



**EUCLID CHEMICAL**

**Technical Center**

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**Customer:** Bilco Brick  
**Submitted By:** Jerry Miller  
**Location:** Lancaster, TX  
**Request:** Masonry Testing, (Water Repellency)

**TSR# 18-02-28-01**  
**Date:** 3/19/2018

**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 – WR3 Standard Test Method for Water Uptake of Concrete Masonry Units

**PRODUCTS TESTED:** 1 set of three inch solid, split-face brick were submitted:

**Admixtures:** EUCON BLOCKTITE (18oz/c wt.), EUCON FOR-CAST S (2.0oz/c wt.)

**Physical Requirements:**

**Performance measures for water repellency test methods**

Test Method	Time Scale	Excellent	Good	Marginal	Poor
Water Bead	1 hours	15 drops remaining	10-14 drops remaining	5-9 drops remaining	0-4 drops 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
Water Uptake	24 hours	Less than 40 % relative absorption of total saturation	40-60 % relative absorption of total saturation	60-80 % relative absorption of total saturation	Greater than 80 % relative absorption of total saturation
			<b>Pass</b>		<b>Fail</b>

**Summary of Test Results:**

Physical Properties	Set #1	
Water Bead Test @ 1 hour	Excellent	
Spray Bar Test @ 4 hours	n/a	
Water Uptake @ 24 hours	Good	

## **Individual Unit Test Results**

### **Set # 1**

#### **CMU – WR1 Water Bead Test Values, average of 3 units**

<b>Time</b>	<b>1 minute</b>	<b>5 minutes</b>	<b>15 minutes</b>	<b>30 minutes</b>	<b>60 minutes</b>
<b>Drops Remaining</b>	15	15	15	15	15



Bilco, Water Bead @ 1 hour

#### **CMU – WR2 Spray Bar-Test**

\*Unable to test these units do to the specimen configuration

#### **CMU – WR3 Water Uptake Values, average of 3 units**

<b>Time</b>	<b>15 minutes</b>	<b>1 hour</b>	<b>4 hours</b>	<b>24 hours</b>
<b>Uptake, g/100cm<sup>2</sup> (%)</b>	12.52	22.90	37.19	59.73

**Comment:** These units comply with NCMA TEK 19-7 performance criteria for water repellent masonry units.