



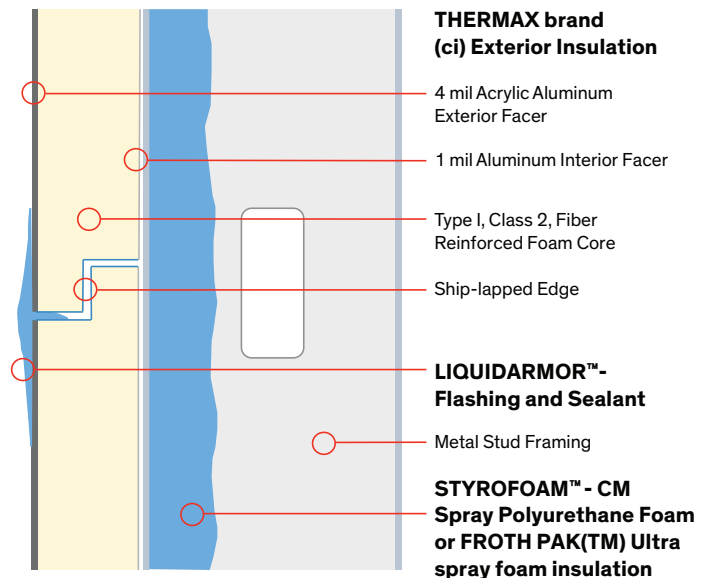
Dow Building Solutions

THERMAX™ Wall System Overview



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 four-in-one system with THERMAX XARMOR™ (ci) Exterior Insulation, LIQUIDARMOR™ Flashing and Sealant 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 insulation requirements for steel-framed, above-grade walls recognize this phenomenon, and in most climate zones, call for



See more case studies, details, and information at www.dowbuildingsolutions.com

Thermal Layer	
ASTM C518, R-value	THERMAX XARMOR™ (ci): 6.5 R /in STYROFOAM™ SPF (CM Series) CM 2030: 6.0 R / in CM 2045: 6.4 R / in FROTH-PAK™ ULTRA Premium Foam Insulation: 6.5 R/in
Water-Resistive Layer	
ASTM E331:	Pass – No water penetration during 2 hours of pressurized testing.
ASTM C209 Water Absorption, % by volume, max	THERMAX XARMOR (ci): 0.1
ASTM 2842 Water Absorption, 5% max volume	STYROFOAM™ SPF (CM Series): Pass
Air Sealing Layer	
ASTM E2357: @ 5/8" thick THERMAX XARMOR™ (ci) with 1.5" of STYROFOAM™ SPF	Code: 0.04 cfm / ft ² Tested: 0.01 cfm / ft ²
Vapor Retarding Layer	
ASTM E96, perms	<0.1 = Class 1 Retarder (Vapor Impermeable)

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 is critical to also account for condensation within the wall assembly. 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.

Back up Applications	Steel Stud
NFPA-285 Approval	Passed (See Hughes Report)
ASTM E84, (Burning Characteristics)	THERMAX XARMOR™ (ci): Flames Spread: 25, Smoke: <450 STYROFOAM™ CM Series SPF: Class A
UL Ratings	V482, V499, V454, U425, U424
Intertek Fire Rating Listing	FI 60-02, FI 60-01, FI 120-01
Joint Treatments	LIQUIDARMOR™ Flashing and Sealant or WEATHERMATE™ Straight Flashing
Edge Treatment	Square edge (5/8" & 1") Ship-lapped (1.55" or greater)
Facer Technology	4 mil acrylic-coated aluminum facer 1.25 mil embossed aluminum backing
Warranty	<ul style="list-style-type: none"> • 15 Year Limited Thermal Warranty • 15 Year Water Resistive System Warranty • 6-month Exposure Warranty
LEED v4 point contributions	<ul style="list-style-type: none"> • EA Credit 2: 1-20 points • MR Credit 1: 1-5 points • MR Credit 2: 1-2 points • MR Credit 3: 1-2 Points • MR Credit 4: 1-2 points • MR Credit 5: 1-2 points • EQ C2: 1 point • EQ C5: 1 point • InC1: 1-2 points • RPC1: 1 point

There are 4 control layers that make up a high performance wall assembly: thermal, water, air, and 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 XARMOR (ci) Exterior Insulation at www.dowbuildingsolutions.com

The Dow Chemical Company

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Sales Information: 1-800-232-2436

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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. LIQUIDARMOR™ 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. Wear eye protection, either safety glasses with side shields or goggles. For LIQUIDARMOR CM it is recommended that those working in the spray area where eye protection. Gloves must be worn when working with LIQUIDARMOR LT. Contact with exposed skin may cause an allergic reaction. Gloves are recommended when working with LIQUIDARMOR CM, especially for prolonged use. Contact with exposed skin may cause skin discoloration and dryness. Ensure adequate ventilation during spray applications. LIQUIDARMOR™ is a combustible material.

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 (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 in the U.S. or 1-519-339-3711 in Canada. When air sealing buildings, ensure that combustion appliances, such as furnaces, water heaters, wood burning stoves, gas stoves and gas dryers are properly vented to the outside. See website: <http://www.epa.gov/iaq/homes/hip-ventilation.html>. In Canada visit: <http://archive.nrc-cnrc.gc.ca/eng/ibp/irc/bsi/83-house-ventilation.html>.

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, WEL or other applicable limits.

Provide adequate ventilation. Contents under pressure. STYROFOAM™ Brand SPF should be installed by a trained SPF applicator.

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 MSDS, 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.

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.

STYROFOAM™ Brand Extruded Polystyrene Foam Insulation

CAUTION: This product is combustible. Protect from high heat sources. A protective barrier or thermal barrier may be required as specified in the appropriate building code. For more information, consult MSDS, 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.

For more information, consult (Material) Safety Data Sheet ((M)SDS) and/or call Dow at 1-866-583-BLUE (2583). In an emergency, call 1-989-636-4400.

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

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