



Dry Fog Application Guidelines

Under normal conditions waterborne as well as solventborne dry fog coatings provide good dry fog or dry fall properties. However, the dry time and dry fog characteristics of a waterborne dry fog coating, regardless of the supplier, can be adversely affected by job conditions such as high relative humidity, low temperature or inadequate ventilation levels. The following is a discussion of these factors.

Factors Influencing Dry Fog Characteristics

Percent Relative Humidity

Percent Relative Humidity is the amount of water in the air at a particular temperature. During application and dry of a waterborne product, water is being added to the air. This water, when combined with natural humidity, can drive job conditions to saturation (100% Relative Humidity). At or near 100% R.H. water will not evaporate and waterborne coatings will not dry. Saturation can occur quickly when the natural relative humidity is already high. At the beginning of a job, waterborne dry fog properties may be acceptable, but after a significant volume of coating has been applied, the air may become saturated with water and cause the product to lose its fast-drying property. This situation is more common on poorly ventilated large jobs where large amounts of material are continuously applied.

Temperature

At different temperatures air can hold different amounts of water vapor. Warm air can hold more water than cool air. Under cool conditions application of a waterborne dry fog will saturate the air faster than under warm conditions.

Ventilation Levels

Ventilation can be effectively used to remove the water contributed by the coating and prevent the air from becoming saturated. The level of ventilation required depends on the natural relative humidity, temperature, coating application rate, film thickness, and ceiling height. Any temperature difference between interior and exterior conditions must also be taken into account. It should also be noted that water vapor is lighter than air and will concentrate at the ceiling. The ventilation pattern must take this into account.

Corrective Action

If excessive humidity or saturation conditions occur, slowing the application rate may drop the humidity below saturation level. Also, moist air can be exhausted by fans, blowers, air movers, or dehumidifiers and the temperature can be increased, if necessary, with space heaters. Excessive air movement should be controlled, however, to minimize stirring up dirt or debris that will be blown onto the wet paint film. If job conditions do not allow humidity levels to be effectively reduced, steps should be taken to protect floors and equipment.