

## Coating Your Floor in Cold Weather Conditions

Cold weather conditions such as low humidity and cold temperatures can have a dramatic effect on coating performance.

### Cure Times

**Low Humidity** slows the curing process of moisture cure products.

#### **Solution:**

1. Use a Fast Cure Additive when applying non-pigmented urethane topcoats.
2. When cure times are less than optimal the following steps can increase the level of humidity:
  - Apply water onto the floor areas adjacent to the areas you are coating and allowing it to evaporate.
  - A fan can be added to aid evaporation of the water. Position the fan so it is not blowing directly over the coating.

**Cold Temperatures** inhibit the evaporation of solvents and water thus slowing the cure times on urethanes. They also affect the cure of epoxies by slowing the chemical reaction between the resin and the catalyst.

#### **Solution:**

1. Verify that ambient and floor temperatures are at recommended levels before application begins.
2. Maintain proper ventilation.
3. At lower temperatures (65°F-70°F) use Tennant Eco-RCE™ to decrease cure times.
4. Increase floor and ambient temperatures.
5. Allow product temperature to stabilize at room temperature before application begins.

### Out-gassing

**Cold fronts or Storms** will cause the dissolved oxygen that would normally cure in the coating to be quickly forced out. A barometric pressure change can cause out-gassing bubbles in the coating.

#### **Solution:**

1. Check the local forecast.
2. Postpone coating the floor until the storm passes.

**Radiant heat** increases vapor emissions (air bubbles) day and night where in the summer season the sun would only cause out-gassing during the day.

#### **Solution;**

1. Turn down the heat an hour before coating and turn up the heat an hour after coating.
2. Large gas heaters with powerful blowers should be temporarily pointed away from the floor while coating, or even turned off. The warm air can flash-dry urethanes and cause solvent entrapment as well as air bubbles.