

FIRE RESISTANCE OF PRECAST CONCRETE STRUCTURES

Precast concrete provides inherent fire protection and resiliency. Concrete does not combust; therefore, it helps to contain fires in a controlled space.

ATTRIBUTES AND BENEFITS OF PRECAST CONCRETE

- Minimizes fire risk at the lowest initial and life-cycle cost vs. conventional construction
- Requires minimal maintenance
- Precast concrete provides passive fire protection, which means it does not rely on another system (like sprinklers) or a someone to take action.
- Precast concrete does not emit any toxic fumes when affected by fire.
- Slow rate of heat transfer
- Ensures structural integrity and provides compartmentation
- Provides one, two, three or four-hour fire separation
- Rational design methods are available to calculate fire resistance
- Provides protection to human life and occupant's possessions
- Fire endurance of concrete can be determined by its thickness and type of aggregate
- Concrete that endures a fire can often be reused when the building is retrofitted
- Confines the fire to its place of origin and prevents it from spreading
- Reduces the fuel content of the building with noncombustible precast concrete vs. conventional combustible construction

The new PCI Specification for Fire Resistance of Precast, Prestressed Concrete, PCI 124-18 will be referenced in the 2021 International Building Code.



**WOOD IS
FLAMMABLE
CONCRETE
IS NOT.**

*It just simply
does not make
sense to use
flammable building
materials to build
structures where people will
work, live, and sleep.*