ANSI A118.4 Evaluation

for

US MIX Co.

AMX 475 PSV – Polymer Stone Veneer Mortar

US MIX Co.
112 South Santa Fe Drive
Denver, CO 80223

January 3, 2020
January 3, 2020

US MIX Co.
112 South Santa Fe Drive
Denver, Colorado  80223

REPORT OF TESTS

SUBJECT:  Physical Analysis of Stone Veneer Mortar

PROJECT:  US Mix – AMX 475 PSV – Polymer Stone Veneer Mortar


MATERIALS:  Delivered by US Mix to NTL in September 2019

NTL PROJECT #:  19-1319

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TEST DATA

Material:  US Mix – AMX 475 PSV – Polymer Stone Veneer Mortar

Water Addition Rate:  1.5 gallons of water per 80 lbs. of material
TEST RESULTS

A118.4 – Section 5.3 – Open Time

Material: AMX 475 PSV
Cast Date: October 2019
Specimens: Material applied over concrete, left open for 20 minutes, then bonded with four Type B tile specimens. The specimens were then cured 28 days at 73 deg F. until testing.

Test Results: PASS (Specification – 75 psi minimum)

Specimen A 273 psi
Specimen B 197 psi
Specimen C 108 psi
Specimen D 207 psi

AVERAGE 196 psi

A118.4 – Section 6.0 – Sag

Material: AMX 475 PSV
Test Date: October 2019
Specimens: Material applied over four Type E tile specimens
Test Duration: 20 minutes

Test Results: PASS (Specification – less than 0.02-in)

Specimen A 0.00-in
Specimen B 0.00-in
Specimen C 0.00-in
Specimen D 0.00-in

AVERAGE 0.00-in
TEST RESULTS

A118.4 – Section 7.1 – Shear Strength to Glazed Wall Tile

<table>
<thead>
<tr>
<th>Material:</th>
<th>AMX 475 PSV</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cast Date:</td>
<td>October 2019</td>
</tr>
<tr>
<td>Specimens:</td>
<td>Material applied over four Type A-1 tile specimens</td>
</tr>
</tbody>
</table>

7.1.2 – Seven-Day Shear Strength

Curing: 7 days at 73 deg F. before testing

Test Results: **PASS** *(Specification – 300 psi minimum)*

<table>
<thead>
<tr>
<th>Specimen</th>
<th>Shear Strength (psi)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>351</td>
</tr>
<tr>
<td>B</td>
<td>419</td>
</tr>
<tr>
<td>C</td>
<td>336</td>
</tr>
<tr>
<td>D</td>
<td>358</td>
</tr>
</tbody>
</table>

**AVERAGE** 366 psi

7.1.3 – Seven-Day Water Immersion Shear Strength

Curing: 7 days at 73 deg F. then 7 days immersed in water before testing

Test Results: **PASS** *(Specification – 200 psi minimum)*

<table>
<thead>
<tr>
<th>Specimen</th>
<th>Shear Strength (psi)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>191</td>
</tr>
<tr>
<td>B</td>
<td>217</td>
</tr>
<tr>
<td>C</td>
<td>202</td>
</tr>
<tr>
<td>D</td>
<td>226</td>
</tr>
</tbody>
</table>

**AVERAGE** 209 psi
TEST RESULTS

A118.4 – Section 7.2 – Shear Strength to Porcelain Mosaic Tile

Material: AMX 475 PSV
Cast Date: October 2019
Specimens: Material applied over four Type C tile specimens

7.2.2 – One-Day Shear Strength
Curing: 1 day at 73 deg F. before testing
Test Results: PASS (Specification – 75 psi minimum)

Specimen A: 63 psi
Specimen B: 81 psi
Specimen C: 87 psi
Specimen D: 84 psi
AVERAGE: 79 psi

7.2.3 – Seven-Day Shear Strength
Curing: 7 days at 73 deg F. before testing
Test Results: PASS (Specification – 200 psi minimum)

