



Our precast concrete buildings are virtually indestructible, but vandals, weather, and the fundamental characteristics of concrete, can still gradually result in damage to the structure. Small cracks in panels typically will not affect the building's structural stability. This document contains the best practices for repairing cracks in concrete and coatings and the suggested materials that should be used in the repairs.

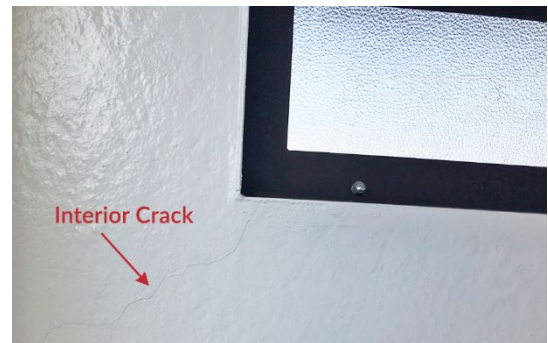
Cracks can typically be found in panels at sharp angles near doors and windows, and at panel connection joints. Some

panels can have full-length, full-depth cracks across the roof and wall sections, while floor cracks are somewhat less common.

### How to Repair Interior and Exterior Cracks

Over time concrete will crack. These cracks are not structural and can be sealed with caulk and painted over.

- Clean foreign material from the surface of the crack with a damp cloth and allow adequate time for the surface to dry.
- Rough up the area along the crack, including any paint edges and exposed concrete with 100- to 125-grit sandpaper. *Wire brushes are not recommended because they may remove too much paint.*
- Use a dry paintbrush with stiff bristles to remove loose material inside the crack.
- Wipe the area around the crack with a damp cloth to remove fine particulate matter on the surface. Allow time for the surface to dry completely.
- Caulk the cracked area with an acrylic latex caulk plus silicone in white (interior caulk 3M white; exterior caulk 3M gray). Cut the tip of the tube of caulk so it has a  $\frac{1}{16}$  to  $\frac{1}{8}$ " opening. A clean 45° angle cut will help ensure an even application of caulk. Begin caulking at the point that is the farthest from you and gently squeeze the caulk gun's handle until caulk appears in the crack. Apply just enough caulk to fill the crack and move the tip of the caulk tube toward you until you have applied caulk along the entire length of the crack. Avoid applying more caulk than needed to fill the crack.
- As soon as you have filled the crack, smooth out the caulk. Place your thumb squarely on the caulk that is farthest from you and apply gentle pressure in a smooth, even motion down the entire length of the crack. Whenever your thumb has too much caulk on it or is pushing caulk outside the crack area, stop and clean your thumb with a damp rag. Clean excess caulk from the surface. If you use a damp rag, be careful not to let it touch the crack, because the rag will pull caulk out, leaving a depression.



- The caulk will dry (become tacky) in about 30 minutes depending on the weather and the type of caulk. After the manufacturer's approved drying (tack up) time has passed, check to make sure that the entire crack has been filled to the surface. If filled, the caulk can be painted. If not, fill areas that are not level with the surface. Allow any new application of caulk to dry for at least 30 minutes before painting.

### How to Repair Coatings

Coatings commonly peel and crack around panel connection joints, under roof eaves, at sealed joints, and around areas of cracked concrete. Failed coatings are most likely to have been caused by water migrating through cracks in the panels. A white, chalky substance found on many of the cracked paint surfaces is caused by efflorescence, crystalline salt that is deposited on the surface. Efflorescence is harmless, but unattractive.

Follow the manufacturer's recommendations for repair or recoating and the manufacturer's specific safety precautions.



### Surface Preparation

- Remove any loose coating, flaking concrete, or other foreign materials with a putty knife or scraper.
- Clean areas to be coated with a cleaner recommended by the coating manufacturer or another approved cleaner.
- Thoroughly rinse all cleansed areas with freshwater and allow them to dry to the touch (usually between 2-4 hours).
- Repair damaged concrete with an approved patching material following the manufacturer's instructions and allow the product to cure for at least 24 hours.
- Repair all cracked areas as described earlier.

### How to Patch Exterior Chips in the Concrete

Chips may be filled using a latex grout mix. We recommend Burke-Krete with latex mix. Once mixed to compatible consistency, apply with a margin trowel then use the edge of the trowel to cut in grooves of barnwood or straightedge. Once dry, finish by re-staining and sealing with the appropriate color of stain.

### How to Repair Cracked or Peeled Interior Paint

If the paint cracks or peels, sand off all the old paint and repaint the area. We offer a paint "Touch-up Kit" (<https://cxtincparts.com/>) that includes all the products you will need to repaint the interior and exterior of your facility.

### How to Remove Interior/ Exterior Graffiti

Graffiti can be easily removed with Xylene solvent. Pour some Xylene on a cloth and wipe off the graffiti. If this does not work, use the same paint that was initially used on the interior to cover it up. CXT offers a paint "Touch-up Kit" that includes all the products you will need to touch-up interior and exterior graffiti.