Curing Concept

Problem:

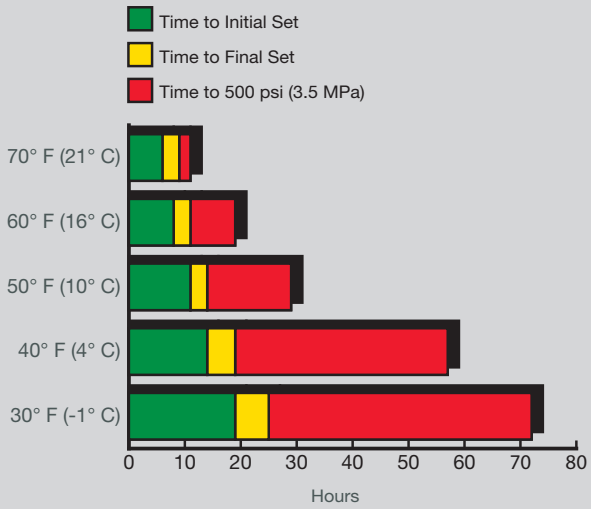
Cold temperatures slow the speed of concrete curing, causing cost increases and schedule delays.

Best Solution:

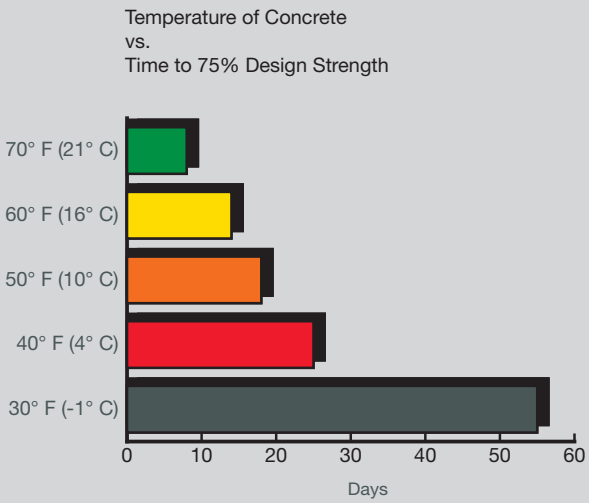
Use Wacker Neuson hydronic heaters to accelerate the cure rate by raising the concrete temperature to an ideal 65-75°F (18-24°C), greatly reducing costs and delays.

How temperature affects the concrete curing process:

Temperature of concrete vs. time



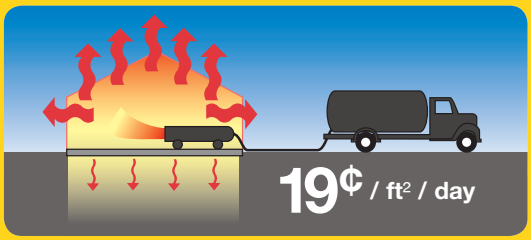
Long-term strength development



CURING

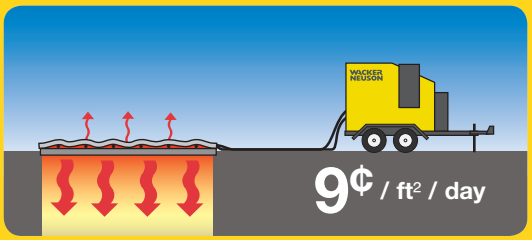
Curing cost per square foot of concrete

Traditional method



- Cost to build enclosure
- Uneven curing, curling and chalking
- Noxious fumes with open flame hazzard
- Huge fuel bills

Hydronic heat

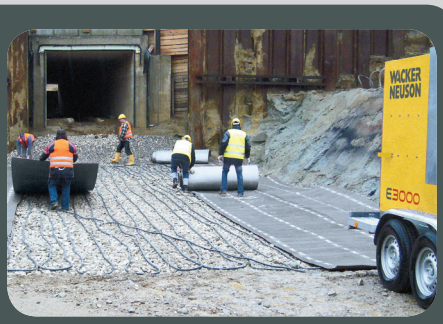


- No enclosure to build with easy set up
- Uniform curing
- No open flame or noxious fumes
- Easy temperature control result in fuel cost less than $50 per day

Figures are based on average rates/costs. Actual rates/costs incurred may vary depending upon application and geographical location.

Slab on Grade

1. Preheat ground – hoses on ground preheat to approximately 70°F (21°C)
2. Remove insulation* and hoses
3. Place concrete 75°F (24°C) on warm ground
4. After final set, place vapor barrier, hoses, and insulation* on top of slab
5. Hydronic heater maintains slab at 65°-75°F (18°-24°C)



Poured Walls

1. Attach hoses to form framework
2. Cover with insulation* and preheat
3. Pour concrete 75°F (24°C) into forms
4. Hydronic heater raises temperature of air space between forms and insulation*, preventing heat of hydration from escaping
5. Hydronic heater maintains 65°-75°F (18°-24°C) concrete for curing period

Elevated Slab

1. Once concrete has taken final set, place vapor barrier (or wet cure blanket), hoses, and insulation* on top of slab
2. On-board positive displacement pumps provide superior flow rate, even when pumping fluid 250 feet (76m) above the hydronic heater
3. Hydronic heater maintains 65°-75°F (18°-24°C) concrete for curing period

Above curing applications are general guidelines. Project engineer must determine specific requirements for all curing applications.
*To ensure even heat distribution for curing applications, use insulation blankets, available from your Wacker Neuson distributor.

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