# Submittal Form

**CertainTeed**
SAINT-GOBAIN

## Insulation

Submitted to: _____

Job Name:_____

Submitted by: _____

Date:_____

This Submittal Form is provided to assist you in specifying and selecting the proper CertainTeed insulation product. Basic product descriptions and performance data are included. For further information or technical assistance, contact your local CertainTeed representative.

| Fibre Glass Products | Description | Product Specifications | | Applicable Standards |
|---|---|---|---|---|

### Building Insulation†

Manufactured in widths to permit pressure fit installation. Used with a separate vapour retarder or where no vapour retarder is required or recommended.

| Thermal Resistance | | Standard Sizes | | | |
|---|---|---|---|---|---|
| | | Nominal Thickness | | Width | |
| R-Value | RSI | inches | mm | inches | mm |
| R-8 | 1.4 | 2.75 | 70 | 15, 16, 24 | 381, 406, 584, 610 |
| R-10 | 1.8 | 3.5 | 89 | 15, 16 | 381, 584, 610 |
| R-12 | 2.1 | 3.5 | 89 | 15, 16, 19, 23, 24 | 381, 406, 483, 508, 584, 610 |
| R-14 | 2.4 | 3.5 | 89 | 15, 23 | 584 |
| R-20 | 3.5 | 6 | 152 | 15, 16, 19, 23, 24 | 305, 381, 406, 483, 584, 610 |
| R-22 | 3.8 | 5.5 | 140 | 14.75, 22.75 | 375, 578 |
| R-24 | 4.2 | 5.5 | 140 | 14.75, 22.75 | 375, 578 |
| R-28‡ | 4.9‡ | 7.5 | 191 | 15, 23 | 381, 584 |
| R-28 | 4.9 | 8.5 | 216 | 16, 24 | 406, 610 |
| R-31 | 5.4 | 9.5 | 241 | 16, 24 | 406, 610 |
| R-35 | 6.1 | 10.5 | 267 | 16, 24 | 406, 610 |
| R-40 | 7.0 | 11.25 | 286 | 16, 24 | 406, 610 |

- Conforms to CAN/ULC-S702-09, Type I, CCMC Numbers 09521-L or 13020-L.
- Non-combustible CAN/ULC S-114-05.
- Complies with ASTM C665, Type I.

### NoiseReducer™

Designed for use in commercial and residential wall and ceiling assemblies to effectively reduce transmission of airborne sound and provide thermal insulation. Unfaced for friction fit installation between steel studs or installation on suspended ceilings.

| Thermal Resistance* | | Standard Sizes | | | |
|---|---|---|---|---|---|
| | | Nominal Thickness | | Width | |
| R-Value | RSI | inches | mm | inches | mm |
| R-8 | 1.4 | 2.75 | 70 | 16 | 406 |
| R-8 | 1.4 | 2.75 | 70 | 24 | 610 |
| R-12 | 2.1 | 3.5 | 89 | 16 | 406 |
| R-12 | 2.1 | 3.5 | 89 | 24 | 610 |
| R-20 | 3.5 | 6 | 152 | 16 | 406 |
| R-20 | 3.5 | 6 | 152 | 24 | 610 |

- Complies with ASTM C665, Type II, Class C, Category 2. Thermal performance determined by ASTM C653 and C518.

### Metal Building Insulation

A flexible fibre glass blanket insulation furnished in unfaced rolls. Its primary use is in exterior walls and standing seam roofing systems of pre-engineered metal buildings. It is intended to be laminated with an appropriate vapour retarder facing suited to the specific job application. In addition it can be used as an unfaced layer of insulation.

| R Value | RSI | Thickness | Width | Length |
|---|---|---|---|---|
| 6 | 1.06 | 2" | 36"-72" | 50'-110' |
| 8 | 1.41 | 2.75" | 36"-72" | 50'-100' |
| 10 | 1.76 | 3" | 36"-72" | 50'-100' |
| 12 | 2.11 | 3.5" | 36"-72" | 50'-75' |
| 13 | 2.29 | 4" | 36"-72" | 25'-50' |
| 14 | 2.47 | 4" | 36"-72" | 25'-50' |
| 16 | 2.82 | 5.25" | 36"-72" (Athens Only) | 25'-50' |
| 17 | 3.17 | 5" | 36"-72" | 25'-50' |
| 20 | 3.52 | 6" | 36"-72" | 25'-50' |
| 23 | 3.52 | 7" | 36"-72" | 25'-50' |
| 25 | 4.40 | 8" | 36"-72" | 20'-25' |
| 26 | 4.58 | 8" | 36"-72" | 20'-25' |
| 28 | 4.93 | 8.5" | 36"-72" | 20'-25' |

