



# COMMERCIAL/INDUSTRIAL INFORMATION BULLETIN

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## CONCRETE DECKS

IKO is often asked “How long should I wait before I can prime and torch a modified bitumen membrane to a poured concrete deck?”. Although we are a manufacturer of roofing membranes only, and have no expertise in concrete technology, we have obtained some general information from a cement supplier which is summarized here.

Immediately after concrete sets, (usually 4 – 6 hours after placing), the pores are completely saturated with water. Concrete is normally mixed with a lot more water than is required for complete hydration of the cement. This extra water is required to make the mix workable and placeable.

After approximately 24 hours, depending on the temperature and curing procedures, the pores will still be saturated, although hydration will have produced substantial strength.

Basic curing (moist curing) required by CSA A23.1 is three days or until 35% of the specified 28-day strength is reached. For outdoor, or more severe exposures, CSA requires seven days or 70% of specified 28-day strength.

It would take several days of air drying after moist curing for the moisture content in the surface of concrete to drop appreciably. It takes one year for approximately 90% of the total drying shrinkage of concrete to take place. In one month only about 1/3rd of the total shrinkage has occurred.

If a membrane requires the pores to not be saturated, it is important that the time required for the pores to dry sufficiently is allowed before application.

At room temperature, concrete typically achieves 1/3rd at one day, 1/2 at three days and 2/3 at seven days of the expected 28-day strengths.

As a general rule, the concrete deck should be left for a minimum of seven days to ensure the bulk of the setting has occurred. Sometimes, the degree of concrete set and cure can also be estimated by looking for a hardened, whitish surface on the poured concrete. This can sometimes give an indication of the degree of dryness and curing which has occurred.

Whenever there are questions as to the degree of readiness of a poured concrete deck, the roofing contractor should consult with the concrete deck supplier/installer.

For additional information on any of IKO's products or application requirements, visit us on the web at [www.iko.com](http://www.iko.com) (North America), or contact us in Canada/United States at 1-800-361-5836 (press “1” for English and then “2” for our Technical Support Department).

