

**TABLE 1078-7  
TOLERANCES FOR BOX BEAMS  
(Refer to Figure 1078-4)**

Dimension	Tolerance
Length (A)	+ 1"
Width (overall) (B)	+ 1/4"
Depth (overall) (C)	+ 1/4"
Variation from specified plan end squareness or skew (D)	+ 1/8" per 12" width, + 1/2" max
Variation from specified elevation end squareness or skew (E)	+ 1/8" per 12", + 1/2" max
Sweep, for member length (F) up to 40 ft	+ 1/4"
Sweep, for member length (F) 40 to 60 ft	+ 3/8"
Sweep, for member length (F) greater than 60 ft	+ 1/2"
Differential camber between adjacent members (G):	1/4" per 10 ft., 3/4" max
Local smoothness of any surface (H)	1/4" in 10 ft
Position of strands (K)	+ 1/4"
Longitudinal Position of blockout (N)	+ 1"
Position of dowel holes (o1)	+ 1/4"
Position of sleeves cast in beams, in both horizontal and vertical plane (o2)	+ 1/2"
Position of void (P)	+ 3/8"
Bearing area – deviation from plane surface	+ 1/16"
Width - Any one span	Plan width + 1/8" per joint
Width – Differential of adjacent spans in the same structure	1/2"

## SECTION 1079

### BEARINGS AND BEARING MATERIALS

#### 1079-1 PREFORMED BEARING PADS

Provide preformed bearing pads composed of multiple layers of 8 oz/sy cotton duck impregnated and bound with high quality natural rubber, or equally suitable materials approved by the Engineer, that are compressed into pads of uniform thickness. Ensure that the thickness of the preformed bearing pads is 3/16" with a tolerance of  $\pm 1/16"$ . Use cotton duck that meets Military Specification MIL-C882-D for 8 oz/sy cotton army duck or equivalent. Provide enough pads as to produce the required thickness after compressing and vulcanizing. Ensure that the finished pads withstand compressive loads perpendicular to the plane of the laminations of not less than 10,000 psi without detrimental extrusion or reduction in thickness.

Furnish a Type 3 certification in accordance with Article 106-3 certifying that the preformed bearing pads meet this Specification.

#### 1079-2 ELASTOMERIC BEARINGS

##### (A) General

Provide elastomeric bearings that meet the requirements of AASHTO M251, except as specified herein.

Manufacturers shall be pre-qualified by the Department and shall submit working drawings for approval. Refer to Subarticles 1079-2(D) and 1079-2(E). Furnish a Type 3 certification in accordance with Article 106-3 certifying that elastomeric bearings satisfy this Specification and all design criteria. Include the lot number, description and test results in the certification.

## Section 1080

### 1 (B) Elastomer Properties

2 The elastomer for all bearings shall be classified as Grade 3.

3 The shear modulus of the elastomer for laminated (reinforced) bearings shall be 160 psi,  
4 unless otherwise noted in the plans.

5 Provide Grade 50 or Grade 60 durometer hardness elastomer in all (unreinforced)  
6 bearings, unless otherwise noted in the plans.

### 7 (C) Testing

8 The optional test procedures of AASHTO M 251 are not required, except as specified  
9 herein.

10 Determine the shear modulus of the elastomer for laminated (reinforced) bearings in  
11 accordance with ASTM D4014.

12 At the Manufacturer's option, plain (unreinforced) bearings may be tested using the  
13 methods of Appendices X1 and X2 of AASHTO M 251.

14 Test at least 2 bearings per lot or as directed by the Engineer. Define a "lot" as a group  
15 of 100 or less bearings with or without holes or slots, which are:

16 (1) Manufactured in a reasonably continuous manner from the same batch of elastomer  
17 and cured under the same conditions, and

18 (2) Of the same type (plain or laminated) and of similar size (no dimensions shall vary  
19 by more than 40%).

20 A lot may include bearings from multiple projects and purchasers.

### 21 (D) Working Drawings

22 Submit 6 sets of detailed fabrication drawings of laminated (reinforced) bearings to the  
23 Engineer for review, comments and acceptance. Show complete details and all material  
24 specifications. Clearly identify any proposed deviations from details shown in the plans  
25 or requirements of the Standard Specifications. Obtain drawing approval before  
26 manufacturing of the bearings.

## SECTION 1080

### PAINT AND PAINT MATERIALS

27

#### 28 1080-1 GENERAL

29 Deliver all paints except 2 component products to the project completely mixed and ready for  
30 use without additional oil or thinner. Mix 2 component paints in accordance with the  
31 manufacturer's printed instructions and shall not need additional oil or thinner upon mixing,  
32 except where necessitated by weather conditions. Mixed paints or paint components that  
33 harden or curdle in the container and will not break up with a paddle to form a smooth,  
34 uniform consistency will be rejected. Any thinning necessitated by weather conditions shall  
35 be approved in writing and use only those thinners approved by the manufacturer. Store all  
36 paint materials in a moisture free environment between 40°F and 110°F or at such  
37 temperatures within this range recommended by the manufacturer.

#### 38 1080-2 PAINT VEHICLES, THINNERS AND DRIERS

39 Paint vehicles, thinners and dryers shall meet the requirements for these ingredients that are  
40 included in the *Standard Specifications* for the paint being used. Only ingredients  
41 recommended by the manufacturer which have a history of compatibility with each other may  
42 be used.