- Material Standards:
  – CAN/ULC-S702 Type I
- Fire Hazard Classification:
  – CAN/ULC-S102 M88 Max. Flame Spread Index: 25 Max Smoke Developed Index: 50
- Non-combustible:
  – CAN/ULC S-114-05
- Thermal Resistance:
  – ASTM C518 and/or ASTM C177 at 75°F (24°C) mean temperature
- Water Vapour Sorption:
  – ASTM C1104; No greater than 5.0% by weight
- Smoulder Resistance:
  – CAN/ULC-S129 No greater than 5.0%
- Odor Emission:
  – ASTM C1304: Pass

* R means resistance to heat flow. The higher the R-Value, the greater the insulating power.
† Standard lengths = 47" (1194 mm) and 48" (1219 mm). Contact your CertainTeed Representative for non-standard sizes and additional lengths.
‡ High Performance Batts

| Air Barrier Product | Description | Product Specifications | | | | | | | | | | | | Applicable Standards |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

## MemBrain™ Smart Vapour & Air Barrier Film

Vapour retarder sheeting intended for use with unfaced, vapour permeable mass insulation (fibre glass and mineral wool) in wall and ceiling cavities. MemBrain is a polyamide film that changes its permeability with ambient humidity conditions.

| Imperial Width | | | Metric Width | | | Coverage | | Length | | Rolls/ Pallet | Weight/ Pallet | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ft | in | Actual | m | mm | Actual | ft² | m² | in | mm | | lbs | kg |
| 8 | 96 | 100 | 2.44 | 2438 | 2540 | 800 | 74.3 | 28.3 | 718 | 45 | 545 | 247 |
| 9 | 108 | 112 | 2.74 | 2743 | 2845 | 900 | 83.6 | 31.5 | 800 | 45 | 608 | 276 |
| 10 | 120 | 124 | 3.05 | 3048 | 3150 | 1000 | 92.9 | 34.5 | 876 | 40 | 593 | 269 |
| 12 | 144 | 148 | 3.66 | 3658 | 3759 | 1200 | 111.5 | 41.0 | 1041 | 30 | 555 | 252 |

*48″ (1219 mm) maximum pallet height.

**Applicable Standards:**

Water vapour permeance values are determined by ASTM E96.

< 1.0 perm (57 ng/ Pa•s•m2) (ASTM E96, Standard Desiccant method)

> 10 perms (570 ng/ Pa•s•m1) (ASTM E96, Standard Water method)

- CCMC 13278-R
- CAN/ULC-S102-07

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## Blow-In Products

### InsulSafe XC®

Attic Application Coverage Chart

Unconfined attic spaces with slopes not exceeding 4.5:12.

| Thermal Resistance | | Minimum Thickness | | Minimum Weight Per Unit Area | | Maximum Coverage/ Bag | | Minimum Bags/Area | |
|---|---|---|---|---|---|---|---|---|---|
| R-Value | RSI | mm | in | kg/m² | lb/ft² | m² | ft² | per 100m² | per 1,000ft² |
| 12 | 2.1 | 114 | 4.5 | 0.95 | 0.194 | 14.9 | 160.1 | 6.7 | 6.2 |
| 16 | 2.8 | 151 | 6.0 | 1.26 | 0.258 | 11.2 | 120.1 | 9.0 | 8.3 |
| 20 | 3.5 | 189 | 7.4 | 1.58 | 0.323 | 8.9 | 96.0 | 11.2 | 10.4 |
| 24 | 4.2 | 227 | 8.9 | 1.89 | 0.387 | 7.4 | 80.0 | 13.4 | 12.5 |
| 28 | 4.9 | 265 | 10.4 | 2.21 | 0.452 | 6.4 | 68.6 | 15.7 | 14.6 |
| 30 | 5.3 | 286 | 11.3 | 2.39 | 0.489 | 5.9 | 63.4 | 17.0 | 15.8 |
| 32 | 5.6 | 303 | 11.9 | 2.52 | 0.516 | 5.6 | 60.0 | 17.9 | 16.7 |
| 36 | 6.3 | 341 | 13.4 | 2.84 | 0.581 | 5.0 | 53.4 | 20.2 | 18.7 |
| 40 | 7.0 | 378 | 14.9 | 3.15 | 0.646 | 4.5 | 48.0 | 22.4 | 20.8 |
| 44 | 7.7 | 416 | 16.4 | 3.47 | 0.710 | 4.1 | 43.7 | 24.7 | 22.9 |
| 48 | 8.4 | 454 | 17.9 | 3.78 | 0.775 | 3.7 | 40.0 | 26.9 | 25.0 |
| 50 | 8.8 | 476 | 18.7 | 3.96 | 0.812 | 3.5 | 38.2 | 28.2 | 26.2 |
| 52 | 9.1 | 492 | 19.4 | 4.10 | 0.839 | 3.4 | 36.9 | 29.1 | 27.1 |
| 56 | 9.8 | 530 | 20.9 | 4.41 | 0.904 | 3.2 | 34.3 | 31.4 | 29.2 |
| 60 | 10.5 | 568 | 22.3 | 4.73 | 0.968 | 3.0 | 32.0 | 33.6 | 31.2 |

