



Building and Zoning Department

75 E Main Street
PO Box 417
Castle Dale, Utah 84513

Phone: 435.381.3555
Fax: 435.381.5644

COLD WEATHER CONCRETE REQUIREMENTS

Low air temperatures during the curing of concrete and masonry work can affect their chrematistics both temporarily and permanently. All types of concrete cure slower in cold temperatures and thus develop their ultimate design strengths over a longer period of time than would be normal for tempters above 50 degrees F. Concrete that is exposed to temperatures less than 32 degrees F without protection may actually freeze. Depending on how early in the curing process the freezing occurs, **permanent damage and reduction in strength** may take place. In most cases, however, upon warming the curing will continue and the design strengths **may** eventually be reached, but in most cases durability under stress will be adversely affected.

Based on these facts and reference' listed above, the County of the Emery County Building Department has determined that the **following requirements must be met** for all un-engineered footings and foundations poured during cold weather. These requirements **are not adequate** for other types of pours such as structural slabs, walls, and beams or beams or foundations that will be immediately loaded.

1. **Rebar, forms, fillers and ground against which concrete will be poured shall be free from ice, snow, or frost.**
2. **Wind protection is required when air temperatures are below 35 degrees F. Otherwise, rapid cooling takes place.**
3. **During freezing weather, pours should be scheduled for mornings in order to avoid immediate nighttime low temperatures.**

REQUIRED PROTECTION

32 – 25 DEGREES: Weather resistive membrane for three days minimum.

25–20 DEGREES: Insulation blankets or insulation coverage with a weather resistive membrane for a minimum of three days.

BELOW 20 DEGREES: Provide supplemental heat under weather resistive membrane for three days minimum.

NOTE: ALL PROTECTION EQUIPMENT MUST BE ON SITE AT THE TIME OF THE INSPECTION