

NFPA 285 ASSEMBLY GUIDE

# ECOMAXCI® FR PLY

## INSULATION FOR CLADDING ATTACHMENT

Rmax ECOMAXci® FR Ply passes the stringent NFPA 285 test within numerous assembly configurations and is approved for use in exterior walls of buildings of any height. This document briefly describes approved options, however, for more specific details, requirements and limitations, refer to third party reports. NFPA 285 is an assembly test and substitution of components is not allowed.

**Table 1: Approved Components for NFPA 285 Assemblies**

WALL COMPONENT	MATERIALS			
<b>Base Wall</b>	<ul style="list-style-type: none"> <li>Steel studs (3 5/8" 20GA min, 24" o.c. max) with Type X interior gypsum wallboard (1/2" min)</li> <li>Concrete or concrete masonry wall</li> <li>FRTW<sup>1</sup> studs (nominal 2x4 min, 24" o.c. max) with 5/8" Type X interior gypsum wallboard</li> </ul>			
<b>Floor Line Fire-Stopping</b>	<ul style="list-style-type: none"> <li>Mineral fiber insulation (4 pcf)</li> <li>FRTW<sup>1</sup> fire blocking</li> </ul>			
<b>Cavity Insulation</b>	<ul style="list-style-type: none"> <li>None</li> <li>Mineral fiber or fiberglass (faced or unfaced)</li> <li>Any non-combustible insulation</li> <li>Various SPF (requires 5/8" exterior gypsum)</li> </ul>			
<b>Exterior Sheathing</b>	<ul style="list-style-type: none"> <li>None (for 3" max exterior insulation with all cladding or 4 1/2" max exterior insulation with cladding options 1-8)</li> <li>Exterior gypsum sheathing (1/2" min)</li> <li>FRTW<sup>1</sup> structural panels (1/2" min)</li> <li>Soprema® SOPRASEAL® Xpress G<sup>2</sup></li> <li>USG/Tremco Securock® ExoAir® 430 Panel</li> <li>5/8" DensElement with DensDefy or Prosoco FastFlash flashing at joints/fasteners</li> </ul>			
<b>WRB Over Exterior Sheathing</b>	<ul style="list-style-type: none"> <li>None</li> <li>Any WRB in Table 2 (Group 1, 2 or 3)</li> </ul>			
<b>Exterior Insulation</b>	<ul style="list-style-type: none"> <li>ECOMAXci® FR Ply (4.5" max foam with 0.625" min FRTW<sup>1</sup>), can be installed with FRTW to interior or exterior</li> </ul>			
<b>WRB Over Exterior Insulation</b>	<ul style="list-style-type: none"> <li>None</li> <li>Any WRB in Table 2, Group 2 (claddings 1-8)</li> <li>Any WRB in Table 2, Group 3</li> </ul>			
<b>Exterior Cladding Options 1-8</b>	<table border="0"> <tr> <td> <ol style="list-style-type: none"> <li>Brick, standard 4" clay brick with max 2" air gap</li> <li>Stucco, cement plaster (3/4" min) and lath with optional secondary WRB (not asphaltic or self-adhered butyl)</li> <li>Limestone (2" min)</li> <li>Natural stone veneer (2" min)</li> </ol> </td> <td> <ol style="list-style-type: none"> <li>Cast artificial stone veneer (1 1/2" min), per ICC-ES AC 51.</li> <li>Precast Concrete Panels (1 1/2" min)</li> <li>CMU (1 1/2" min)</li> <li>Terracotta cladding (1 1/4" min)</li> </ol> </td> </tr> </table>	<ol style="list-style-type: none"> <li>Brick, standard 4" clay brick with max 2" air gap</li> <li>Stucco, cement plaster (3/4" min) and lath with optional secondary WRB (not asphaltic or self-adhered butyl)</li> <li>Limestone (2" min)</li> <li>Natural stone veneer (2" min)</li> </ol>	<ol style="list-style-type: none"> <li>Cast artificial stone veneer (1 1/2" min), per ICC-ES AC 51.</li> <li>Precast Concrete Panels (1 1/2" min)</li> <li>CMU (1 1/2" min)</li> <li>Terracotta cladding (1 1/4" min)</li> </ol>	
