

## High Temperature and Humidity Alert!

### **STORAGE / SHELF LIFE: (EPIC, IMPACT, I-TECH)**

- Keep all water-based products in a cool, temperature-controlled environment **at all times**.

- Water-based urethanes must be stored between 59°-77°F (15°-25°C) **at all times** to avoid potential evaporation and/or degradation of the product.

- When receiving a shipment from UDT, **immediately** transfer all water-based coatings into a room that is consistently between 59°-77°F (15°-25°C).

### **MIXING PROCEDURES: (EPIC, IMPACT, I-TECH)**

- All water-based products must be between 59°-77°F prior to starting the mixing process.

- Precisely follow all mixing instructions on Part A labels **including stir and dwell times**. (*Stir Part A/A1 and B together for a full 90 seconds. Let the mixture sit/dwell for 1 minute. Add Part C or water slowly while stirring.*)

- If the product has visible chunks after adding water or Part C, discard it. Start with a new kit and follow the mixing instructions carefully and precisely.

- Always use a scale when mixing small/partial quantities. Mixing small/partial quantities by volume is not ever recommended.

### **AIR TEMPERATURE AND RELATIVE HUMIDITY:**

- Coatings **SHALL NOT** be applied when the air temperature is above 90°F (32°C) and/or the humidity is above 70%.

- Adjustments to the temperature or relative humidity may need to be made prior to beginning the coating process.

- For best results, **use fans and/or dehumidifiers** when applying coatings in moist or humid environments.

**NOTE:** Even though a building may be climate controlled, check the temperature and humidity and take appropriate action. Beware - some facilities have automatic thermostats that are turned down or even turned off in the evening hours. This may dramatically affect the temperature and humidity in the building.

Signs of excess humidity and no airflow:

- Inconsistent sheen / gloss
- Hazy / cloudy final appearance
- Floors stay tacky beyond the normal dry time

## **FLOOR TEMPERATURE AND DEW POINT:**

- An industry rule of thumb states; Coatings SHALL NOT be applied when the substrate (floor) temperature is within 5° of the dew point.

**DEW POINT DEFINITION:** The dew point is the temperature at which moisture will condense on surfaces at a given air temperature and % relative humidity. As it relates to interior moisture condensation, the dew point is a crucial factor for ensuring that proper conditions exist before and during substrate testing, preparations, and floor covering installations.

## **TESTING DEVICES:**

- UDT recommends that every crew has the following two types of tools.  
(If unavailable, use the *DEW POINT CALCULATION CHART on page 3*).

The following tools are widely available (Amazon.com links provided):

### **Psychrometer \$25-\$30**

**(for air temperature, humidity and dew point readings)**

[https://www.amazon.com/Sanrui-Psychrometer-Thermo-Hygrometer-Temperature-Humidity/dp/B01FGV28E8/ref=sr\\_1\\_6?s=home-garden&ie=UTF8&qid=1497971832&sr=1-6&keywords=temperature+and+humidity+meter](https://www.amazon.com/Sanrui-Psychrometer-Thermo-Hygrometer-Temperature-Humidity/dp/B01FGV28E8/ref=sr_1_6?s=home-garden&ie=UTF8&qid=1497971832&sr=1-6&keywords=temperature+and+humidity+meter)

### **Infrared Thermometer \$15-\$30**

**(for floor temperature readings)**

[https://www.amazon.com/dp/B00837ZGRY/ref=dp\\_cerb\\_2](https://www.amazon.com/dp/B00837ZGRY/ref=dp_cerb_2)

**HOW TO CALCULATE THE DEW POINT** (if Psychrometer is unavailable): Using the chart below, start at the current % Relative Humidity (green) column on the left. Then scroll across the current Ambient Air Temperature (blue) row at the top. Find the number where these two values intersect. This number is the dew point.

### DEW POINT CALCULATION CHART FOR COATINGS APPLICATIONS

Ambient Air Temperature (measured in °F)

	40°F	45°F	50°F	55°F	60°F	65°F	70°F	75°F	80°F	85°F	90°F
90%	37	42	46	52	57	62	67	72	77	81	87
85%	35	40	45	50	55	60	65	70	75	80	84
80%	34	39	44	49	54	59	63	68	73	78	82
75%	32	37	42	47	52	57	62	66	71	76	80
70%	31	35	40	45	50	55	60	64	68	74	78
65%	30	33	38	43	47	53	57	62	66	72	76
60%	27	32	36	40	45	50	55	60	64	69	73
55%	26	30	34	38	43	48	53	58	61	67	70
50%		28	32	36	40	45	50	55	59	64	67
45%		26	30	33	37	42	47	52	56	61	64
40%		21	27	32	35	40	43	49	52	58	61
35%			24	28	31	36	40	45	48	54	57
30%				25	28	32	36	41	44	50	52

**Example 1 - DO NOT COAT:** The relative humidity is 50% and the ambient air temperature is 80°F, so the dew point is 59°F. The substrate temperature is 58°F. Since the substrate temperature is 1° below the dew point, the coatings installation should not begin until the dew point drops. **Remember - Coatings SHALL NOT be applied when the substrate (floor) temperature is within 5° of the dew point.**

**Example 2 – OK TO COAT:** The relative humidity is 40% and the ambient air temperature is 75°F, so the dew point is 49°F. The substrate temperature is 55°F. Since the substrate temperature is 6° above the dew point, the coatings installation may begin.

### END TECHNICAL BULLETIN