

# **Basic Guides for Winter Concreting**

## **Winter Concreting Tips**

1. Plan in advance. Have equipment and materials ready before cold weather hits. Be set with heaters, insulating materials and enclosures.
2. Use air-entrained concrete.
3. Don't place concrete on a frozen subbase. Be sure that all ice, snow and frost are removed from surfaces the concrete will touch.
4. For durability, the fresh concrete should be kept at 55°F. or higher for thin sections. Consider using high-early strength concrete.
5. Cure concrete to prevent loss of moisture. When heated enclosures are used, provide extra moisture by sprinkling or use steam for heating. Vent salamanders and other fuel-burning heaters. Concrete should be allowed to cool slowly to prevent thermal cracking.
6. Do not use "antifreeze" compounds in an attempt to lower the freezing point of concrete.
7. Leave the forms in place as long as the job schedules permit. Reshoring is necessary until concrete reaches required design strength.
8. Keep job condition records. Record, at least twice daily: weather conditions, temperatures of the air and the concrete surface.
9. If the concrete is to cure below 60°F, water reducers or retarders may prolong the set.
10. The use of calcium chloride or admixtures containing soluble chlorides is not recommended under certain conditions:
  - In concrete containing aluminum or prestressing strand because of corrosion.
  - Where discoloration of troweled surfaces cannot be tolerated.
  - Where galvanized steel will remain in permanent contact with the concrete.
  - In concrete subjected to alkali-aggregate reaction or exposed to soils or water containing sulfates.
11. Concrete placed in late fall or winter should not be exposed to salts applied as deicers or salts which drip from parked vehicles.