Standard Test Method for Scaling Resistance of Concrete Surfaces Exposed to Deicing Chemicals
ASTM C 672/C 672M-12

APPARATUS / SECTION 4

1. Freezer Cabinet/room:

   - Of suitable size capable of lowering the temperature of the specimen to -18 ± 3° C
   - (0 ± 5° F) within 16 to 18 h? …….. ____
   - Capable of maintaining designated temperature with a full load of specimens? ____

2. Molds: Conforming to the requirements of Practice C192/ C 192M? …….... ____
3. Slump Cone: Conforming to the requirements of Test Method C143/C 143M? …. ____
4. Air Meter: Conforming to C192/C 192M? ……. ____
5. Tamping Rod: Conforming to the requirements of Test Method C143/C 143M? .. ____
6. Scales: Conforming the requirements of Practice C 192/C 192M? ……. ____
7. Concrete Mixer: Conforming to the requirements of Practice C192/C 192M? ….. ____

PROPORTIONING AND MIXING / SECTION 5

1. Those factors determining the physical characteristics of the concrete and its ingredients shall be those appropriate for the purposes for which the test is to be made? …….. ____

   Example: Air content
   Cement factor Slump
   Water-to-cement ratio

2. Machine mix and test in conformance with applicable provisions of Practice C192/C 192M? …… ____

SPECIMENS / SECTION 6

1. Specimen Surface Area: Minimum of 0.045 m² (72 in.²) / Depth: Minimum of 75 mm (3.0 in.)? …….. ____

   <u>Fabrication of Specimen</u>

2. Thinly spread a light coat of oil on inside of mould prior to fabrication? …… ____
3. Specimen fabricated accordingly:

   - Mold filled with one layer? ……..... ____
   - Rod one time for each 1400 mm² (2 in.²) / leave slight excess of material after rodding? …… ____
   - Close voids by tapping mold? …….. ____
   - Spade around the periphery with a trowel? …… ____
   - Level the surface with a wood strike-off board? …… ____
   - Use the strike-off board again to finish the surface after the concrete has stopped bleeding - 3 passes using a sawing motion? …… ____
   - Final finish completed by brushing surface with a medium-stiff brush? …….. ____

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SPECIMENS / SECTION 6 (CONTINUED)

4. After the specimens have set, placed a dike about 25 mm (1 in.) wide and 20 mm high (¾ in.) along the surface perimeter? ……. ____

   Note: Refer to Clause 6.2.4 for further details on dike material and fabrication?. _____

5. Test specimens cut from hardened concrete in a structure:

   - Specimen not to be cut or damaged on the surface to be tested? …… ____
   - Specimen not allowed to dry below the moisture condition of the structure from which the sample was taken? …… ____

CURING / SECTION 7

1. Specimen covered with a polyethylene sheet immediately after finishing? ……. ____
2. Sheet not allowed to touch concrete surface? ……... ____
3. Specimens removed from the molds 20 to 24 h (after addition of water to mix during mixing procedure) and placed in moisture room/cabinet as per ASTM C511?. ____
4. Removed specimen from moisture room/cabinet after the desired strength level has been reached? ……... ____
5. Stored in air for 14 days at 23.0 ± 2.0° C (173.5 ± 2.0° F) and 45 to 55 % relative humidity? …….. ____

PROCEDURE / SECTION 9

a. Covered flat surface of specimen with approximately 6 mm of calcium chloride and water solution (100mL of solution contains 4 g of anhydrous calcium chloride)? ……. ____
b. Freeze specimens for 16 to 18 h? ……. ____
c. Removed from freezer and air cured at 23 ± 2.0° C (73.5 ± 3.5° F) at relative humidity of 45 to 55% for 6 to 8h? ……. ____
d. Water added between cycles to maintain depth of solution? ……. ____
e. Cycle repeated daily? ……... ____
f. Flush the surface thoroughly at the end of each 5 cycles? ……... ____

   - Inspect visually? …… ____
   - Continue with test by replacing solution? …….. ____

g. Repeat for at least 50 cycles or more if necessary? …… ____

REPORT / SECTION 10

1. Refer to ASTM C672 / Section 10 …….. ____

COMMENTS:

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