

# 1504 - PREFORMED ELASTOMERIC COMPRESSION JOINT SEALS FOR CONCRETE

## SECTION 1504

### PREFORMED ELASTOMERIC COMPRESSION JOINT SEALS FOR CONCRETE

#### 1504.1 DESCRIPTION

This specification governs the preformed elastomeric joint seals designed to operate under compression and intended for various applications. The specification also addresses certain components, such as lubricants and adhesives, required for installation of the seals.

#### 1504.2 REQUIREMENTS

##### a. General.

(1) Unless specified otherwise in the Contract Documents, provide transverse pavement joint seals that comply with **TABLE 1504-1**.

<b>Joint spacing on centers.</b>	<b>15 feet</b>	<b>30 feet</b>
Allowable range of non-compressed seal width across flat contact surfaces.	0.687 ⇔ 0.750 inch 0.719 inch nominal width	0.812 ⇔ 0.875 inch 0.843 inch nominal width
Vertical dimension of non-compressed seal flat contact surface, per side, minimum.	0.630 inch	0.800 inch
Maximum allowable overall vertical dimension of seal when compressed to width of 3/8 inch.	1.50 inch	1.50 inch

(2) Provide elastomeric seals for bridge deck expansion joints that comply with the dimensional requirements specified in the Contract Documents.

##### b. Material Specifications.

(1) Comply with AASHTO M 220 when the intended application is pavement joints and AASHTO M 297 when the intended application is bridge deck joints.

Durably label and mark seals in compliance with the requirements of those AASHTO standards inclusive of a unique identifier such as a batch or lot number and date of manufacture. Package seals to prevent damage during transport and durably label the packaging containment with all information required to properly identify the contents.

(2) All adhesives, lubricants, cementing agents, etc., that are required for installation of the seals are to be specified and provided by the manufacturer of the seal. All installation is to be in strict accordance with the specified procedures and practices of the seal manufacturer. These procedures and practices are to be provided with the component.

Properly package all of these components and provide instructions for safe storage, transport, proper disposal of component and container, emergency procedures, etc. Durably label all with the name and address of the manufacturer, date of manufacture, shelf life or expiration date if applicable, a unique identifier such as a batch or lot number, and any other relevant information.

#### 1504.3 TEST METHODS

Using the applicable AASHTO material specification shown in **subsection 1504.2b.**, conduct all tests required according to the specified procedures with the following exceptions:

- Pavement and bridge deck seals when compressed to a width of 80 and 85 percent of nominal are to provide a load resistance of not less than 50 pounds per linear foot.
- Bridge deck seals when compressed to a width of 50 percent of nominal are not to produce a load resistance that exceeds 500 pounds per linear foot.

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These properties are evaluated while conducting the compression deflection tests according to the procedures of the applicable AASHTO standard.

### 1504.4 PREQUALIFICATION

**a. General.** All manufacturers of elastomeric seals that intend to provide seals for KDOT projects must have their products prequalified by size and design configuration. To initiate this process provide a request for the evaluation of the product to the Bureau Chief, Materials and Research along with the following documentation:

- The manufacturer's corporate name and address as well as the address of the facilities that are manufacturing the seals being prequalified,
- The method of traceability utilized for quality control such as lot or batch numbers, dates of manufacture, etc.,
- Typical material quantities represented by this method,
- A list of authorized distributors of the product(s) being prequalified if applicable.

**b. Manufacturer Quality Control Requirements.** The manufacturer must perform the quality control testing with an identified and adequately staffed section within its organization. The laboratory must have the proper calibrated equipment with which to adequately perform all testing required by **subsection 1504.3**. Provide a copy of the quality control plan to the Bureau Chief, Materials and Research.

**c. Sampling and Testing Procedure.** The manufacturer is to provide a 6-foot length sample of each seal size and design configuration they desire to have evaluated for prequalification. Submit samples to the Engineer of Tests. The samples are to be representative of seal production and are to be provided with certified laboratory reports documenting the results of the tests required by **subsection 1504.3**.

The samples will be evaluated and tested by the central laboratory according to **subsection 1504.3** with the results compared to those of the manufacturer.

**d. Manufacturer Status.** A manufacturer will be notified by written documentation of the results of their application for prequalification and in the event of any change in prequalified status once it has been attained.

The manufacturer is to immediately notify the Bureau of Materials and Research of any changes in the elastomeric compound, design configuration, dimensions, installation procedures and practices, etc., of the prequalified products. The Bureau of Materials and Research will review the changes and determine whether the product is to remain prequalified. If the changes disqualify the product, an application for prequalification as a new product according to the preceding requirements may be submitted. The failure of random verification samples removed from seals delivered to projects may also disqualify the product.

The Bureau will maintain a list of all prequalified manufacturers by facility and the specific seal size(s) and design(s) that have been approved. Authorized distributors of the approved products, as provided by the manufacturer, will also be maintained on the prequalified list. A distributor may be added to the prequalified list if they can provide verifiable documentation to The Bureau of Materials and Research that they are supplying a prequalified product.

### 1504.5 BASIS OF ACCEPTANCE

**a.** The manufacturer by facility and the specific seal size and design must be currently prequalified.

**b.** Receipt and approval of a Type C certification as specified in **DIVISION 2600** for the seals, adhesives, lubricants, cementing agents, and any other products specified by the seal manufacturer for proper installation of the seals.

**c.** The **final disposition** of all products and components will be completed at the final destination as the result of inspection for the quality of workmanship, the delivery condition, and approval of the associated required documentation.