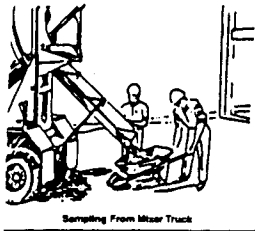


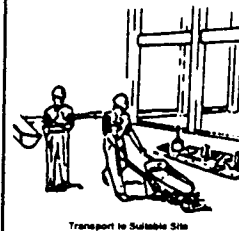
SAMPLING FRESH CONCRETE

ASTM C-172



Sampling From Mixer Truck

Sample the concrete at two or more regularly spaced intervals during discharge of the middle portion of the batch. Do not obtain samples from the very first or last portions of the batch discharged. Samples should be obtained in as short a time as possible,



Transport to Suitable Site

but in no instance shall it exceed fifteen minutes. A sample of at least one cubic foot is required for strength tests. Smaller samples may be used for routine air content and slump tests.

Sample by repeatedly passing a receptacle through the entire discharge stream or by completely diverting the discharge into a sample container (wheelbarrow).

Transport the sample container to where the fresh concrete tests are to be performed or where test specimens are to be molded. The sample shall be **combined** and **remixed** with a shovel the minimum amount necessary to ensure uniformity.

Start tests for slump or air content, or both, within five minutes after obtaining the final portion of the composite sample. Start molding specimens for strength tests within fifteen minutes after fabricating the composite sample.

SLUMP TEST

ASTM C-143



Tamp 25 times into the first & second layer



Tamp 25 times into 3rd Strike off - clear excess



Lift evenly upward

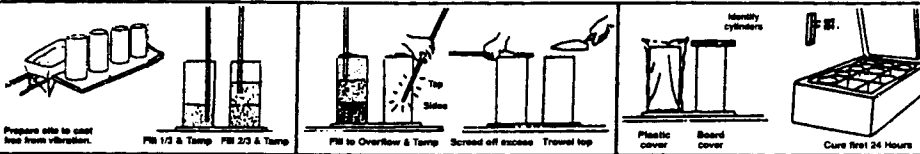
Measure slump

Procedure: Dampen the mold (slump cone) and place it on a flat, moist, nonabsorbent (rigid) surface. It shall be held firmly in place during filling by the operator standing on the two foot pieces. From the sample of concrete obtained in accordance with the instructions above, immediately fill the mold in three layers, each approximately one-third the volume of the mold. Rod each layer with 25 strokes of the tamping rod. Uniformly distribute the strokes over the cross section of each layer. Rod the second layer and the top layer each throughout its depth so that the strokes just penetrate into the underlying layer.

In filling and rodding the top layer, heap the concrete above the mold before rodding is started and keep excess concrete above the top of the mold during the entire rodding operation. After the top layer has been rodded, strike off the surface of the concrete by means of a screeding and rolling motion of the tamping rod. Remove the mold immediately from the concrete by raising it carefully in a vertical direction. Raise the mold a distance of 12 inches in five seconds by a steady upward lift with no lateral or torsional motion. Complete the entire test in two and one-half minutes.

Immediately measure the slump by determining the vertical difference between the top of the mold and the displaced original center of the top surface of the specimen.

MAKING COMPRESSION TEST SPECIMENS ASTM C-31



Mold specimens promptly on a level, rigid, horizontal surface, free from vibration

Procedure: Place the concrete in the molds in three layers of approximately equal volume. Rod each layer with a 5/8" rounded end rod 25 times, distributing the strokes uniformly over the cross section of the mold. When rodding the second and third layer, allow the rod to penetrate about one-half inch into the underlying layer. After each rodding operation, tap the sides of the cylinders lightly to close any voids.

After consolidation, finish the top surfaces by striking them off with the tamping rod or with a trowel or float.

Curing: To prevent evaporation of water from the unhardened concrete, cover the specimens immediately after finishing with a nonabsorbent cover or plate. During the first 24 hours after molding, store all test specimens under conditions that maintain the **temperature immediately adjacent to the specimens in the range of 60 to 80 degrees** and prevent loss of moisture from the specimens.

After the 24 hour on the job curing period, the cylinders shall be transported to the laboratory for testing in a container that will keep them from excessive vibration or bumping so as not to damage the "green specimens".

PROPER FIELD TESTING AND SAMPLING OF READY MIXED CONCRETE



AGGREGATE & READY MIX
ASSOCIATION OF MINNESOTA

These procedures can not be described completely with this guide, only as a reminder of the fundamentals necessary for quality control. Refer to the appropriate ASTM standard for complete reference.

OTHER APPLICABLE TESTS

ASTM C-231 AIR CONTENT: PRESSURE METHOD	ASTM C-173 AIR CONTENT: VOLUMETRIC METHOD	ASTM C-138 UNIT WEIGHT: WEIGHT OF FRESH CONCRETE TO DETERMINE YIELD.	ASTM C-1064 TEMPERATURE
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Decal can be cut along borders for dashboards or restricted spaces.