

**Asphalt Lab Test Procedure #18-A  
Sample Preparation for Mix Designs  
(DTI Method)**

1. Dry 3-4 pans of coarse aggregate, 3-4 pans of each fine aggregate and one pan of blending sand overnight at 110°C.
2. Remove the dried material from oven, and cool to room temperature.
3. The blending sand shall be screened over the 9.5 mm sieve. No further preparation is needed for the blending sand.
4. If the coarse and the dirty fine aggregate are from the same source, they can be combined and sieved together.
5. Any additional aggregates (i.e., washed sand) should be sieved separately.
6. Separate the material to the following size fractions:

25.0 to 19.0 mm
19.0 to 16.0 mm
16.0 to 12.5 mm
12.5 to 9.5 mm
9.5 to 6.3 mm
6.3 to 4.75 mm
4.75 to 2.36 mm
2.36 mm to 600 μm
600 to 75μm
Passing 75μm

7. Rinse the material retained on the 2.36 mm, 600 μm and 75 μm until the rinse water runs clear.
8. Dry the rinsed material overnight at 110°C.
9. Weigh the appropriate size fractions to obtain the desired batch weight.
  - a. TMRD batch weight (including binder) shall be:
    - i. Base mix minimum 2500g.
    - ii. Seal mixes shall be minimum 1500g.
  - b. Briquette batch weights shall produce a specimen 115 ±5 mm in height by one of the following methods:

- i. Using the consultant's size recommendation.
- ii. Using the formula: Briquette mass =  $(0.96 \times \text{TMRD}) \times 2000$
- iii. Using the formula: Briquette mass =  $(\text{WBRD} \times 1795)$

10. When weighing the size fractions, individual piles for each size will aid in making corrections should a mass be exceeded in error.
11. Dry mix the samples. If individual piles were used in step 10, additional mixing may be required to achieve a homogenous blend.
12. Heat batched aggregate for a minimum 4 hours. The mixing temperature recommended by the binder supplier may be exceeded by 15°C.