

DEC-TECHNICAL BULLETIN



Bulletin No: TB020 Version: v.01 Effective Date: 2021-04-16

Subject: COLD WEATHER APPLICATION

- Product
 Pre-Installation
 Installation
 Repair
 Maintenance
 Other
 External
 Internal Use
 Internal Use Only

Target Audience: All
Reason for Bulletin: To provide clarity on cold weather deck preparation and considerations

Details:
 As the summer construction season winds to a close, so do favorable conditions. With the change in ambient conditions, installation practice needs to be altered to ensure the best possible performance of your Dec-Tec system. This bulletin will provide considerations and recommendations on cold weather deck preparation.
 Note: For adhesive recommendations and consideration, refer to **TB021 – COLD WEATHER APPLICATION OF DEC-TEC ADHESIVE**

Substrate
 Substrate preparation is key. All successful installation begin with a properly installed and prepared substrate. Ideal moisture content (MC) of substrate / plywood at the time of installation is 9% to 14%. Make sure the substrate is at a minimum of 50°F/10°C. Check the weather forecast for the next 24 hours to ensure appropriate weather conditions for substrate preparation. Refer to **CM-001 Basic Installation Guide – Wood Substrate V.03** and follow recommended installation practices.

Please note: Substrate temperature is not the same as ambient temperature.
 Ex: Substrate could take a thermal reading of -5°C but ambient (outside air) conditions could be 5°C.

Dew point
 Dew point is the temperature below which the water vapor in a volume of humid air, at a given constant barometric pressure will condense into liquid water at the same rate at which it evaporates. Condensed water is called dew when it forms on a solid surface. The dew point is water-to-air saturation temperature. Ensure the dew point is a minimum of 5°F/3°C below the surface temperature to avoid the buildup of moisture on the surface. Follow the table below to find the dew point at different temperature and relative humidity.

Relative Humidity %	Ambient Air Temperature – Fahrenheit/Celsius										
	20°F/ -7°C	30°F/ -1°C	40°F/ 4°C	50°F/ 10°C	60°F/ 16°C	70°F/ 21°C	80°F/ 27°C	90°F/ 32°C	100°/ 38°C	110°/ 43°C	120°/ 49°C
90	18	28	37	47	57	67	77	87	97	107	117
85	17	26	36	45	55	65	75	84	95	104	113
80	16	25	34	44	54	63	73	82	93	102	110
75	15	24	33	42	52	62	71	80	91	100	108
70	13	22	31	40	50	60	68	78	88	96	105
65	12	20	29	38	47	57	66	76	85	93	103
60	11	19	27	36	45	55	64	73	83	92	101
55	9	17	25	34	43	53	61	70	80	89	98
50	6	15	23	31	40	50	59	67	77	86	94
45	4	13	21	29	37	47	56	64	73	82	91
40	1	11	18	26	35	43	52	61	69	78	87
35	-2	8	16	23	31	40	48	57	65	74	83
30	-6	4	13	20	28	36	44	52	61	69	77

Deck Patching Compound

Dec-Patch II



- Application temperature should be 50°F/ 10°C and rising.
- Cure time may be longer due to colder temperature, 12 hours is recommended.
- Dec-Patch II should be stored at 73°F/23°C in a dry area.

Use of Tarps

Tarpping the work area can aid in limiting moisture that the substrate will be exposed to (i.e. frost, heavy dew, etc.) and can help you the contractor, have some control on the work environment temperature. You may need to use heating devices within the tarped area to maintain a satisfactory temperature level in the work area. Check with local code authorities as to acceptable methods of heating in your area.

Heating and Hoarding

Within a tarp, heating and hoarding can be done to keep the area warm and dry. Consider the following when hoarding:

- Propane heater can produce moisture/water vapor. Make sure propane heaters are not kept too close to the substrate as the moisture can drive through the wood and can cause bubbles in the membrane.
- To limit the buildup of carbon monoxide, consider using indirect fire.
- Make sure there is proper ventilation to ensure proper air quality and air movement.
- Do not leave adhesives, membrane and combustible materials next to the heater as this can be a fire hazard.
- Inspect the area frequently to keep the workplace free of hazards.

Extra Cold Weather Tips:

- Store Dec-Tec membrane in a clean and dry area, bring the membrane out during the time of application to avoid wrinkling and stiffness of the membrane.
- Pre-fit membrane and allow to “relax” for a period of time to help with the stiffness of the membrane.
- To install sidings and prepare for Dec-Tec membrane installation when the winter/cold weather pass, refer to **TB010 – “STRIPPING IN” TECHNIQUE**.
- Consider using a hotbox or warm storage area for Dec Patch II and Dec-Tec adhesives during application.
- For application temperature and conditions of adhesives during cold weather, refer to **TB021 – COLD WEATHER APPLICATION OF DEC-TEC ADHESIVES**.

While we cannot control Mother Nature and the effect that she has on the end of the construction season, we can take steps to ensure the best possible installation for our customers. If we take the proper steps and watch for falling temperatures and rising moisture levels, we can significantly increase our likelihood of a successful job, which will benefit us all.

If you have any questions concerning this bulletin, please contact Dec-Tec, Technical Support at 1-866-461-3914.

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