Section 4136. Joint Fillers, Sealers, and Seals

4136.01 GENERAL REQUIREMENTS.

Use the type of joint fillers and sealers required in the contract documents.

4136.02 CONTRACTION JOINT SEALERS AND SEALS.

Meet the following requirements:

A. Poured Joint Sealer.
Approved sources for poured joint sealers are listed in Materials I.M. 436.01, Appendix A.

1. Hot poured: Use sealers composed of petropolymers supplied in solid form and meeting the requirements of ASTM D 6690, Type IV.

2. Cold applied: Use sealers that meet the above physical requirements.

B. Backer Rod.
Approved backer rod sources are listed in Materials I.M. 436.04, Appendix A and B. If used in conjunction with joint sealers, obtain the Engineer's approval for composition. Use backer rod meeting the following requirements:

1. When used with hot poured sealers, is capable of withstanding, without damage, the high temperatures inherent to the sealers.

2. Has a maximum of 5% absorption when immersed in water for 24 hours with the ends sealed.

3. Is of a size that compression is required for installation in the joint, so that it maintains its position during the sealing operation.

4. Is dry and kept dry during installation.

5. Is inspected and accepted according to Materials I.M. 436.04.

C. Preformed Elastomeric Joint Seal.
Apply AASHTO M 220, including requirements for lubricant adhesive. Obtain Engineer's approval for the dimensions and shape.

4136.03 EXPANSION JOINT FILLERS AND SEALS.

Fill expansion joints with one of the following material types. When the type is not specified, use resilient filler.

A. Resilient Filler.

1. Meet requirements of AASHTO M 213.

2. Furnish in strips of dimensions shown in the contract documents.

3. When the self expanding type is specifically required, use material meeting the requirements of AASHTO M 153, Type III. Use an accompanying sealer that meets the requirements of Article 4136.02, A.

4. Approved resilient filler sources are listed in Materials I.M. 436.03, Appendix A.

5. The Engineer may approve other resilient fillers.

B. Flexible Foam Expansion Joint Filler.

1. Use the size designated in the contract documents.

2. Ensure material is resistant to petroleum derivatives.

3. Comply with the requirements of ASTM D 1752, Sections 5.1 to 5.4, with Section 5.3 modified to 10 psi (0.069 MPa) minimum and 25 psi (0.173 MPa) maximum when tested in accordance with AASHTO T 42.

4. Approved sources for flexible foam expansion joint fillers are listed in Materials I.M. 436.05, Appendix A.

5. Use sealer that meets the requirements of Article 4136.02, A.

C. Tire Buffings Expansion Joint Filler.

When designated in the contract documents, use tire buffings to fill expansion joints. Comply with the following:

1. Use buffings from the tire retreading industry. Approved sources for tire buffings for expansion joints are listed in Materials I.M. 436.06, Appendix A.

2. Ensure tire buffings are clean, dry, and without any contamination.

3. Place loose and strike off level.

4. Remove compacted material and replace with loose material.

5. Use sealer that meets the requirements of Article 4136.02, A. Approved sources for sealers are listed in Materials I.M. 436.01, Appendix A.

D. Elastomeric Joint Seals.

1. Use elastomeric joint seals of the size designated in the contract documents and of a shape approved by the Engineer. Approved sources for elastomeric joint seals are listed in Materials I.M. 436.02, Appendix A. For the seal and the lubricant adhesive, meet the requirements of AASHTO M 220.

2. Seals with splices will be acceptable only when splices are made using factory type methods the Engineer approves. Comply with the following:
   - Do not locate splices within 1 foot (0.3 m) of a sharp bend, when placed in final position, and
   - Do not use more than one splice per finished piece.