

From Alan Seymour

The following code section 1405.3 is new model code language in the 2009 International Building Code and currently not contained in the Oregon Structural Specialty Code. This requirement has traditionally been located in Chapter 13. ODOE feels that the following amendments will make this section more user-friendly.

1405.3 Vapor retarders. Class I or II vapor retarders shall be provided on the interior side of frame walls in Climate Zones 1 and 2 ~~5, 6, 7, 8~~ and Marine 4 as defined in 1302.

Reason: Model code language leaves the user to figure out if this is even necessary in Oregon's climates. This reference to Climate Zones that are already used in Oregon's code will clarify this requirement.

Exceptions:

1. Basement walls.
2. Below-grade portion of any wall.
3. Masonry walls with exposed interior surfaces.
4. Where exterior continuous rigid insulation is at least 50 percent of required R-value for that wall assembly, a Class I or Class II vapor retarder may be installed on the interior surface of rigid insulation.
5. Construction where moisture or its freezing will not damage the materials

1405.3.1 Class III vapor retarders. Class III vapor retarders shall be permitted where any one of the conditions in Table 1405.3.1 is met.

**TABLE 1405.3.1
CLASS III VAPOR RETARDERS**

<u>CLIMATE ZONE</u>	<u>CLASS III VAPOR RETARDERS PERMITTED FOR^a</u>
Marine 4 <u>1</u>	Vented cladding over OSB Vented cladding over plywood Vented cladding over fiberboard Vented cladding over gypsum Insulated sheathing with R -value $\geq R2.5$ over 2x4 wall Insulated sheathing with R -value $\geq R3.75$ over 2x6 wall
5 <u>2</u>	Vented cladding over OSB Vented cladding over plywood Vented cladding over fiberboard Vented cladding over gypsum Insulated sheathing with R -value $\geq R5$ over 2x4 wall Insulated sheathing with R -value $\geq R7.5$ over 2x6 wall
6	Vented cladding over fiberboard Vented cladding over gypsum Insulated sheathing with R -value $\geq R7.5$ over 2x4 wall Insulated sheathing with R -value $\geq R11.25$ over 2x6 wall
7 and 8	Insulated sheathing with R -value $\geq R10$ over 2x4 wall Insulated sheathing with R -value $\geq R15$ over 2x6 wall

For SU: 1 pound per cubic foot = 16 kg/m³.

^a Spray foam with a minimum density of 2 lbs/ft³ applied to the interior cavity side of OSB, plywood, fiberboard, insulating sheathing or gypsum is deemed to meet the insulating sheathing requirement where the spray foam R -value meets or exceeds the specified insulating sheathing R -value.

Reason: Deletion of requirements that are not pertinent to Oregon simplifies the Table.

1405.3.2 Material vapor retarder class. The vapor retarder class shall be based on the manufacturer's certified testing or a tested assembly.

The following shall be deemed to meet the class specified:

Class I: Sheet polyethylene, nonperforated aluminum foil

Class II: Kraft-faced fiberglass batts or paint with a perm rating greater than 0.1 and less than or equal to 1.0.

Class III: Latex or enamel paint.

1405.3.3 Minimum clear airspaces and vented openings for vented cladding. For the purposes of this section, vented cladding shall include the following minimum clear airspaces.

1. Vinyl lap or horizontal aluminum siding applied over a weather-resistive barrier as specified in this chapter.
2. Brick veneer with a clear airspace as specified in this code.
3. Other *approved* vented claddings.

Amend section 1312.1.4 as follows to correlate with proposed amendments stated above in 1405.3.

1312.1.4 Moisture control. A ~~1-perm~~-vapor retarder shall be installed on the warm side (in winter) in all exterior floors, walls and ceilings of heated buildings. A 1-perm vapor retarder shall be installed on the warm side (in winter) in all exterior floors and ceilings of heated buildings. See Section 1405.3 for wall vapor retarder requirements.

Exceptions:

1. ~~Masonry walls with exposed interior surfaces.~~
2. ~~Slab-on-grade floors need are not required to have a warm-side vapor-barrier retarder.~~
3. The building official may require designed moisture control systems for refrigerated buildings, buildings covering swimming pools or similar buildings with unusual potential for moisture damage.
4. The building official may accept designed moisture control systems which may include vapor barriers, ventilation, dehumidification or combinations thereof.

A ground cover shall be installed in the crawl space for both new and existing buildings when insulation is installed. Ground cover shall be 6-mil black polyethylene or other approved material of equivalent perm rating. Ground cover shall be lapped 12 inches (305 mm) at all joints and cover the entire surface area extending full width and length of the crawl space.

See Sections 1807 for dampproofing and waterproofing and 1910 for vapor barrier requirements for concrete slab-on-grade floors.