



Cold Weather Concrete Rule of Thumb – when should we NOT pour concrete (per ACI 306R-2016):

Note that I do not recommend pouring in temperatures below 15°F in most circumstances...regardless what the table below indicates.

Pouring typical concrete – with blankets and/or in a heated environment (heated from below should look at the outside temperatures for evaluating)

The temperature of concrete at the site when the temperature is between 0°F - 30°F = 65°F when concrete is less than 12" thick
 The temperature of concrete at the site when the temperature is between 0°F - 30°F = 60°F when concrete is less than 12-36" thick

Using Type I cement – minimum temperature to be maintained for 7 days:

Cement content = 300 lb/yd³

Slab or wall thickness: 6" max thickness

Use of R-2 Blankets: 48°F Use of R-4 Blankets: 46°F Use of R-6 Blankets: 43°F Use of R-8 Blankets: 40°F

Slab or wall thickness: 12" max thickness

Use of R-2 Blankets: 45°F Use of R-4 Blankets: 39°F Use of R-6 Blankets: 32°F Use of R-8 Blankets: 25°F

Slab or wall thickness: 18" max thickness

Use of R-2 Blankets: 41°F Use of R-4 Blankets: 31°F Use of R-6 Blankets: 21°F Use of R-8 Blankets: 11°F

Cement content = 400 lb/yd³

Slab or wall thickness: 6" max thickness

Use of R-2 Blankets: 47°F Use of R-4 Blankets: 44°F Use of R-6 Blankets: 40°F Use of R-8 Blankets: 36°F

Slab or wall thickness: 12" max thickness

Use of R-2 Blankets: 43°F Use of R-4 Blankets: 35°F Use of R-6 Blankets: 26°F Use of R-8 Blankets: 17°F

Slab or wall thickness: 18" max thickness

Use of R-2 Blankets: 39°F Use of R-4 Blankets: 25°F Use of R-6 Blankets: 11°F Use of R-8 Blankets: -2°F

Cement content = 500 lb/yd³

Slab or wall thickness: 6" max thickness

Use of R-2 Blankets: 47°F Use of R-4 Blankets: 43°F Use of R-6 Blankets: 38°F Use of R-8 Blankets: 22°F

Slab or wall thickness: 12" max thickness

Use of R-2 Blankets: 42°F Use of R-4 Blankets: 31°F Use of R-6 Blankets: 20°F Use of R-8 Blankets: 9°F

Slab or wall thickness: 18" max thickness

Use of R-2 Blankets: 36°F Use of R-4 Blankets: 19°F Use of R-6 Blankets: 2°F Use of R-8 Blankets: -15°F

Cement content = 600 lb/yd³

Slab or wall thickness: 6" max thickness

Use of R-2 Blankets: 46°F Use of R-4 Blankets: 41°F Use of R-6 Blankets: 35°F Use of R-8 Blankets: 29°F

Slab or wall thickness: 12" max thickness

Use of R-2 Blankets: 40°F Use of R-4 Blankets: 28°F Use of R-6 Blankets: 14°F Use of R-8 Blankets: 0°F

Slab or wall thickness: 18" max thickness

Use of R-2 Blankets: 33°F Use of R-4 Blankets: 13°F Use of R-6 Blankets: -7°F Use of R-8 Blankets: -29°F

Using Type III cement – minimum temperature to be maintained for 3 days:

Cement content = 300 lb/yd³

Slab or wall thickness: 6" max thickness

Use of R-2 Blankets: 46°F Use of R-4 Blankets: 41°F Use of R-6 Blankets: 36°F Use of R-8 Blankets: 32°F

Slab or wall thickness: 12" max thickness

Use of R-2 Blankets: 41°F Use of R-4 Blankets: 31°F Use of R-6 Blankets: 21°F Use of R-8 Blankets: 11°F

Slab or wall thickness: 18" max thickness

Use of R-2 Blankets: 36°F Use of R-4 Blankets: 21°F Use of R-6 Blankets: 8°F Use of R-8 Blankets: -5°F



Cement content = 400 lb/yd³

Slab or wall thickness: 6" max thickness

Use of R-2 Blankets: 44°F Use of R-4 Blankets: 38°F Use of R-6 Blankets: 32°F Use of R-8 Blankets: 26°F

Slab or wall thickness: 12" max thickness

Use of R-2 Blankets: 37°F Use of R-4 Blankets: 24°F Use of R-6 Blankets: 12°F Use of R-8 Blankets: 0°F

Slab or wall thickness: 18" max thickness

Use of R-2 Blankets: 30°F Use of R-4 Blankets: 12°F Use of R-6 Blankets: -6°F Use of R-8 Blankets: -24°F

Cement content = 500 lb/yd³

Slab or wall thickness: 6" max thickness

Use of R-2 Blankets: 43°F Use of R-4 Blankets: 35°F Use of R-6 Blankets: 28°F Use of R-8 Blankets: 20°F

Slab or wall thickness: 12" max thickness

Use of R-2 Blankets: 34°F Use of R-4 Blankets: 18°F Use of R-6 Blankets: 3°F Use of R-8 Blankets: -12°F

Slab or wall thickness: 18" max thickness

Use of R-2 Blankets: 24°F Use of R-4 Blankets: 2°F Use of R-6 Blankets: -21°F Use of R-8 Blankets: -44°F

Cement content = 600 lb/yd³

Slab or wall thickness: 6" max thickness

Use of R-2 Blankets: 41°F Use of R-4 Blankets: 32°F Use of R-6 Blankets: 23°F Use of R-8 Blankets: 14°F

Slab or wall thickness: 12" max thickness

Use of R-2 Blankets: 31°F Use of R-4 Blankets: 12°F Use of R-6 Blankets: -7°F Use of R-8 Blankets: -26°F

Slab or wall thickness: 18" max thickness

Use of R-2 Blankets: 21°F Use of R-4 Blankets: 2°F Use of R-6 Blankets: -35°F Use of R-8 Blankets: -63°F

Pouring high-strength concrete structures
(our typical 3 or 4 day pour schedule concrete) SPG Concrete

The temperature of concrete at the site when the temperature is between 0°F - 30°F = 65°F when concrete is less than 12" thick
 The temperature of concrete at the site when the temperature is between 0°F - 30°F = 60°F when concrete is less than 12-36" thick

If the concrete thickness is less than 12", the temperature cannot drop more than 50°F less than the initial temperature, we should not be pouring concrete.

If the concrete thickness is 12" to 36", the temperature cannot drop more than 40°F less than the initial temperature, we should not be pouring concrete.

<p>If the concrete is less than 12" thick and the temperature is <u>15°F with-in 24 hours...</u> DO NOT POUR – Review overnight temperatures</p> <p>If the concrete is 12" to 36" thick and the temperature is <u>20°F with-in 24 hours...</u> DO NOT POUR – Review overnight temperatures</p>
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