GEORGIA DEPARTMENT OF
COMMUNITY HEALTH

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Clyde L. Reese, III, Esq., Commissioner Sonny Perdue, Governor

Tuesday, May 04, 2010

Tuf-Tite, Inc.
1200 Flex Court
Lake Zurich, IL 60047

Subject: Plastic Septic Tank Riser Models Approval

Dear Riser Manufacturer:

Pursuant to new Georgia plastic riser standards as adopted by the Department's Technical Review Committee (TRC), your company's currently listed riser models are approved. The previous "provisional" approval status is rescinded based upon the information provided with regard to materials data; riser-to-tank connection; and lid-to-riser fastening security.

This updated approval is based upon continued compliance with the specifications contained within the new standards (see attachment). Any additions or modifications to your approved product must be approved by the Department prior to use in the State.

Thank you for your participation in the Georgia On-Site Sewage Management Systems Program. Should you have any questions concerning this notification, feel free to contact me. Telephone: 404-657-6534; FAX: 404-657-6516; or E-mail: grharless@dhr.state.ga.us

Sincerely,

Gregory R. Harless
Land Use Program Consultant
Environmental Health Branch
Two Peachtree Street, NW
13th Floor, Suite 13.413
Atlanta, GA 30303

cc: Chris Kumnick, Programs Director, Land Use Programs

Enclosure

**The following plastic riser standard was adopted by the Georgia Department of Community Health's Technical Review Committee (TRC) on November 17, 2009.*

Polyethylene, Fiberglass and Polypropylene Septic Tank Risers and Lids

A. The following general requirements are applicable to plastic septic tank risers and lids.

1) Materials: Resins and sealants used in the riser manufacturing process shall be capable of effectively resisting corrosive influences of liquid components of sewage as well as withstanding the physical factors that may affect the structural integrity of the risers. Materials used shall be formulated to withstand vibration, shock, normal household chemicals, by-products of sewage digestion, hydrostatic soil pressures.

2) Physical Properties: Risers shall be so constructed that all parts of the riser and lid shall meet the following requirements:

Polyethylene – Made from HDPE type 3, having density of .941 to .965, in accordance with ASTM D-3350 and ASTM D-1248, Class B with UV stabilizer.

a) Ultimate Tensile Strength: Minimum - 2,400 PSI when tested in accordance with ASTM D-638, Standard Method of Test for Tensile Properties of Plastics.
b) Flexural Strength: Minimum - 80,000 PSI when tested in accordance with ASTM D-790, Standard method of Test for Flexural Properties of Plastics.
c) Equivalent ASTM, CSA, IAPMO, AASHTO or any ANSI certified third party testing may be accepted.
d) One or all of the following assembly stress tests may be accepted; 7.5 inches Hg vacuum with minimal joint seal deflection; compressive to 2500 lbs. center loading; compressive to 4500 lbs. full assembly and center loading; compressive to 6000 lbs. uniform loading; compression to deformation at 500 psi @ 3000 lbs. load or at 1000 psi @ 6000 lbs. load; or ASTM D-1784 tested in accordance with AASHTO M304M.

Fiberglass – Having a minimum 30% fiberglass reinforcing and UV stabilized.

a) Ultimate Tensile Strength: Minimum -12,000 PSI when tested in accordance with ASTM D- 638, Standard Method of Test for Tensile Properties of Plastics.
b) Flexural Strength: Minimum -19,000 PSI when tested in accordance with ASTM D-790, Standard Method of Test for Flexural Properties of Plastics.
c) Flexural Modulus of Elasticity: (Tangent) Minimum -800,000 PSI when tested in accordance with ASTM D-790, Standard Method of Test for Flexural Properties of Plastics.
d) Equivalent ASTM, CSA, IAPMO, AASHTO or any ANSI certified third party testing may be accepted.
e) One or all of the following assembly stress tests may be accepted: 7.5 inches Hg vacuum with minimal joint seal deflection; compressive to 2500 lbs. center loading; compressive to 4500 lbs. full assembly and center loading; compressive to 6000 lbs. uniform loading; compression to deformation at 500 psi @ 3000 lbs. load or at 1000 psi @ 6000 lbs. load; or ASTM D-1784 tested in accordance with AASHTO M304M.

Polypropylene – Having a minimum 30% glass filled copolymer and UV stabilized.

a) Ultimate Tensile Strength: Minimum -13,000 PSI when tested in accordance with ASTM D- 638, Standard Method of Test for Tensile Properties of Plastics.
b) Flexural Strength: Minimum -16,000 PSI when tested in accordance with ASTM D-790, Standard Method of Test for Flexural Properties of Plastic.
c) Flexural Modulus of Elasticity: (Tangent) Minimum - 875,000 PSI when tested in accordance with ASTM D-790, Standard Method of Test for Flexural Properties of Plastics.

d) Flexural Modulus of Elasticity: (Secant) Minimum -700,000 PSI when tested in accordance with ASTM D-790, Standard Method of Test for Flexural Properties of Plastics.
e) Equivalent ASTM, CSA, IAPMO, AASHTO or any ANSI certified third party testing may be accepted.
f) One or all of the following assembly stress tests may be accepted: 7.5 inches Hg vacuum with minimal joint seal deflection; compressive to 2500 lbs. center loading; compressive to 4500 lbs. full assembly and center loading; compressive to 6000 lbs. uniform loading; compression to deformation at 500 psi @ 3000 lbs. load or at 1000 psi @ 6000 lbs. load; or ASTM D-1784 tested in accordance with AASHTO M304M.

3) Plastic Septic Tank Riser Lids shall withstand the following stress testing:

a) 150 lbs. / sq. ft. uniform live load.
b) 1500 pound 10 by 10-inch area center loading in accordance with ASTM C- 890.

4) Attachment to tank: For installation on new concrete tanks, plastic risers must be attached by means of an integrally (cast in place) molded casting ring. Installation of plastic risers onto existing tanks may be achieved with the use of a bolt on attachment ring, adhesive mastic, or epoxy adhesive compatible with both plastic and concrete. Risers that are part of a plastic tank manufacturer's proprietary integrated tank and riser system may be attached by screw type threads molded into the tank and riser.

5) Watertight Assembly: Plastic riser lids shall be so constructed as to be watertight. Risers and lids shall be sufficiently tight when installed to preclude the entrance of surface or ground water into the tank for the designed life of the assembly. Riser segments and lid attachment must include an o-ring gasket or bead of mastic to seal those joints.

6) Security: Provision shall be made in the construction of plastic septic tank riser lids to prevent unauthorized entry or removal when the access openings are at or above ground level. Lids shall be fastened to the riser by use of stainless steel nuts and bolts or other lockout mechanism.

7) Safety: The heavy wedge access opening cover for concrete tanks must be maintained in place in conjunction with plastic risers; however, where the plastic riser manufacturer provides a safety net placed immediately beneath the riser lid, the concrete wedge cover may be removed. In addition, plastic riser lids should present a level slip resistant surface. Smooth domed lids are not recommended.

8) Workmanship: Risers and Lids shall be of uniform thickness and free from defect that may affect their serviceability or durability.

9) Longevity: Proof from an independent testing laboratory shall be submitted substantiating a minimum life expectance of twenty years service for the intended use of the risers and lids.