

# NSA Sunroom Datasheet #104

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## Sunrooms and Condensation

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There are instances where sunrooms may be conditioned, usually heated, to accommodate particular sunroom uses. One situation that may be encountered is condensation, which is water that collects as droplets on a cold surface when humid air is in contact with it. This Sunroom Data Sheet will give an overview of condensation causes and some tips for controlling condensation on sunroom glazing.

Notes:

- Glazing condensation is not a manufacturing defect, but characteristic of a warm, humid sunroom and cooler sunroom surfaces due to a colder exterior temperature. A higher interior humidity can result from use of a humidifier, lack of dehumidifier or moisture from an adjacent laundry or washing area.
- Condensation on glazing is not typically a safety concern affecting the durability and structural integrity of the sunroom wall and roof systems.
- Ice formation on glazing in extreme cold climates is not considered in this document. Care should be used if the ice is mechanically scraped off the glass.

### **Common causes of condensation**

- Extreme temperature differential between panes
- Extreme temperature differential between the room interior and exterior
- Excessive humidity within the room
- Inadequate room ventilation

### **Tips for controlling condensation**

- Maintain proper ventilation to control humidity. The ideal relative humidity is between 40-50% in the cooling months and between 50-60% in the heating months. This is also a function of whether or not the sunroom is conditioned space.
- Increase the air circulation to reduce or eliminate the condensation from forming. Use of a ceiling or floor fan is helpful whether or not the sunroom is conditioned space.
- Reduce the air temperature during extreme cold-weather conditions. The ideal temperature in these conditions is 65-70 deg F, assuming the sunroom is conditioned space.
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- Ensure tight seals around glazing perimeters. Check if daylight can be seen along the seal perimeters from the inside of the room and feel for any air coming through.
- Consider using a dehumidifier to control humidity. A small portable dehumidifier may be effective.
- Since Sunroom Categories I through IV are designed as thermally isolated, the door separating the main structure from a sunroom in these categories should be kept closed at all times.

### **Fogging vs. condensation**

Glazing may experience fogging as well as condensation. The fogging phenomenon can occur in a multi-pane system, which is moisture trapped between panes. Although the causes may be similar, fogging may be an indication of a glazing seal failure in a double or triple pane system. A trained sunroom installation expert should be contacted to evaluate the situation.