

By: 

**LOUISIANA  
DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT  
SPECIFICATIONS**

**LOOP DETECTOR SEALANT**

**DESCRIPTION:**

This specification sets forth the requirements for a two-part loop detector sealant that will be used to provide environmental protection to the wires of traffic detection systems that are installed in the roadway. The material shall protect the loop wire from moisture, foreign body penetration, fracture and shear forces, and roadway deterioration.

**MATERIAL REQUIREMENTS:**

The sealant shall be a self-leveling, two-part formulation. Part 1 shall consist of a polyester sealant furnished in a premeasured one (1) gallon container; part 2 shall consist of a liquid hardener. Polyester sealant shall be activated by adding the liquid hardener (curing agent) directly into the container of polyester sealant.

Sealant shall have a minimum shelf life of twelve (12) months when stored in accordance with the manufacturer's recommendations.

**TESTING REQUIREMENTS**

<b>PROPERTY</b>	<b>TEST METHOD</b>	<b>PERFORMANCE CRITERIA</b>
Adherence to Concrete and Asphalt	Sealant will be installed into a 0.312 to 0.4 inch by 2 inch saw cut and cured at 77° F for 2 weeks.	Sealant shall securely adhere to concrete and asphalt with no visible signs of shrinkage after curing. Shrinkage shall be measured using a dimensional measurement.
Viscosity	ASTM D562 at 77° F	Sealant shall not run out of un-level slots
Tensile Strength	ASTM D638	Sealant shall have a minimum 900 psi or higher tensile strength.
Cure Rate	ASTM C679 at 77° F	Sealant shall be tack-free at 25 minutes from time of application and completely cured at 60 minutes.
Cracking	ASTM C1246	Sealant shall not become brittle with age or temperature extremes when tested for weight loss, cracking, and chalking.
Expansion Cracking	ASTM D412	Sealant shall resist cracking caused by expansion and contraction due to temperature changes when tested for tensile strength and elongation.
Resistance to Fluids	ASTM D570	Sealant shall resist water, No. 3 oils, gasoline, antifreeze, and brake fluid when tested for absorption for 24 hours.
Penetration	ASTM D2240 Shore A	Sealant shall resist penetration of foreign material when tested for durometer hardness for 24 hours.

**PACKAGING AND LABELING:**

The polyester sealant container and liquid hardener shall be packaged together in the proper proportions to make one (1) gallon of activated material. Activation, application and safety instructions must be included on either the label of the polyester sealant container and/or on an instruction sheet that is inserted into the package containing both materials.

Packages must be labeled, at a minimum, with the following:

- Purchase Order No.
- Manufacturer's Name
- Product Name/Description

Polyester sealant container shall be designed to prevent liquids and foreign objects from contaminating the material. Container must be labeled, at a minimum, with the following:

- Manufacturer's Name
- Product Name/Description
- Part 1 of 2
- Date of Manufacture
- Batch Number (if applicable)

Liquid hardener shall be contained in a tube or tube like package that prevents leakage of material during shipment and storage. Liquid hardener shall be labeled, at a minimum, with the following:

- Manufacturer's Name
- Product Name/Description
- Part 2 of 2
- Date of Manufacture

**CERTIFICATION:**

A Certificate of Compliance stating the material supplied conforms to the requirements of this specification must be provided with each shipment. Certificate will be kept on file by the Department.

**WARRANTY AND NON-CONFORMANCE:**

Material shall be supplied with a manufacturer's warranty. Material that fails to remain viable during the warranty period and/or any part of this specification shall be replaced at no additional cost to the Department. Failing material shall be removed by the supplying vendor at the vendor's expense.