

CONDENSATION CAUSE & PROTECTION

✓ Water vapor in the atmosphere will only condense onto another surface when that surface is cooler than the dew point temperature, or when the water vapor equilibrium in air has been exceeded. The dew point temperature is based on the air temperature & relative humidity. A typical example is with 90°F air temperature and 50% RH the dew point temperature is about 73°F. It's more complicated math than you'd think so this dew point temperature calculator link can help you determine it.

<http://www.decatour.de/javascript/dew/index.html>

✓ Many times through the evening dew will condense onto all outdoor surfaces like grass, cars, patio furniture, toys, bikes and the like as the air temperature & surfaces cool below the "dew point". Once the morning sun heats the air temperature or those surfaces up enough the dew will evaporate back into "humidity" and this cycle will continue as long as the weather conditions permit.

✓ When you cover your boat you are sealing the outside air in its present condition under the cover. Also, if the boat wasn't dried out that additional moisture will add to the wetness of the trapped environment. As the air and surface temperatures cool below the dew point the water vapor in that air will condense onto all surfaces inside the boat. In the morning it will take longer to heat the air & surfaces under the cover as it affords protection thereby lengthening the time it takes to have the condensation evaporate. It's very possible if weather conditions change that the condensation may not return to vapor for quite some time.

✓ This condition is often misunderstood as the cover "leaking" water through the fabric however because of the fabrics high hydrostatic water resistance (160 cm) this is not possible. It's understandable to think that having the cover wet underneath is somehow due to it allowing water through but it is just condensation forming on its surface. It's like camping in a synthetic tent; if you've ever done it you'll remember water beads form on the tent surface and bumping the tent would cause them to "rain" on you!

✓ **Summary**

As referenced in the Mold & Mildew Cause and Prevention Bulletin boat storage preparation is also a key to lowering the effect of the condensation condition. Using desiccant bags can help control the occurrence.

- Clean and dry the boat thoroughly
- Place a "boat dry" set of desiccant bags throughout the boat
- Put our **Outer Armor™** cover on, tightly ratcheted (seal will be created at the rub-rail)
- Block the **VacuHold** Vents to prevent outside air from getting in (Caution do not block when towing)

Lowering the possibility of condensation also lowers the possibility of mold or mildew growth.