



To: <p style="text-align: center;">SUPERSEDED BY <u>EB 06-059</u> EFFECTIVE <u>5/3/07</u></p>		<p style="text-align: center;"><i>New York State Department of Transportation</i> ENGINEERING INSTRUCTION</p>	<p style="text-align: center;">EI 05-027</p>
Title: ELASTOMERIC CONCRETE, NEW SPECIAL SPECIFICATION AND MATERIAL SPECIFICATION			
Distribution: <input checked="" type="checkbox"/> Manufacturers (18) <input checked="" type="checkbox"/> Local Govt. (31) <input checked="" type="checkbox"/> Agencies (32) <input type="checkbox"/> Surveyors (33) <input checked="" type="checkbox"/> Consultants (34) <input checked="" type="checkbox"/> Contractors (39) <input type="checkbox"/> _____ ()	Approved:  R. L. Sack, P.E. Deputy Chief Engineer, Research <div style="text-align: right;"> <u>4 AUG 05</u> Date </div>		

ADMINISTRATIVE INFORMATION:

- **Effective Date:** This Engineering Instruction (EI) is effective beginning with projects submitted for the letting of 01/12/06.
- **Superseded Issuances:** No EI or Engineering Bulletin is superseded.
- **Disposition of Issued Materials:** The special specification will reside on the Department's internet site under Special Specifications. Materials Specification 701-11 will be added to the Standard Specifications in a future revision.

PURPOSE: This EI issues a new special specification for elastomeric concrete.

TECHNICAL INFORMATION:

- The Materials Bureau will establish and maintain an Approved List for Elastomeric Concrete (701-11). Elastomeric concretes that meet the physical requirements under Materials Specification 701-11 will be placed on the Department's Approved List of Materials and Equipment for use on New York State Department of Transportation projects.
- Manufacturers must submit Materials Detail Sheets containing all material requirements and installation information for Elastomeric Concrete and request that their product be considered for placement on the Department's Approved List. Application forms are available on the Department's internet site http://www.dot.state.ny.us/tech_serv/mat/alme/menu_sub.html.
- **Cost Impact.** It is anticipated that there will be no increase in cost due to this action.

IMPLEMENTATION:

- For contracts let prior to the effective date of this EI, designers should continue to use specification 567.46----18 or 567.46----09.
- **Special Specification:** 567.47----18 Elastomeric Concrete.
- **Standard Specification:** 701-11 Elastomeric Concrete.
- **Disapproved Special Specification:** 567.46----18 Elastomeric Concrete for Bridge Joint Systems.
- **Disapproved Special Specification:** 567.46----09 Elastomeric Concrete for Bridge Joint Systems.

TRANSMITTED MATERIALS ATTACHED TO THIS EI:

- Special Specification 567.47----18
- Standard Specification for § 701-11 ELASTOMERIC CONCRETE

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BACKGROUND: Elastomeric concrete has been used as a header material for bridge expansion joints and as a concrete patching material. After several years of monitoring the field performance and conducting laboratory testing on elastomeric concrete, the Materials Bureau is issuing standard material specification 701-11.

VENDOR: Vendors supplying elastomeric concrete to the Department must submit Materials Detail Sheets to the General Engineering Unit of the Materials Bureau for approval. Technical representatives are to be present during all phases of the Elastomeric Concrete Installation.

REFERENCES: 1. ASTM Standards C579-01

CONTACT: Contact the General Engineering Unit of the Materials Bureau at (518) 485-5432 or gdrzewiecki@dot.state.ny.us should you have questions regarding this issuance.

ITEM 567.47 18 ELASTOMERIC CONCRETE

DESCRIPTION

Furnish and place elastomeric concrete at the locations indicated on the contract documents, or as directed by the Engineer.

MATERIALS

Use an elastomeric concrete appearing on the Department's Approved List Materials and Equipment for use on New York State Department of Transportation Projects.

