A&I Coatings FAQ Sheet No. 20

Water Borne Coating Application

Facts on Water borne Coating Application.
Everyone connected with the coating industry knows that it there are numerous pitfalls for the applicator. This applies also to water borne coatings. These must be overcome as WB coatings will become more common. We summarize some points as follows…

1. **Mixing water borne coatings**

WB Coatings must be power stirred very thoroughly to ensure dispersion and consistency. The Pack B must be mixed with the Pack A thoroughly before adding any water to thin.

2. **Thinning water borne coatings.**

Water is only added to help get an even finish, as solvent is added to a solvent borne coating for the same reason. It then evaporates out of the film and leaves a solid even coating.

3. **Influence of weather on water borne coatings.**

The ambient temperature should be above 10° C and at least 3°C above dew point. Air movement will help lower the humidity and thus facilitate water evaporation. *Another thing to remember is that in winter cold steel will increase the chance of the paint running so application should be with care.* Once the water is out of the film, cure is by chemical reaction exactly as for solvent borne coatings, and will be equivalent in time to a solvent borne coating of the same family e.g. epoxy, polyurethane etc. Hardness for transport is very similar to solvent borne coatings.

4. **Spray application**

It is especially important with water borne coatings to put a tack or mist coat on first before putting the flow coats on. This will help the paint to hang up and also avoid bubbles. It is also important to wait until the water is evaporated out of the coating before recoating to achieve build. Experience will help with this.

5. Potlife

It is critical to go by the potlife on the Data Sheet as a water borne coating doesn't go hard when at end or potlife like a solvent borne one does, and yet it may have come to the complete end of its useful life as far as film properties go.

6. Training and familiarization

We recommend the applicator do a full size trial member to get the feel of application characteristics, and then get approval from the relevant body prior to doing a production run.

7. Health and Safety

Even though a waterborne coating doesn't have the smell of a solventborne, it is important to still wear PPE equipment as recommended on the SDS.

8. Commitment and Assurance

A&I Coatings has put extensive Research and Development into water borne coatings over the past few years. We have achieved excellent results. We are absolutely committed to overcoming any difficulty whatever and will go to great lengths to help you the applicator win also.