A&I Coatings FAQ Sheet No. 9

Concrete Preparation for Painting

1. **Facts on concrete.**
   Excessive moisture and inadequate surface preparation are two major pitfalls that need to be addressed to achieve successful and lasting coatings application.
   The source of moisture can be found within the concrete, or it can enter from an external source. Newly poured concrete should cure for 30 days before coating application. This allows the moisture to fall to an acceptable level.
2. **How is moisture measured?**
   The plastic sheet test is simple and basic. A small plastic sheet is taped on the surface for 24 hours and any excess moisture will condense under the plastic.
   A moisture meter also can be used, and the best is one that measures not only the moisture percentage deep in the concrete, but has also a humidity box. It is placed on the concrete for a period and the hydrostatic humidity is measured, that is the moisture that may also be coming out of the concrete from underneath.
   Moisture content should be lower that 5.5%.
3. **What is the best way to prepare a concrete floor for painting?**
   The important thing about a floor is that it is clean, dry, and etched. In the last 15 years, diamond grinding has become much more cost effective and therefore popular. We see this as the ideal way to prepare a floor, although grinding marks need to be minimal or they are likely to show in the finish coat.
4. **Is acid etching suitable?**
   Some contractors still like to acid etch. If a floor has a release agent of some sort on it, acid washing is unlikely to be adequate.
   Acid etching requires the addition of 10% hydrochloric acid to water using all necessary personal protective equipment. This is applied to the concrete causing a fizzing reaction. The products and salts left from acid etching must then be carefully rinsed away using fresh water.

5. **Is a hot, high pressure water blast suitable for the preparation of older uncoated concrete?**
   We see grinding as first choice then acid etching as second choice and water blasting only as a last resort. If water blasting is the only option we recommend the water droplet test to be done once the concrete has dried from water blasting. This test is where a few

drops of water are placed on the concrete and if the water soaks into the concrete then the concrete should be fine for coating but if the water droplets bead on the surface of the concrete then the concrete needs to be treated further. **If oil is present in the concrete, preparation should be especially thorough,** and A&I Coatings technical staff are available to advise in this situation. They have access to products that will force the oil out of the concrete.