**Water-Resistive Barrier (WRB) Grade Requirements**

<table>
<thead>
<tr>
<th>WRB GRADE</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>FELT</th>
<th>SYNTHETICS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water Resistance: Hour Rating</td>
<td>24</td>
<td>16</td>
<td>8</td>
<td>1/6</td>
<td>5</td>
<td>1/6</td>
</tr>
<tr>
<td>Water Vapor Permeability (Grams PSM* per 24 hour period)</td>
<td>4 max</td>
<td>6 max</td>
<td>-</td>
<td>35 min</td>
<td>7 max</td>
<td>77 max</td>
</tr>
</tbody>
</table>

*Per Square Meter

**GRADE A:**
High water-vapor resistive, self-sealing self-adhering flexible membrane

**GRADE B:**
A building paper classified as a moderate water/vapor resistant material. According to the UBC Standard 14-1, it must have a water resistance of not less than 16 hours. Many manufacturers of Grade "B" along with most plaster bureaus do not recommend this product behind portland cement plaster/stucco on an exterior application.

**GRADE C:**
Water-resistant, non-commercialized

**GRADE D:**
Vapor permeable and according to the UBC Standard 14-1 must have a water resistance of not less than 10 minutes. The product is currently made in 10, 20, 30 and 60 minute water resistance. Grade "D" building paper is the preferred water-resistive barrier for the plaster exterior wall envelope because it has a water-vapor transmission rate similar to portland cement-based plaster and it has been shown not to adhere to ASTM C926 plaster when installed properly. Additionally, per the 2010 California Building Code and International Building Code, when plaster assemblies are specified and applied over wood-based sheathing, shall include a water-resistive vapor-permeable barrier with a performance at least equivalent to two layers of Grade "D" paper. TSIB also recommends the use of Grade "D" (or equivalent) building paper when exterior gypsum sheathing is the substrate.

**GRADE F:**
This "non-combustible" paper sometimes seen on federal specs in conjunction with paper-backed lath, has been discontinued.

**#15 FELT PAPER:**
The use of organic felt (previously called 15 lb. felt paper) in the substrate of lath and plaster was replaced in the 1970’s by asphalt saturated kraft paper. Felts become vapor retardant when wet. During installation, felt, which is heavier and thicker than asphalt saturated kraft paper, cannot be bent around tight corners without resulting in damage that usually renders it unable to stop water.

**SYNTHETIC BUILDING WRAPS:**
Most synthetic papers are able to withstand longer exposure to ultraviolet (UV) light as compared to asphalt saturated kraft papers. In certain tests, synthetics greatly outperform asphalt saturated kraft paper in water resistance hold out.

When using synthetic wraps, consult manufacturer for allowable time exposure. Synthetics that are found to adhere to plaster may impede moisture drainage. An architect may specify an intervening, "sacrificial" layer of grade "D" on top of the synthetic layer where plaster will come in contact.

**LIQUID-APPLIED BARRIERS:**
A sprayed, roller-applied or trowel-applied material used as an alternate to building papers or synthetic wraps. Liquid-applied barriers should meet the acceptance criteria set forth by the International Code Council (ICC AC 212), and have various water-resistive and or waterproofing abilities. Always check the product’s permeability so that the product is appropriate for the project.