**Applicable Standards:**

- CCMC 13141-L.
- CAN/ULC-S702-09, Type 5 loose fill mineral fibre thermal insulation.

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### OPTIMA® System

System including OPTIMA premium fibre glass blowing insulation and OPTIMA non-woven fabric or equivalent.

| Thermal Resistance* | | Minimum Thickness | | Minimum Weight Per Unit Area | | Maximum Coverage Per Bag | | Bags Per Unit Area | |
|---|---|---|---|---|---|---|---|---|---|
| R-Value | RSI | inches | mm | lb/ft² | kg/m² | ft² | m² | 1,000ft² | 100m² |
| 15 | 2.6 | 3.50 (2 x 4)† | 89 | 0.525 | 2.56 | 53 | 4.92 | 18.8 | 20.3 |
| 23 | 4.1 | 5.50 (2 x 6)† | 140 | 0.825 | 4.03 | 34 | 3.16 | 29.5 | 31.7 |
| 30 | 5.3 | 7.25 (2 x 8)† | 184 | 1.088 | 5.31 | 26 | 2.42 | 38.8 | 41.4 |
| 39 | 6.9 | 9.25 (2 x 10)† | 235 | 1.388 | 6.78 | 20 | 1.86 | 49.6 | 53.8 |
| 47 | 8.3 | 11.25 (2 x 12)† | 286 | 1.688 | 8.24 | 17 | 1.58 | 60.3 | 63.3 |
| 56 | 9.9 | 13.25 (2 x 14)† | 337 | 1.988 | 9.71 | 14 | 1.30 | 71 | 76.9 |

**Applicable Standards:**

- Conforms to CAN/ ULCS702-09, Type 5, CCMC13272-R.
- Complies with ASTM C764, Type I. Thermal performance is determined by ASTM C687 and ASTM C518.

* R means resistance to heat flow. The higher the R-Value, the greater the insulating power.
† Cavity Size

| Blow-In Products | Description | Product Specifications | | | | | | | | | | Applicable Standards |
|---|---|---|---|---|---|---|---|---|---|---|---|---|

