

IECC 2018 / ASHRAE 2016 Fiberglass Solutions

| IECC 2018 Building Envelope Requirements, Table C402.1.4 Metal Building Walls | | | |
|--|-------------------------------|--------------------|---|
| Climate Zone | Prescriptive Maximum U-Factor | Compliance Options | |
| | | U - Factor | Assembly Description |
| 1 | 0.079 | 0.059* | Single Layer, Filled Cavity Fiberglass System - R-25 with 1/8" Foam Thermal Break Strip |
| 2 | | | |
| 3 | | | |
| 4 | 0.052 | 0.052* | Single Layer, Filled Cavity Fiberglass System - R-30 with 1/4" Foam Thermal Break Strip |
| 5 | | | |
| 6 | | | |
| 7 | | | |
| 8 | | | |

* Use with COMcheck - Other Metal Building Wall

| IECC 2018 Building Envelope Requirements, Table C402.1.4 Metal Building Roof | | | |
|---|-------------------------------|--------------------|---|
| Climate Zone | Prescriptive Maximum U-Factor | Compliance Options | |
| | | U - Factor | Assembly Description |
| 1 ^a | 0.044 | 0.037** | Filled Cavity / Long Tab Banded Insulation System - Faced R-19 plus Unfaced R-11 with Thermal Blocks and Standing Seam Roof |
| 2 ^a | | | |
| 3 ^a | 0.035 | 0.035** | Filled Cavity / Long Tab Banded Insulation System - Faced R-25 plus Unfaced R-11 with Thermal Blocks and Standing Seam Roof |
| 4 | | | |
| 5 | | | |
| 6 | 0.031 | 0.029** | Filled Cavity / Long Tab Banded Insulation System - Faced R-25 plus Unfaced R-19 with Thermal Blocks and Standing Seam Roof |
| 7 | 0.029 | | |
| 8 | | | |

** Use with COMcheck - Other Metal Building Roof

^a Metal Building roofs with a slope less than 2:12, installed directly above cooled conditioned spaces in Climate Zones 1, 2, and 3 shall comply with one or more of the following options; 3 year aged Solar Reflectance of 0.55 and a 3 year aged Thermal Emittance of 0.75 or a 3 year aged Solar Reflectance Index of 64, see C402.3 for a list of exceptions.

| ASHRAE 90.1-2016 Building Envelope Requirements, Table 5.5 Non-Residential Metal Building Walls | | | |
|--|-------------------------------|--------------------|--|
| Climate Zone | Prescriptive Maximum U-Factor | Compliance Options | |
| | | U - Factor | Assembly Description |
| 1 | 0.094 | 0.059* | Single Layer, Filled Cavity Fiberglass System - R-25 with 1/8" Foam Thermal Break Strip |
| 2 | | | |
| 3 | | | |
| 4 | 0.060 | 0.042* | Double Layer, Filled Cavity Fiberglass System - R-25 plus R-16 (If both fiberglass layers are faced with a vapor retarder, the vapor retarder toward the cold side of the building MUST be perforated) |
| 5 | 0.050 | | |
| 6 | | | |
| 7 | 0.044 | 0.039* | Double Layer, Filled Cavity Fiberglass System - R-30 plus R-16 (If both fiberglass layers are faced with a vapor retarder, the vapor retarder toward the cold side of the building MUST be perforated) |
| 8 | 0.039 | | |

* Use with COMcheck - Other Metal Building Wall

| ASHRAE 90.1-2016 Building Envelope Requirements, Table 5.5 Non-Residential Metal Building Roof | | | |
|---|-------------------------------|--------------------|---|
| Climate Zone | Prescriptive Maximum U-Factor | Compliance Options | |
| | | U - Factor | Assembly Description |
| 1 ^b | 0.041 | 0.037*** | Filled Cavity / Long Tab Banded Insulation System - Faced R-19 plus Unfaced R-11 with Thermal Blocks and Standing Seam Roof |
| 2 | | | |
| 3 | | | |
| 4 | 0.037 | 0.029*** | Filled Cavity / Long Tab Banded Insulation System - Faced R-25 plus Unfaced R-19 with Thermal Blocks and Standing Seam Roof |
| 5 | 0.031 | | |
| 6 | | | |
| 7 | 0.029 | --- | --- |
| 8 | 0.026 | | |

*** Use with COMcheck - Other Metal Building Roof

^b Metal Building roof panels installed directly above cooled conditioned spaces in Climate Zone 1, shall comply with a minimum 3 year aged Solar Reflectance value of 0.55 and a minimum 3 year aged Thermal Emittance of 0.75 or a minimum 3 year aged Solar Reflectance Index of 64, if not, the roof insulation must be increased by installing a system with a maximum U - Factor of 0.028.