
Test Procedure for

SAMPLE PREPARATION FOR HOT-APPLIED POLYMER-MODIFIED JOINT SEALANTS AND REPAIR MATERIALS



TxDOT Designation: Tex-546-C

Effective Date: December 2011

1. SCOPE

- 1.1 Use the following procedure to obtain and prepare a representative sample of sealant or repair material for testing. Two separate procedures are provided: one for pre-melted materials and another for powdered materials.
 - 1.2 The values given in parentheses (if provided) are not standard and may not be exact mathematical conversions. Use each system of units separately. Combining values from the two systems may result in nonconformance with the standard.
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2. APPARATUS

- 2.1 *Forced draft oven*, capable of maintaining $430 \pm 5^\circ\text{F}$ ($221 \pm 3^\circ\text{C}$).
 - 2.2 *Heating mantle*, capable of accommodating a 1-quart paint can and heating the test material to approximately 450°F (232°C).
 - 2.3 *Laboratory gas burner*, Fisher style.
 - 2.4 *Can*, steel, round, 1-quart capacity, paint type without lip or with lip cut out.
 - 2.5 *Spatula*, steel, of sufficient length and stiffness to safely stir the material in the paint can while heating in the mantle.
 - 2.6 *Spoon*, steel, approximate bowl size 2.5×4 in. (6×10 cm), total length approximately 16 in. (40 cm), or of sufficient size to safely transfer the material sample.
 - 2.7 *Aggregate sample splitter*, capable of uniformly splitting mixed samples of material up to approximately 0.25 in. size.
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3. SAMPLING PRE-MELTED MATERIALS

- 3.1 Heat the material in the shipping box in the forced draft oven at 430°F (221°C) for approximately one hour or until soft enough to remove a sample for testing.
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- 3.2 Remove the heated box of material from the oven. Remove a sufficient amount of material for testing from the shipping box into the quart can using the metal spoon, heated on the burner. To obtain a representative sample, push the metal spoon into the material all the way down to the bottom of the box. This is easiest to do near the edge of the box.
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4. SAMPLING POWDERED MATERIALS

- 4.1 Agitate the container of material by shaking to provide a somewhat even distribution of particles and to break up clumps as much as possible.
- 4.2 Pour the sample through the sample splitter to produce two representative specimens.
- 4.3 If necessary, split the resulting specimens to achieve a specimen size sufficient for testing.
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5. HEATING THE SPECIMEN

- 5.1 Place the final specimen into a clean quart can.
- 5.2 Place the quart can into the heating mantle. Heat the material, continuously stirring with the spatula, until it is fluid enough to pour (approximately 425°F [218°C]).
- 5.3 Immediately transfer the hot material into molds prepared in accordance with material testing specifications.