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# **Cooling and Insulating Systems for Mass Concrete**

Reported by ACI Committee 207



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## Cooling and Insulating Systems for Mass Concrete

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*The need to control volume change induced primarily by temperature change in mass concrete often requires cooling and insulating systems. This report reviews precooling, postcooling, and insulating systems. A simplified method for computing the temperature of freshly mixed concrete cooled by various systems is also presented.*

**Keywords:** cement content; coarse aggregate; creep; formwork; heat of hydration; mass concrete; modulus of elasticity; precooling; postcooling; pozzolan; restraint; specific heat; strain; stress; temperature rise; tensile strength; thermal conductivity; thermal diffusivity; thermal expansion; thermal gradient; thermal shock.

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