

# MISTER INSULATION

## Informational Handout Regarding Insulation Expectations

### **Mister Insulation**

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### **Homeowner Information Sheet: Understanding Insulation in Extreme Weather**

Dear Valued Customer,

Thank you for choosing Mister Insulation!

Our professional installations following the highest industry standards use high-performance materials to create a better thermal envelope, reduce energy bills, and improve year-round comfort in Maryland's climate. Insulation is highly effective, but **no residential insulation can fully prevent heat loss during extended cold snaps or heat gain during prolonged hot spells**. Insulation slows heat flow—it does not create a perfect barrier like a commercial thermos or fridge. Homes always experience some heat transfer, and prolonged extremes (multiple days of extreme cold or extreme heat/humidity) require your HVAC system to maintain indoor comfort rather than simply being well insulated. It obviously helps, but it is not meant to create an environment unaffected by weather.

#### **Key Facts:**

- Heat flows from hot to cold until temperatures equalize (basic thermodynamics).
- Even high R-value insulation like we install allows gradual drift against desired heating/cooling.
- In Maryland (IECC Zone 4/5), code requires solid insulation levels, but extremes push beyond what any standard home can handle passively.

Thank you for your trust. Stay comfortable!

Sincerely,

Jeff

Jeffrey Buck

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## **Additional Resources:**

We HIGHLY ENCOURAGE you to do your own research – please don't simply take this as gospel from us. For your own research, here are reliable, third-party sources explaining these principles:

- **U.S. Department of Energy – Insulation Basics** Explains R-values, heat flow mechanisms, and why insulation reduces but does not eliminate the need for HVAC.  
<https://www.energy.gov/energysaver/insulation>
- **Building Science Corporation – Thermal Control in Buildings** Detailed building science on why no enclosure achieves zero heat flow, including in extreme cold.  
<https://buildingscience.com/documents/digests/bsd-011-thermal-control-in-buildings>
- **ENERGY STAR – Recommended Home Insulation R-Values** Climate-specific guidance showing limits and the role of HVAC. [https://www.energystar.gov/saveathome/seal\\_insulate/identify-problems-you-want-fix/diy-checks-inspections/insulation-r-values](https://www.energystar.gov/saveathome/seal_insulate/identify-problems-you-want-fix/diy-checks-inspections/insulation-r-values)
- **Oak Ridge National Laboratory (via SIPA) – R-Values in the Real World** Shows how extreme temperatures and real conditions reduce effective performance. <https://www.sips.org/resources/r-values-in-the-real-world>
- **Department of Energy – Why Insulation Can't Maintain Perfect Temperatures** Related explanations on heat flow and system reliance. <https://www.energy.gov/energysaver/insulation> (see sections on heat flow and limitations)

These resources from government, labs, and experts confirm: insulation dramatically improves performance, but **prolonged extremes require HVAC stress and support** for consistent indoor temperatures.

Questions? Contact Mister Insulation — we're happy to discuss your home's setup!