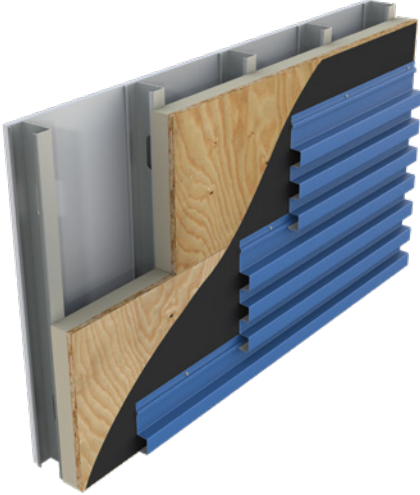


DEFEND-R CI PLY

POLYISOCYANURATE INSULATION BONDED TO FIRE TREATED PLYWOOD FOR EXTERIOR COMMERCIAL WALL APPLICATIONS



Defend-R CI Ply is an energy efficient rigid insulation panel composed of a closed cell polyisocyanurate foam core bonded to a premium performance coated glass facer on one side and 5/8" or 3/4" fire treated plywood on the other. It is designed for use in commercial wall applications to provide both continuous insulation and an attachment substrate.

APPLICATIONS

- Provides continuous insulation (ci) for standard wood frame, FRT wood frame, steel stud, CMU and concrete exterior wall constructions
- Compatible with numerous claddings/finishes including metal, masonry, fiber cement, stucco, terra cotta, mcm, natural stone, stone aluminum and EIFS
- Optimal substrate for mechanically attaching cladding materials
- Can be installed directly to steel studs for certain applications

PANEL CHARACTERISTICS

- Manufactured with NexGen Chemistry: Zero Ozone Depleting Potential (ODP); Contains no CFCs, HCFCs or HFCs; Virtually zero Global Warming Potential (GWP). Use of Drexel Metals products helps reduce the carbon footprint of buildings.
- Polyiso offers increased R-value per inch vs mineral fiber, XPS or EPS options
- Provides improved dimensional stability and fire performance

- A superior combination of high insulating properties and mechanically attachable surface
- ASTM C 1289 Type V made with Type II Class 2 foam
- Available in 4' x 8' (1220mm x 2440mm) panels in thickness of 1.6" (39mm) – 4.7" (119mm)
- Available with 5/8" or 3/4" fire treated plywood

DEFEND-R CI PLY THERMAL VALUES WITH 5/8" PLYWOOD

Long Term Thermal Resistance Values are based on ASTM C 1289

Thickness (inches)	(mm)	LTTR R-Value
1.60	41	6.8
2.10	53	9.8
2.60	66	12.9
3.10	79	16.1
3.60	91	19.3
4.10	104	22.5
4.60	117	25.8

DEFEND-R CI PLY THERMAL VALUES WITH 3/4" PLYWOOD

Long Term Thermal Resistance Values are based on ASTM C 1289

Thickness (inches)	(mm)	LTTR R-Value
1.70	43	7.0
2.20	56	10.0
2.70	69	13.1
3.20	81	16.3
3.70	94	19.5
4.20	107	22.7
4.70	119	26.0

LEED® POTENTIAL CREDITS FOR POLYISO USE

Energy and Atmosphere

- Optimize Energy Performance

Materials and Resources

- Building Life-Cycle Impact Reduction
- Environment Product Declaration
- Material Reuse
- Recycled Content
- Construction and Demolition Waste Management

Indoor Environmental Quality

- Thermal Comfort

TYPICAL PHYSICAL PROPERTY DATA

(Polyiso Foam Core Only)

Physical Property	Test Method	Value
Compressive Strength	ASTM D 1621	20psi* (138 kPa, Grade 2)
Dimensional Stability	ASTM D 2126	2% linear change (7 days)
Moisture Vapor Transmission	ASTM E 96	<1 perm (57.5ng/(Pa·s·m ²))
Water Absorption	ASTM C 209	<0.1% volume
Service Temperature		-100°F to 250°F (-73°C to 122°)
Resistance to Mold	ASTM D 3273	Passed (10)
Flame Spread Index	ASTM E 84	<75
Smoke Developed	ASTM E 84	<450

*Also available in 25 psi, Grade 3

CODES AND COMPLIANCES

- Incorporates APA-TECO Rated Exposure 1 Fire Treated Plywood with flame spread of <25 per ASTM E 84
- Designed for use in continuous insulation to assist in meeting the most current ASHRAE 90.1, IECC, IBC and IRC standards
- ASTM C 1289
- IBC Chapter 26 and IRC Section R316
- Numerous NFPA 285 compliant assemblies

STRUCTURAL

Drexel Metals Defend-R CI Ply, up to 2.7" of total thickness, can be used as structural insulating sheathing when applied to wood studs. Please contact Drexel Metals for shear values, wind loads and attachment requirements.

FASTENING

Several factors are involved in the proper fastening of Defend-R CI Ply. These include overall thickness of the panel, the weight of the specified cladding and the type of support provided at the base of the wall assembly. Please contact Drexel Metals for assistance with fastening rate and fastener type.

POST-INSTALLATION EXPOSURE

Defend-R CI Ply is not intended to be left exposed for extended periods of time. During the time between the installation of the Defend-R CI Ply and the application of the exterior cladding it is recommended that the WRB be installed as soon as possible. If the WRB is not being installed right away it is recommended that the Defend-R CI Ply be protected from excess moisture and UV. All unfaced foam exposed directly to daylight can be taped with a compatible waterproof tape and the edges of the boards can be buttered with a sealant that is compatible with the WRB.

JOB-SITE STORAGE

Good construction practice dictates that all insulations should be protected from moisture and direct sunlight during job-site storage. Pallets of Drexel Metals Defend-R CI Ply are double packaged in a UV resistant polyethylene bag. This moisture resistant package is designed for protection from the elements during flatbed shipment from our factories to the job-site. Outdoor storage for extended periods of time requires waterproof tarpaulins and elevated storage above ground level a minimum of 2". Additionally, we recommend slitting the bundle packaging vertically down the center of the two short sides to prevent moisture accumulation within the package.

WARNINGS AND LIMITATIONS

Insulation must be protected from open flame. Drexel Metals will not be responsible for specific building design by others, for deficiencies in construction or workmanship, for dangerous conditions on the job site or for improper storage and handling. Technical specifications shown in this literature are intended to be used as general guidelines only and are subject to change without notice. Call Drexel Metals for more specific details.

Note: Defend-R CI Ply is not intended for use below grade.

