**Interpretation:** Effect of Compression in Insulation Grading

**Designation** 301-2019-021

**Approved:** January 13, 2021by RESNET SDC 300

**Effective Date:** February 12, 2021

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| **R****equest from:** | Name:  | Jamie Dovell |
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|  | Affiliation: | PEG, LLC |
|  |  |  |
|  | Address: | 3975 Fair Ridge Drive, Suite T15S |
|  |
|  | City: | Fairfax | State: | Virginia | Zip: | 22033 |
|  |
|  | Telephone: | 703.934.2777 |
|  |
|  | E-mail: | jdovell@pegenv.com |
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| **Reference:** | This request for interpretation refers to the requirements presented in Standard: ANSI/RESNET/ICC 301-2019 standard Normative Appendix A |
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|  | Page Number(s): | page A-4 |
|  | Section(s): | A-2.1.1 through A-2.1.2.1 |
|  | Table(s): |  |
|  | Relating to: | Insulation Grading |
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| **B****ackground:** | Based on the ANSI/RESNET/ICC 301-2019 standard Normative Appendix A, Both Grade I and Grade II definitions state that batt or loose fill insulation shall not be compressed more than ¾ inch of the specified insulation thickness in **any** given location. (Emphasis added) It seems that the way this standard is written and the definitions for Grade I and Grade II would push builders to use Blown-in Blankets or spray foam as opposed to batts. Or another type of wall assembly. It seems a bit extreme and yet that is how I interpret that standard as written.  |
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| **Interpretation:** | We interpret this to mean that ANY compression greater than ¾ inch would deem that total insulated area as Grade III. |
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| **Question:** | Is this Interpretation correct? |
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| **SDC Answer:** | (Yes) |
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| **SDC Comments:** | As currently written, batt and loose fill insulation that is installed with compression “more than ¾” of the specified insulation thickness in any given location”, would be deemed to be a Grade III. The key phrase in these sections, however, is the “specified insulation thickness” and the “thickness required to attain the labeled R-Value”.For a Grade I installation, some minimal amount of compression below the “specified insulation thickness” is acceptable. For example, if the total assembly being graded consisted of 100 sqft of area, up to 2 sqft of area can be compressed between 0 and ¾” of the “specified insulation thickness”.¾” is the typical compression of inset stapled tabs on batt insulation. These sections in Appendix A are not intended to mean that inset stapled batt installation cannot meet the requirement for Grade I installation. The inset area is part of the “thickness required to attain the labeled R-Value”.If the insulation specified achieves its labeled R-value, while including some amount of reduced thickness for inset staples, Grade I can still be achieved. Compression that exceeds ¾” of that “specified insulation thickness” would result in Grade III.  If the “thickness required to attain the labeled R-Value” is not achieved because it is compressed by some nominal amount (0-¾”), that would only be acceptable for Grade I, IF that compressed area is not more than 2% of the area being graded and for Grade II, not more than 15% of the area being graded.  Remember that the assembly as a whole can be graded or if the rater would like, the assembly can be broken up into smaller entries in the software, each with a different Grade. |