



City of Ocala

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BUILDING DEPARTMENT
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DS 2012-096

Request for Declaratory Statement for the use of polyurethane resins under an existing dwellings for soil stabilization.

RE: Project #1) In the scope of the work plan review for permitting the process of stabilizing an interior concrete slab, on grade, for a 2000 sq. ft. existing dwelling unit that was built in 2001, the application consists of injecting pressurized structural polyurethane resin through the slab, on grade, by using core drilled holes in which the polyurethane resin expands to lift/stabilize the concrete slab. This process has no control of the path of flow for the polyurethane resin in which direct contact with the slab on grade concrete is possible.

Question – Does injecting this pressurized structural polyurethane resin for soil stabilization thru the slab on grade for existing dwellings, with possible direct contact with the concrete slab on grade, constitute a violation of 2010 FBC-R Section 318.5?

RE: Project #2) In the scope of the work plan review for permitting the process of stabilizing an exterior foundation/footer for a 1450 sq. ft. existing dwelling unit that was built in 1985, the application consists of injecting structural polyurethane resin in the ground outside of the existing dwelling unit to provide structural support for the foundation /footer. This process has no control of the path of flow for the polyurethane resin in which direct contact with the foundation/footer is possible.

Question - Does injecting this structural polyurethane resin into the ground outside the existing dwelling unit with possible direct contact with the foundation/footer constitute a violation of 2010FBC-R 318.5?

The polyurethane resin is hydrophobic (sets up in wet conditions and forms a water-tight barrier) and has a peak compressive strength of 117+psi, tensile strength of 123+psi.

2010 FBC-R Section R318.5 Foam plastic protection.

In areas where the probability of termite infestation is “very heavy” as indicated in Figure R301.2(6), extruded and expanded polystyrene, polyisocyanurate and other foam plastics shall not be installed on the exterior face or under interior or exterior foundation walls or slab foundations located below grade. The clearance between foam plastics installed above grade and exposed earth shall be at least 6 inches (152 mm).

Exceptions:

1. Buildings where the structural members of walls, floors, ceilings and roofs are entirely of noncombustible materials or pressure-preservative-treated wood.
2. When in addition to the requirements of Section R318.1, an approved method of protecting the foam plastic and structure from subterranean termite damage is used.
3. On the interior side of basement walls.

The State of Florida is classified as “very heavy” in probability of termite infestation per figure R301.2 (6) FBC 2010.

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