**Northern White** — Fibre glass blowing insulation for pneumatic application.

| Thermal Resistance* | | Minimum Thickness | | Minimum Weight Per Unit Area | | Maximum Coverage Per Bag | | Bags Per Unit Area | |
|---|---|---|---|---|---|---|---|---|---|
| R-Value | RSI | inches | mm | lb/ft² | kg/m² | ft² | m² | 1,000ft² | 100m² |
| 8 | 1.4 | 3.0 | 76 | 0.13 | 0.65 | 201.4 | 18.71 | 5.0 | 5.3 |
| 12 | 2.1 | 4.5 | 114 | 0.20 | 0.98 | 134.3 | 12.47 | 7.4 | 8.0 |
| 13 | 2.3 | 4.9 | 124 | 0.22 | 1.08 | 122.6 | 11.39 | 8.2 | 8.8 |
| 16 | 2.8 | 6.0 | 151 | 0.27 | 1.31 | 100.7 | 9.35 | 9.9 | 10.7 |
| 19 | 3.3 | 7.0 | 178 | 0.32 | 1.54 | 85.4 | 7.94 | 11.7 | 12.6 |
| 20 | 3.5 | 7.4 | 189 | 0.34 | 1.64 | 80.6 | 7.48 | 12.4 | 13.4 |
| 22 | 3.8 | 8.1 | 205 | 0.36 | 1.78 | 74.2 | 6.89 | 13.5 | 14.5 |
| 24 | 4.2 | 8.9 | 227 | 0.40 | 1.96 | 67.1 | 6.24 | 14.9 | 16.0 |
| 28 | 4.9 | 10.4 | 265 | 0.47 | 2.29 | 57.5 | 5.35 | 17.4 | 18.7 |
| 30 | 5.3 | 11.3 | 286 | 0.51 | 2.48 | 53.2 | 4.94 | 18.8 | 20.2 |
| 32 | 5.6 | 11.9 | 303 | 0.54 | 2.62 | 50.3 | 4.68 | 19.9 | 21.4 |
| 34 | 6.0 | 12.8 | 324 | 0.57 | 2.81 | 47.0 | 4.37 | 21.3 | 22.9 |
| 36 | 6.3 | 13.4 | 341 | 0.60 | 2.95 | 44.8 | 4.16 | 22.3 | 24.1 |
| 38 | 6.7 | 14.3 | 362 | 0.64 | 3.13 | 42.1 | 3.91 | 23.8 | 25.6 |
| 40 | 7.0 | 14.9 | 378 | 0.67 | 3.27 | 40.3 | 3.74 | 24.8 | 26.7 |
| 44 | 7.7 | 16.4 | 416 | 0.74 | 3.60 | 36.6 | 3.40 | 27.3 | 29.4 |
| 48 | 8.4 | 17.9 | 454 | 0.80 | 3.93 | 33.6 | 3.12 | 29.8 | 32.1 |
| 49 | 8.6 | 18.3 | 465 | 0.82 | 4.02 | 32.8 | 3.05 | 30.5 | 32.8 |
| 50 | 8.8 | 18.7 | 476 | 0.84 | 4.12 | 32.0 | 2.98 | 31.2 | 33.6 |
| 52 | 9.1 | 19.4 | 492 | 0.87 | 4.26 | 31.0 | 2.88 | 32.3 | 34.7 |
| 56 | 9.8 | 20.9 | 530 | 0.94 | 4.58 | 28.8 | 2.67 | 34.8 | 37.4 |
| 60 | 10.5 | 22.3 | 568 | 1.01 | 4.91 | 26.9 | 2.49 | 37.2 | 40.1 |

Applicable Standards:
- Conforms to CAN/ULC-S702-09, Type 5.
- CCMC 13255-L (Ottawa only).

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| Spray Foam Product | Description | Product Specifications | Applicable Standards |
|---|---|---|---|

**CertaSpray® Closed Cell Foam** — A two-component HFC-245fa blown spray polyurethane foam applied as a spray insulation. The foam provides thermal insulation for the interior of buildings and reduces air infiltration through the building envelope.

| Recommended Processing Conditions | Value |
|---|---|
| Preheater Temperature, °C (°F) | 49-57 (120-135) |
| Hose Temperature, °C (°F) | < 57 (135) |
| Pressure, MPa (psi) | 7.6-10.3 (1100-1500) |
| A/B Volumetric Ratio | 1:1 |
| Cream Time, sec | 1-2 |
| Tack-free Time, sec | 4-7 |
| Maximum Thickness per Pass, mm | 50 |

| Thermal Performance | | |
|---|---|---|
| Thermal Resistance Initial m²•K/W @ 50mm thick, (°F•ft²•h/Btu) | ASTM C518 | 2.2 (12.5) |
| Conditioned Thermal Resistance @ 90 days, 60°C m²•K/W @ 50mm thick, (°F•ft²•h/Btu) | ASTM C518 | 2.05 (11.6) |
| Long-term Thermal Resistance (LTTR) m²•K/W (°F•ft²•h/Btu) 75 mm 50 mm | CAN/ULC S770 D1623 D2126 | 2.8 (15.8) 1.8 (10.2) |

Applicable Standards: Conforms to CAN/ULC-705.1-01. Evaluation Listing CCMC 13405-L.

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* R means resistance to heat flow. The higher the R-Value, the greater the insulating power.

