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base oil for 22 h at 70°C (158°F) and the percentage change in volume calculated. Three specimens shall be run on each test and the average of the three values reported.

26. Procedure

26.1 Follow the procedure of Test Method D 471, using petroleum base oil No. 3.

LOW-TEMPERATURE TEST
SUFFIX F1, -40°C (-40°F)
SUFFIX F2, -55°C (-67°F)
SUFFIX F3, -75°C (-103°F)

27. Apparatus

27.1 The apparatus shall consist of two parallel plates at least 38 mm (1.5 in) in diameter, one of which is movable and the other one stationary, a means of applying a load, and a means of accurately measuring the distance between the parallel plates.

28. Test Specimens

28.1 Standard test specimens shall be used for this test. The thickness shall be measured and stated in the report. The minimum thickness shall be 6.3 mm (1/4 in). Plied-up samples are not satisfactory. The specimen shall be dried in a desiccator for 16 h before testing.

29. Procedure

29.1 Measure the compression deflection of the specimen first at room temperature and record the load in kilopascals (or pounds per square inch) necessary to obtain a 25% deflection. Place the specimen in the cold box for 5 h at the specified temperature, at the end of which time apply the previously determined load as rapidly as possible while the specimens are still in the cold box, and record the deflection within 30 s.

30. Calculation

30.1 Calculate the percentage change in deflection as follows:

$$C = [(D - E)/D] \times 100$$

where: C = percentage change in deflection,
 D = deflection at room temperature, and
 E = deflection at temperature of test.

WATER ABSORPTION TEST

31. Scope

31.1 The water absorption test (see footnote A of Table 2) is applicable to expanded rubbers (closed-cell type). It should not be used on

sponge rubbers or latex foam rubbers (open-cell type) unless they are completely encased in an added skin.

32. Test Specimens

32.1 Test specimens approximately 12.5 mm (1/2 in) in thickness and 2500 mm² (4 in²) in area shall be used for this test. Round specimens are preferable.

33. Procedure

33.1 Submerge specimens in distilled water at room temperature (18 to 35°C, or 65 to 95°F) 50 mm (2 in) below the surface of the water, and reduce the pressure above the water to 17 kPa (2.5 psi absolute) for 3 min. Release the vacuum and allow the specimen to remain submerged for 3 min at atmospheric pressure. Remove the specimen, blot dry, and calculate the percentage change in mass.

FLUID IMMERSION TEST, CLOSED CELL (EXPANDED)

(see Footnote B, Table 2)

34. Apparatus

34.1 Equipment required is analytical balance, tared weighing bottles, screens, ASTM Reference Fuel B, filter paper, 250-cm³ (8-oz) containers.

35. Test Specimens

35.1 The test specimens shall be 25 × 50 × 6 mm (nominally 1 × 2 × 1/4 in). It is preferable that the specimens be cut with clean, square edges.

36. Procedure

36.1 Weigh the specimens to the nearest 0.0001 g. Place a noncorrosive screen having 2-mm openings (10-mesh) on the bottom of the container. Alternatively place specimens of one material and screens into the cans. Use one can per material. Fill the cans with ASTM Reference Fuel B and seal with their lids. Store the cans for 7 days at a temperature of 23 ± 2°C. Remove one specimen at a time from the test fluid. Without squeezing the specimen, place it on top of one sheet of filter paper and immediately place a second sheet of filter paper on top of it. Blot lightly without squeezing, then remove the top filter paper and slide the specimen from the bottom filter paper into a tared weighing bottle. Determine the mass of the specimen to the nearest 0.0001 g.

37. Calculation

37.1 Calculate the percent change in mass.

φ LATEX DIPPED GOODS AND COATINGS FOR AUTOMOTIVE APPLICATIONS—SAE J19 JAN85

SAE Standard

Report of the Nonmetallic Materials Committee, approved September 1960, completely revised November 1980, reaffirmed without change January 1985.
 Conforms with ASTM D 1764.

1. Scope

1.1 These specifications cover dipped goods and coatings made from compounded latex. Products manufactured from this material include

boots, coated clips, coated sponge parts, and coated fabrics for automotive applications.

1.2 The compounds listed in Tables 1 and 2 are grouped into classifi-