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<b>Exterior Cladding Options 9-20</b>	<table border="0"> <tr> <td> <ol style="list-style-type: none"> <li>Any MCM (aluminum, steel, copper, zinc) passing NFPA 285 with max 2 1/2" air gap</li> <li>Metal panel, uninsulated (aluminum, steel, copper, zinc)</li> <li>Fiber-cement siding, uninsulated</li> <li>Porcelain or ceramic tile</li> <li>Autoclaved-aerated-concrete (AAC) panels passing NFPA 285</li> <li>Stone/aluminum honeycomb composite building panels passing NFPA 285</li> <li>Natural stone veneer, adhered (1 1/4" min)</li> </ol> </td> <td> <ol style="list-style-type: none"> <li>Thin (clay) brick, natural stone or artificial stone (min 3/4" thick) fully adhered with cementitious mortar (standard or polymer-modified) to min 1/2" thick cement backer board or gypsum sheathing with optional secondary WRB (not full coverage asphalt or self-adhered butyl)</li> <li>Stone Panels, Inc. StoneLite® panel system</li> <li>Glen-Gery Thin Tech® Elite Series or Tru-Brix®</li> <li>Tabs II Panel System with 1/2" bricks using Tabs Wall Adhesive</li> <li>FunderMax M.Look with max 1 1/2" air gap</li> </ol> </td> </tr> </table>	<ol style="list-style-type: none"> <li>Any MCM (aluminum, steel, copper, zinc) passing NFPA 285 with max 2 1/2" air gap</li> <li>Metal panel, uninsulated (aluminum, steel, copper, zinc)</li> <li>Fiber-cement siding, uninsulated</li> <li>Porcelain or ceramic tile</li> <li>Autoclaved-aerated-concrete (AAC) panels passing NFPA 285</li> <li>Stone/aluminum honeycomb composite building panels passing NFPA 285</li> <li>Natural stone veneer, adhered (1 1/4" min)</li> </ol>	<ol style="list-style-type: none"> <li>Thin (clay) brick, natural stone or artificial stone (min 3/4" thick) fully adhered with cementitious mortar (standard or polymer-modified) to min 1/2" thick cement backer board or gypsum sheathing with optional secondary WRB (not full coverage asphalt or self-adhered butyl)</li> <li>Stone Panels, Inc. StoneLite® panel system</li> <li>Glen-Gery Thin Tech® Elite Series or Tru-Brix®</li> <li>Tabs II Panel System with 1/2" bricks using Tabs Wall Adhesive</li> <li>FunderMax M.Look with max 1 1/2" air gap</li> </ol>	
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<b>Rough Openings</b>	<p>Rough opening perimeters shall incorporate one of the following, spanning at a minimum from the interior edge of the cladding to the interior edge of the exterior insulation at the rough opening.</p> <table border="0"> <tr> <td> <ol style="list-style-type: none"> <li>0.08" (min.) aluminum (i.e. window frame, flashing, lintel, c-channel)</li> <li>20 GA. (min.) sheet steel (i.e. window frame, flashing, lintel, c-channel)</li> <li>1/2" (min.) 4pcf (min.) mineral wool</li> </ol> </td> <td> <ol style="list-style-type: none"> <li>3/4" (min.) FRT wood buck</li> <li>3/4" (min.) FRT plywood</li> <li>5/8" (min.) type X GWB</li> </ol> </td> <td> <ol style="list-style-type: none"> <li>1/4" (min.) fiber cement board</li> </ol> </td> </tr> </table>	<ol style="list-style-type: none"> <li>0.08" (min.) aluminum (i.e. window frame, flashing, lintel, c-channel)</li> <li>20 GA. (min.) sheet steel (i.e. window frame, flashing, lintel, c-channel)</li> <li>1/2" (min.) 4pcf (min.) mineral wool</li> </ol>	<ol style="list-style-type: none"> <li>3/4" (min.) FRT wood buck</li> <li>3/4" (min.) FRT plywood</li> <li>5/8" (min.) type X GWB</li> </ol>	<ol style="list-style-type: none"> <li>1/4" (min.) fiber cement board</li> </ol>
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<b>Flashing</b>	<ul style="list-style-type: none"> <li>Any asphalt, acrylic or butyl based (12" max)</li> <li>Any liquid applied (12" max)</li> </ul>			

