2 count
Average Dampness on Webs at Conclusion of Testing	****	0.0%
Average Water Absorbed During Testing	***	0.45 lb.

Individual Unit Results - Note: Measurements and weights below are obtained from cut specimens.

Measured	d Demension	5				Total Inside	
				Length Insi	Length Inside Face Shell		
	Unit	Unit Length	Unit Hight	Left (L <sub>FS (left)</sub> )	Right (L <sub>FS (right)</sub> )	Surface Area	
	ID	în.	În.	īn.	Ĭn	in. <sup>2</sup>	
	Α	15.63	7.61	6.03	6.00	91.5	
	В	15.66	7.64	5.97	6.00	91.5	
	C	15.63	7.66	6.00	5.97	91.7	
	Average	15.64	7.64	6.00	5.99	91.6	

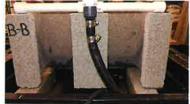
Unit	4		Web 3 (L <sub>web 3</sub> )	Web 4 (L <sub>web 4</sub> )	Total Inside Web Surface Area
ID	in.	in,	in,	in.	in. <sup>2</sup>
Α	4.94	4.94	5.00	4.97	151.1
В	4.94	4.97	4.97	4.94	151.4
C	4.91	4.94	4.97	4.97	151.6
Average	4.93	4.95	4.98	4.96	151.4

Measured Weights, Absorbed Water, Dampness, and Pinhole Measurements at Conclusion of Spray Bar Testing (4 hours)

Unit	Weight at Start of Test	Weight at End of Test	Water Absorbed in Test	Dampness Inside Face Shell	Dampness Inside Face Shell	Pinholes Inside Face Shell	Dampness Total Webs	Dampness Total Webs
ID	lb.	lb.	Ib.	in. <sup>2</sup>	%	#	in. <sup>2</sup>	%
Α	28.48	29.02	0.54	10.1	11.0	4	0.0	0.0
В	28.60	29.06	0.46	3.7	4.0	2	0.0	0.0
C	29.04	29.38	0.34	1.8	2.0	1	0.0	0.0
Average	28.71	29.15	0.45	5.2	5.7	2	0.0	0.0



Unit A @ 4 Hours



Unit B @ 4 Hours



Unit C @ 4 Hours

Note: These Units Comply With NCMA TEK 19-7 Spray Bar Criteria