Use one elastomeric concrete product supplied by a single supplier for this work. Combining products will not be permitted unless specifically approved by the Director, Materials Bureau.

CONSTRUCTION DETAILS

General. Arrange for the elastomeric concrete manufacturer to have a competent technical representative with necessary equipment to perform the quality-control testing at the job site during all phases of preparation and installation. The technical representative will present all quality-control testing equipment to the Engineer to verify calibration dates and demonstrate their competency to perform quality-control testing.

Supply Material Safety Data Sheets (MSDS) and approved Material Detail Sheets prepared by the elastomeric concrete manufacturer a minimum of two weeks prior to the scheduled commencement of work.

Preparation. Unless the Approved Materials Detail Sheets require other preparations, the following surface requirements will apply:

1. Abrasive-blast clean all metal surfaces to come in contact with the elastomeric concrete in accordance with the requirements of the Steel Structures Painting Council (SSPC) SP-6 Commercial Blast Cleaning, Vis-1.
2. Abrasive-blast clean all concrete surfaces that come in contact with the elastomeric concrete to ensure that all oil, grease, or any other material which may affect the bond between the elastomeric material and the concrete have been removed.
3. Measure the surface moisture content of the substrate surface using a moisture meter before installing the elastomeric concrete. The moisture content will be within allowable tolerances stated in the approved Material Detail Sheets.
4. Vacuum clean or air-blow clean all receiving surfaces with moisture free and oil-free compressed air immediately prior to material installation. No loose material of any nature will be permitted on any receiving surface.

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Installation. Adhere to approved Manufacturers Materials Detail Sheets for proper mixing, placement, and finishing.

Note: Because of the stiff consistencies and fast-setting properties of elastomeric concretes, care will be exercised to eliminate voids in the material.

METHOD OF MEASUREMENT

The work will be measured as the number of cubic meters of elastomeric concrete satisfactorily installed as shown on the contract plans or ordered by the Engineer.

BASIS OF PAYMENT

The unit price bid per unit shall include the cost of all labor, materials, and equipment necessary to complete the work.

No payment will be made for any material installed due to failure of the initial installation, unless the Engineer certifies that the reason for removal was beyond the Contractor's control.

Payment will be made under:

Item No.	Item	Pay Unit
567.47 18	Elastomeric Concrete	0.1 Cubic Meter

701-11 ELASTOMERIC CONCRETE

SCOPE. This specification covers the material requirements for elastomeric concrete.

GENERAL. Supply elastomeric concrete components and primer materials in prepackaged and/or premeasured containers with the product name, manufacturer, VOC content, and mixing instructions clearly marked on each container.

MATERIAL REQUIREMENTS.

Physical Test Requirements

Elastomeric concrete will conform to the following physical test requirements:

TESTS	PROCEDURE	MINIMUM REQUIREMENTS
Resilience	ASTM C579-01	70%
5-Hr. Compressive Strength	ASTM C579-01 (modified)	3.45 MPa
24-Hr. Compressive Strength	ASTM C579-01 (modified)	14 MPa
7-Day Tensile	ASTM D638	1 MPa
7- Day Tear	ASTM D624	7 kN/m
Pot Life	Gardco GT-S Gel Timer	5 minutes

Materials Details

The manufacturer will submit Material Detail Sheets to the Materials Bureau for approval. Upon approval, the manufacturer, product name, and the Material Detail Number will be placed on the Department's Approved List.

Field Evaluation

To maintain Approved List status, the elastomeric concrete will be evaluated by the Materials Bureau or a designated representative at six-month intervals for a period of two years from the date of installation. If the material is performing as designed at the end of the two-year evaluation approved status will continue.

BASIS OF ACCEPTANCE. Acceptance of this material will be based on the manufacturer's name appearing on the Department's Approved List for Materials and Equipment. The supplier shall provide two copies of the Approved Material Detail Sheets and Material Safety Data Sheets through the Contractor to the Engineer as part of the evidence of acceptability for the material at least 14 days prior to shipment of the product to the job site.