# CCW Fire Resist BARRITHANE VP
# MATERIAL CERTIFICATION

This is to certify that Carlisle Coatings & Waterproofing CCW Fire Resist Barrithane VP is a roller applied moisture cured silane-terminated polyether (STPE) which provides a monolithic vapor-permeable air barrier membrane for use with concrete, masonry, insulation, steel, exterior sheathing, gypsum or wood wall construction and other substrates. CCW Fire Resist Barrithane VP is Made in the USA.

Carlisle Coatings & Waterproofing manufactures CCW Fire Resist Barrithane VP to comply with the following ASTM typical property values and meets the specification requirements:

| Fire Resist Barrithane VP - Property | Test Method | Typical Value |
|---|---|---|
| Color | -- | Dark Gray |
| Chemistry | -- | STPE |
| % Solids | -- | 88% |
| Volatile Organic Content (VOC) | ASTM C 1250 | 70 g/L |
| Coverage (Theoretical) CMU | Comb Gauge | 30 to 50 SQ FT per GAL<br>(15-25 wet mils) (26-44 dry mils) |
| Coverage (Theoretical) Sheathing | Comb Gauge | 60 to 100 SQ FT per GAL<br>(15-25 wet mils) (13-22 dry mils) |
| Application Temperature | -- | Min 15°F |
| Maximum Service Temperature | -- | 180°F |
| Maximum Exposure | -- | 180 Days |
| Shore A Hardness | ASTM D 2240 | 48 |
| Tensile Strength | ASTM D 412 | 140 psi |
| Elongation at Break | ASTM D 412 | 235% |
| Elastic Recovery | ASTM D 412 | 100% recovery @ 100% elongation |
| Pull-Off Adhesion | ASTM D4541, | Substrate Failure on gypsum sheathing,<br>240 psi on CMU |
| Water Penetration – CMU Substrate | AATCC 127 | 40 mils Barrithane VP<br>No leakage after 5h under 55 cm (22”)<br>water column |
| Water Penetration – Gypsum Sheathing w/Joint | AATCC 127 | 20 mils Barrithane VP, 40 mils Barribond over joint<br>No leakage after 5h under 55 cm (22”)<br>water column |
| Air Permeance – Sheathing Substrate | ASTM E 2178 | 0.0002 L/s*m$^2$ @ 75 Pa<br>(0.00004 CFM/ft$^2$ @ 1.57 PSF) |

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| Fire Resist Barrithane VP - Property | Test Method | Typical Value |
|---|---|---|
| Air Permeance – CMU Substrate | ASTM E 2178, modified | 0.013 L/s*m$^2$ @ 75 Pa<br>(0.0026 CFM/ft$^2$ @ 1.57 PSF) |
| Air Leakage through Assembly | ASTM E 2357 | Max 0.0041 L/s*m$^2$ @ 75 Pa<br>(0.00082 CFM/ft$^2$ @ 1.57 PSF)<br>Penetrated specimen, after load sequence |
| Water Leakage through Assembly | ASTM E 331 | No Leaks after 2h @ -6.24 PSF<br>No Leaks after 15 min @ -15 PSF |
| Water Vapor Permeance | ASTM E 96A<br><br><br><br>ASTM E 96 B | 5.1 Perms @ 40 mils<br>16.5 Perms @ 20 mils<br><br><br>11.1 Perms @ 40 mils<br>29.6 Perms at @ 20 mils |
| Low-Temp Flexibility | ASTM D 1970 | Pass @ 20$^0$F |
| Nail Sealability | ASTM D 1970 | Pass @ 20 mils thick |
| Surface Burning | ASTM E 84 | 50 mil membrane: Flame 20<br>Smoke 250<br><br>20 mil membrane: Flame 0<br>Smoke 0 |
| Heat Release by Cone Calorimeter,<br>50 mil membrane | ASTM E 1354<br>(50 kW/m$^2$ heat flux) | HRRPeak @ 129 kW/m$^2$<br>THR 16 MJ/ m$^2$<br>EHC 12.2. MJ/kg |
| Heat Release by Cone Calorimeter,<br>20 mil membrane | ASTM E 1354<br>(50 kW/m$^2$ heat flux) | HRRPeak @ 142 kW/m$^2$<br>THR 6 MJ/ m$^2$<br>EHC 10.01 MJ/kg |
| Vertical and Lateral Fire Propagation | NFPA 285 | Pass in many wall assemblies. Priest & Associates EEV 10123 for Carlisle Coatings & Waterproofing. |

Rev. July 27, 2018