

**OKLAHOMA DEPARTMENT OF TRANSPORTATION  
SPECIAL PROVISIONS  
FOR  
PLANT MIX BITUMINOUS BASES AND SURFACES**

These Special Provisions revise, amend, and where in conflict, supersede applicable Subsections of Section 708 of the Standard Specifications for Highway Construction, Edition of 1999.

**708.03. ASPHALT MATERIALS.** *(add the following:)*

- (d) Additional requirements for asphalt cement. PG 64-22 OK, PG 70-28 OK, PG 76-28 OK shall meet the requirements for PG 64-22, PG 70-28, and PG 76-28 as shown in AASHTO MP1. Additionally, they must meet the requirements as shown below.
1. Three grades of asphalt cement will be used as shown below unless otherwise specified on the Plans. For convenience, a higher grade asphalt binder in a type of asphaltic concrete than was indicated on the plans initially may be used, but at no additional cost to the Department.
    - a. PG 64-22 OK - Use in roadways with < 3M ESALs (< 5000 AADT) and with all mixes more than 5 inches (125 mm) below the surface of the pavements in roadways with  $\geq 3M$  ESALs ( $\geq 5000$  AADT).
    - b. PG 70-28 OK - Use with all mixes in the top 5 inches (125 mm) of pavements in roadways with  $\geq 3M$  ESALs ( $\geq 5000$  AADT) (shoulders and temporary detours excepted).
    - c. PG 76-28 OK - Use with all mixes in the top 5 inches (125 mm) of pavements in roadways with  $\geq 10M$  ESALs ( $\geq 10000$  AADT) or in roadways with slow, standing, or turning traffic such as urban intersections with  $\geq 3M$  ESALs ( $\geq 5000$  AADT).
  2. Elastic recovery, ASTM D6084, 77°F (25°C), run on RTFO residue.
    - a. 65% Minimum for PG 70-28 OK
    - b. 75% Minimum for PG 76-28 OK
  3. Separation, ASTM D5976, except test as original binder for  $G^*$  value according to AASHTO TP5. (Separation is defined as 10% or greater difference in  $G^*$  between top and bottom samples.)
  4. AASHTO TP5 -Test Method for Determining the Rheological Properties of Asphalt Binder Using a Dynamic Shear Rheometer (DSR)
    - a. Original DSR  $G^*/\sin(\delta)$  limits 1.00-2.50
    - b. RTFO DSR  $G^*/\sin(\delta)$  limits 2.20-5.50
    - c. PAV DSR ( $G^*$ )\*( $\sin(\delta)$ ) - Run at 77°F (25°C) for PG 64-22 OK, PG 70-28 OK and PG 76-28 OK
  4. Spot Test with Standard Naphtha Solvent, AASHTO T102, Negative, PG 64-22 OK
  5. Flash Point, AASHTO T48, increase from 450°F to 550°F (230°C to 288°C)
  6. Solubility in Trichloroethylene, AASHTO T44 and AASHTO MP1 (99% Soluble Required).
  7. Asphalt Binder Suppliers shall furnish recommended mixing and compaction temperatures for their product to the hot-mix producer. They shall also supply handling requirements.