



BULLETIN

Technical Bulletin 2025-01

NFRC Condensation Resistance and Condensation Index Ratings for Products using VIG

This bulletin addresses the limitations of the condensation ratings when applied to simulating Vacuum Insulating Glazing (VIG) systems. LBNL has determined the Condensation Resistance Model in THERM yields inaccurate results for VIG products. A review of certified product data for VIG product options indicates that the condensation results are lower than expected.

The CR Model for Glazing Systems is not applicable to VIG because:

- The lack of convective movement within the VIG gap results in temperature inaccuracies, especially on horizontal members.
- The small but notable effect of the VIG's support pillars is not accounted for by the THERM software.

To ensure the integrity of NFRC product ratings:

- **Effective immediately, product options utilizing VIG can only be rated using the test option in NFRC 500-2017 (Section 5) for Condensation Resistance or ANSI/NFRC 500-2023 (Section 5) for CI. Simulations cannot be utilized for any condensation resistance ratings.**
- NFRC will notify all stakeholders when the Condensation Resistance or Condensation Index ratings for VIG products are available for product certification authorization using the NFRC 500 or ANSI/NFRC 500 simulation method.

For existing products in the Certified Products Directory (CPD):

- Manufacturers are not required to redo certifications for existing VIG products.
- Manufacturers that physically tested their products with VIG for condensation are not required to re-test.
- **Condensation ratings for VIG product options conducted using the NFRC 500 or ANSI/NFRC 500 simulation method shall be excluded on the temporary labels due to the inaccuracy of the results.**
- Products with VIG that have already been labeled or preprinted labels have already been generated remain acceptable since the performance rating is underestimating the results, but the condensation ratings shall be removed from the temporary label at the earliest opportunity if the NFRC 500 or ANSI/NFRC 500 simulation method was used.

If you have any questions concerning the information in this NFRC Technical Bulletin, please contact [Kevin Louder](#) at 240-821-6538.



National Fenestration Rating Council

NFRC envisions a future where every window, door, and skylight purchase decision is made using the NFRC label to evaluate energy performance.

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