



Dow Building Solutions

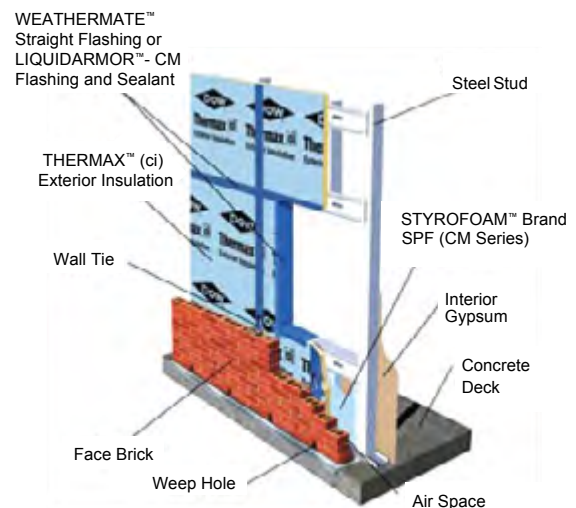
THERMAX™ Total Wall System Overview



Photo courtesy of Trinity Christian School

The THERMAX™ Wall System is more than an insulated wall – it’s a systematic approach to achieving efficiency at every level: simplified design, streamlined construction and optimized energy consumption for a reduced carbon footprint. Dow’s three-in-one system with THERMAX™ (ci) insulation, LIQUIDARMOR™ - CM Flashing and Sealant or WEATHERMATE™ Flashing, and STYROFOAM™ CM Series Spray Polyurethane Foam, meets all applicable IBC and ASHRAE requirements for continuous insulation, moisture mitigation, air sealing, and vapor barriers. This complete system eliminates the need for exterior gypsum sheathing, applied air/vapor barrier membranes, and extensive site coordination, making it both cost effective and easy to install.

Steel transfers heat amazingly fast – up to 300 times faster than wood studs and reduces the effective R-value of metal stud wall designs by 40–60%. The ASHRAE prescriptive continuous



Thermal Layer	
ASTM C518, R-value	THERMAX™ ci: 6.5 R /in STYROFOAM™ SPF (CM Series) CM 2030: 6.0 R / in CM 2045: 6.5 R / in
Water-Resistive Layer	
ASTM E331:	Pass – No water penetration during 2 hours of pressurized testing.
ASTM C272 Water Absorption, Max 5% Volume	THERMAX ci: <0.05 % STYROFOAM™ SPF (CM Series) CM 2030: Pass CM 2045: Pass
Air Sealing Layer	
ASTM E2357: @ 5/8" thick THERMAX™ ci with 1.5" of Styrofoam™ SPF	Code: 0.04 cfm / ft ² Tested: 0.01 cfm / ft ² Improvement over code: 250%
Vapor Retarding Layer	
ASTM E96, perms	<0.1 = Class 1 Retarder (Vapor Impermeable)

Back up Applications	Steel Stud
NFPA-285 Approval	Passed
ASTM E84, (Burning Characteristics)	THERMAX™ ci: Flames Spread: 25, Smoke: <450 STYROFOAM™ CM Series SPF: Class A
UL Ratings	V482, V499, V454, U425, U424
Joint Treatments	LIQUIDARMOR™ - CM Flashing and Sealant or WEATHERMATE™ Flashing
Edge Treatment	Square edge (5/8" & 1") Ship-lapped (1.55" or greater)
Facer Technology:	4 mil BLUE™ acrylic-coated aluminum facer 1.25 mil embossed aluminum backing
Warranty	<ul style="list-style-type: none"> • 15 Year Limited Thermal Warranty • 6-month Exposure Warranty • 6-month Limited WEATHERMATE™ Flashing Exposure Warranty
LEED Points	EA Credit: 1-19 points MR Credit 2: 1-2 points MR Credit 3.1 & 3.2: 1-2 points MR Credit 4.1 & 4.2: 1-2 points MR Credit 5.1 & 5.2: 1-2 points EQ Credit 2: 1 point EQ Credit 7.1: 1 point ID Credit 1.1: 1 point ID Credit 1.2: 1 point ID Credit 1.3: 1 point

insulation requirements for steel-framed, above-grade walls recognize this phenomenon, and in most climate zones, call for a layer of continuous insulation (ci) to be added to the assembly to help stop the steel thermal shorts that can decrease the energy efficiency of the wall system.

To meet the continuous insulation code it's critical to also account for condensation within the wall assembly. Condensation within wall assemblies is a result of temperature differential in the wall layers, particularly lower temperatures. Even if a wall is adequately designed to prevent liquid water from entering the

assembly, condensation can still occur as a result of the interior and exterior temperatures as well as relative humidity.

There are 4 control layers that make up a high performance wall assembly to manage thermal, air, and moisture management. They are: thermal, water, air, & vapor control layers. The THERMAX™ Wall System is designed to incorporate all of these control layers while simplifying the installation process and providing high effective R-value; all of the necessary components of a high-performing wall system.

Learn more about making history with THERMAX™ (ci) Exterior Insulation at www.thermaxwallsystems.com

The Dow Chemical Company

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Technical Information: 1-866-583-BLUE (2583)

Sales Information: 1-800-232-2436

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DOW Polyisocyanurate Insulation

CAUTION: This product is combustible and shall only be used as specified by the local building code with respect to flame spread classification and to the use of a suitable thermal barrier. For more information, consult (Material) Safety Data Sheet ((M)SDS), call Dow at 1-866-583-BLUE (2583) or contact your local building inspector. In an emergency, call 1-989-636-4400. THERMAX™ products should be used only in strict accordance with product application instructions. THERMAX™ products, when used in a building containing combustible materials, may contribute to the spread of fire.

WARNING: Rigid foam insulation does not constitute a working walkable surface or qualify as a fall protection product.

Dow Polyurethane Foam Insulation and Sealants

CAUTION: When cured, these products are combustible and will burn if exposed to open flame or sparks from high-energy sources. Do not expose to temperatures above 240°F (116°C). For more information, consult (M)SDS, call Dow at 1-866-583-BLUE (2583) or contact your local building inspector. In an emergency, call 1-989-636-4400 in the U.S. or 1-519-339-3711 in Canada.

STYROFOAM™ Brand Spray Polyurethane Foam contains isocyanate, hydrofluorocarbon blowing agent and polyol. Read all the instructions and (M)SDS carefully before use. Wear protective clothing (including long sleeves), gloves, goggles and proper respiratory protection. Supplied air or an approved air-purifying respirator equipped with an organic vapor sorbent and a P100 particulate filter is required to maintain exposure levels below ACGIH, OSHA, WEEL or other applicable limits. Provide adequate ventilation. Contents under pressure. STYROFOAM™ Brand SPF should be installed by a trained SPF applicator.

LIQUIDARMOR™ - CM bridges up to 1/4" gaps without the need of mesh or a backer rod. Larger gaps may need the addition of common backer rods. Read all instructions and (Material) Safety Data Sheets carefully before use. It is recommended that spray applicators and those working in the spray area wear eye protection. Contact with exposed skin may cause skin discoloration and dryness. Gloves are recommended for prolonged exposure. Ensure adequate ventilation during spray applications. LIQUIDARMOR™ - CM is a combustible material. Ensure product application complies with local building codes

Building and/or construction practices unrelated to building materials could greatly affect moisture and the potential for mold formation. No material supplier including Dow can give assurance that mold will not develop in any specific system.