**Surface Burning Characteristics**

These products have the following maximum flame spread and smoke developed ratings when tested per CAN/ULC S102 or S102.2:

| Product | Flame Spread Index | Smoke Developed Index |
|---|---|---|
| Building Insulation | 5 | 0 |
| NoiseReducer | 5 | 0 |
| Metal Building Insulation | 25 | 50 |
| InsulSafe XC | 0 | 5 |
| OPTIMA | $\leq 25$ | $\leq 50$ |
| Northern White | $\leq 25$ | $\leq 50$ |
| CertaSpray Closed Cell Foam | | |
|   CAN/ULC S102 | 30 | 475 |
|   CAN/ULC S127 | 275 | 475 |
| MemBrain | $\leq 20$ | $\leq 55$ |

**Fire Safety**

CertainTeed fibre glass insulation is noncombustible per CAN/ULC S114-05. Conforms to CAN/ULC-S702-97 Type I or 5, CCMC Numbers 09521-L, 13020-L, 13141-L, 13272-R, 13255-L, 09799-L, 12775-L.

**Sound Transmission Loss**

CertainTeed's fibre glass products can reduce sound transmission when properly installed in construction assemblies and can add from 4 to 12 points to the STC rating depending on the type of partition. The actual rating is dependent on the workmanship, mass of total material, thickness of insulation, and the air tightness of the construction. In wood stud assemblies, separation of the wall surfaces plus the addition of insulation in stud cavities is the most effective means of reducing sound transmission. This is accomplished by installing resilient channel on one side of the partition, or with staggered or double wall constructions. The following table lists a typical sound rated partition construction.

## Approximate STC Ratings

| Wood Frame Partitions With Gypsum Wallboard Facings (1/2" & 5/8") | No Insulation | | 3½" of CertainTeed Fibre Glass Insulation (batts or blown) | |
|---|---|---|---|---|
| | 1/2" | 5/8" | 1/2" | 5/8" |
| Single studs/single layer facings | 34 | 35 | 39 | 38 |
| Single studs/resilient channel | 39 | 40 | 46 | 50 |
| Staggered studs/single layer facings | 39 | 43 | 50 | 51 |
| Double stud walls/single layer facings | 46 | 45 | 57 | 57 |

| Steel Stud Partitions With Gypsum Wallboard Facings (1/2" & 5/8") | No Insulation | | | | 3½" of CertainTeed Fibre Glass Insulation (batts or blown) | | | |
|---|---|---|---|---|---|---|---|---|
| | 2½" Studs | | 3⅝" Studs | | 2½" Studs | | 3⅝" Studs | |
| | 1/2" | 5/8" | 1/2" | 5/8" | 1/2" | 5/8" | 1/2" | 5/8" |
| Single layer facings | 36 | 39 | 36 | 39 | 45 | 47 | 47 | 50 |
| Double layer one side, single layer other side | 39 | 44 | 42 | 47 | 50 | 52 | 52 | 55 |
| Double layer each side | 45 | 48 | 50 | 52 | 54 | 57 | 56 | 58 |

Note to the specifier: Provide information as required; delete inappropriate items and fill in where indicated.

This guide specification applies to thermal and acoustical insulation in walls, ceilings and floors. It follows Construction Specifications Institute (CSI) format.

**Part 1. General**

1.01 Work Included: State type of insulation and where it is to be installed.

1.02 Related Work: State if separate vapour and/or air barrier is to be installed.

1.03 References: Include appropriate insulation standards.

**Part 2. Products**

2.01 Acceptable Manufacturers
CertainTeed Corporation

2.02 Materials

**Thermal Insulation**
Insulation for (ceilings) (walls) (floors) shall be CertainTeed:

_____ inches thick

with R-Value of _____

or

Insulation for (ceilings) (or other approved location) shall be CertainTeed installed at minimum of

_____ inches thick, with _____ bags/1,000 sq. ft. for R-Value of _____ .

**Sound Control Insulation**
Insulation for (ceilings) (walls) (floors) shall be CertainTeed

**Part 3. Execution**

3.01 Preparation:
Verify that mechanical and electrical services in (ceilings) (walls) (floors) have been installed and tested and, if appropriate, verify that adjacent materials are dry and ready to receive insulation.

3.02 Installation:
Installation shall be in accordance with CertainTeed's instructions.

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