<sup>1</sup>Fire Retardant Treated Wood (FRTW), where allowed, must comply with IBC Section 2303.2.  
<sup>2</sup>No additional WRB over sheathing.

**NOTE:** For additional details of each component and confirmation of approved assembly, refer to DrJ Technical Evaluation Report (at [www.rmax.com](http://www.rmax.com)) or Fire Analysis Summary from Priest & Associate

**Table 2: Water Resistive Barriers (WRBs) Approved for Use in Rmax NFPA 285 Assemblies**

GROUP 1 WRB Over Exterior Sheathing (all claddings) Sheathing = gypsum or FRTW applied direct to studs, prior to ECOMAXci® FR Ply		
SELF ADHERED	FLUID APPLIED	
Dörken Systems: DELTA®-STRATUS SA	BASF: MasterSeal® AWB 660	Kemper Systems STS: Wall Guardian® FW-100
Dörken Systems: DELTA®-VENT SA	BASF: MasterSeal® AWB 660 I	NaturaSeal: AirSeal NS-A250-HP
Henry®: Blueskin® SA	GCP: PERM-A-BARRIER® NPL 10	NaturaSeal: AirSeal NS-A250-HP
SOPREMA®: SOPRASEAL® Stick 1100T	GCP: PERM-A-BARRIER® VPL 50 Membrane	Sika: SikaGard®-530
Tremco™: ExoAir® 110AT	Henry®: Air-Bloc® 32MR	SOPREMA®: SOPRASEAL® LM 204 VP
	Kemper Systems STS: Wall Guardian® FW-100-A	Tremco™: ExoAir® 230
GROUP 2 WRB Over Exterior Sheathing (all claddings), WRB Over Exterior Insulation (claddings 1-8) Sheathing = gypsum or FRTW applied direct to studs, prior to ECOMAXci® FR Ply; Insulation = ECOMAXci® FR Ply		
SELF ADHERED	FLUID APPLIED	
GCP: PERM-A-BARRIER® VPS	Carlisle: Fire Resist Barritech NP™	Pecora: ProPerm VP
Henry®: EnviroCap	Carlisle: Fire Resist Barritech VP	Pecora: XL-Perm <sup>ULTRA</sup> NP
Henry®: Blueskin® VP160	Dow®: DOWSIL™ DEFENDAIR 200	Pecora: XL-Perm <sup>ULTRA</sup> VP (10 mil DFT)
SIGA: Majvest® 500 SA	Dow®: DOWSIL™ DEFENDAIR 200C	PROSOCO: R-Guard® Cat 5™
SOPREMA®: SOPRASEAL® Stick VP	Dryvit®: Backstop® NT™	PROSOCO: R-Guard® VB
VaproShield®: RevealShield SA®	GCP: PERM-A-BARRIER® VPL	PROSOCO: R-Guard® Spray Wrap
VaproShield®: WrapShield SA®	GCP: PERM-A-BARRIER® VPL LT	PROSOCO: R-Guard® Spray Wrap MVP
W.R. Meadows®: AIR-SHIELD SMP	Henry®: Air-Bloc® 17MR	Sika: SikaGard®-535
	Henry®: Air-Bloc® 21FR	W.R. Meadows®: AIR-SHIELD LMP (Black)
	Henry®: Air-Bloc® 16MR	W.R. Meadows®: AIR-SHIELD LMP (Gray)
	Henry®: Air-Bloc® 31MR	W.R. Meadows®: AIR-SHIELD LSR
	Henry®: Air-Bloc® 33MR	W.R. Meadows®: AIR-SHIELD TMP
	Henry®: Air-Bloc® All-Weather STPE	
	Parex USA: WeatherSeal Spray & Roll-On	
MECHANICALLY ATTACHED		
Dörken Systems: DELTA®-FASSADE S	Dörken Systems: DELTA®-MAXX PLUS	Henry®: Super Jumbo Tex® 60 Minute <sup>1</sup>
Dörken Systems: DELTA®-FOXX PLUS	Dörken Systems: DELTA®-VENT S PLUS	Henry®: WeatherSmart® Drainable
GROUP 3 WRB Over Exterior Sheathing (all claddings), WRB Over Exterior Insulation (all claddings) Sheathing = gypsum or FRTW applied direct to studs, prior to ECOMAXci® FR Ply; Insulation = ECOMAXci® FR Ply		
SELF ADHERED	FLUID APPLIED	MECHANICALLY ATTACHED
Carlisle: Fire Resist 705FR-A	PROSOCO: R-Guard® Spray Wrap MVP	DuPont™: Tyvek® (various per ESR-2375)
GCP: PERM-A-BARRIER® Aluminum Wall Membrane		DuPont™: WEATHERMATE™
Henry®: FOILSKIN		DuPont™: WEATHERMATE™ Plus
Henry®: Blueskin® Metal Clad®		Kingspan: GreenGuard® MAX™ Building Wrap
SOPREMA®: SOPRASOLIN HD		
<sup>1</sup> Use over insulation is limited to stucco only. NOTE: For additional details of each component and confirmation of approved assembly, refer to Fire Analysis Summary from Priest & Associates.		

For warranties, limitations and conditions refer to the Rmax Sales Policy and applicable warranties. All documents are located at [www.rmax.com](http://www.rmax.com). For technical support, email [rmax.technical@us.sika.com](mailto:rmax.technical@us.sika.com). For sales support, pricing and availability, email [rmax@rmax.com](mailto:rmax@rmax.com) or call (800) 527-0890.