Specimen A: 294 psi
Specimen B: 285 psi
Specimen C: 332 psi
Specimen D: 216 psi
AVERAGE: 282 psi
TEST RESULTS

A118.4 – Section 7.2 – Shear Strength to Porcelain Mosaic Tile (continued)

Material: AMX 475 PSV  
Cast Date: October 2019  
Specimens: Material applied over four Type C tile specimens

7.2.4 – Seven-Day Water Immersion Shear Strength

Curing: 7 days at 73 deg F. then 7 days immersed in water before testing  
Test Results: PASS (Specification – 150 psi minimum)

<table>
<thead>
<tr>
<th>Specimen</th>
<th>Shear Strength (psi)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Specimen A</td>
<td>192 psi</td>
</tr>
<tr>
<td>Specimen B</td>
<td>225 psi</td>
</tr>
<tr>
<td>Specimen C</td>
<td>214 psi</td>
</tr>
<tr>
<td>Specimen D</td>
<td>228 psi</td>
</tr>
<tr>
<td>AVERAGE</td>
<td>215 psi</td>
</tr>
</tbody>
</table>

7.2.5 – Four-Week Shear Strength

Curing: 28 days at 73 deg F. before testing  
Test Results: PASS (Specification – 200 psi minimum)

<table>
<thead>
<tr>
<th>Specimen</th>
<th>Shear Strength (psi)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Specimen A</td>
<td>238 psi</td>
</tr>
<tr>
<td>Specimen B</td>
<td>235 psi</td>
</tr>
<tr>
<td>Specimen C</td>
<td>225 psi</td>
</tr>
<tr>
<td>Specimen D</td>
<td>210 psi</td>
</tr>
<tr>
<td>AVERAGE</td>
<td>227 psi</td>
</tr>
</tbody>
</table>
TEST RESULTS

A118.4 – Section 7.2 – Shear Strength to Porcelain Mosaic Tile (continued)

Material: AMX 475 PSV
Cast Dates: October 2019
Specimens: Material applied over four Type C tile specimens

7.2.6 – Four-Week Freeze-Thaw Shear Strength

Curing: 28 days at 73 deg F. then 20 cycles of freeze-thaw before testing
Test Results: PASS (Specification – 175 psi minimum)

Specimen A 192 psi
Specimen B 213 psi
Specimen C 196 psi
Specimen D 193 psi
AVERAGE 199 psi

7.2.7 – Twelve-Week Shear Strength

Curing: 12 weeks at 73 deg F. before testing
Test Results: PASS (Specification – 200 psi minimum)

Specimen A 227 psi
Specimen B 237 psi
Specimen C 265 psi
Specimen D 285 psi
AVERAGE 254 psi
TEST RESULTS

A118.4 – Section 7.3 – Shear Strength to Quarry Tile

Material: AMX 475 PSV
Cast Date: October 2019
Specimens: Material applied over four Type D tile specimens

7.3.2 – Four-Week Shear Strength

Curing: 28 days at 73 deg F. before testing
Test Results: PASS (Specification – 150 psi minimum)

Specimen A 155 psi
Specimen B 172 psi
Specimen C 123 psi
Specimen D 177 psi

AVERAGE 157 psi

7.3.3 – Four-Week Freeze-Thaw Shear Strength

Curing: 28 days at 73 deg F. then 20 cycles of freeze-thaw before testing
Test Results: PASS (Specification – 100 psi minimum)

Specimen A 170 psi
Specimen B 152 psi
Specimen C 182 psi
Specimen D 126 psi

AVERAGE 158 psi
January 3, 2020
US Mix – AMX 475 PSV
NTL Project #19-1319
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Respectfully submitted,

NELSON TESTING LABORATORIES

[Signature]

Mark R. Nelson
President

Notes: The results listed within this report relate only to the materials submitted for testing. This report shall not be reproduced, except in full, without written approval of this laboratory. The test materials not consumed in this testing will be discarded 14 days from the date of this report unless we receive written notification requesting otherwise.