

DuPont™ Isocast™ R Polyisocyanurate Insulation

Superior Insulation for Concrete Sandwich Panel Applications

FEATURES/BENEFITS

Description

DuPont™ Isocast™ R Polyisocyanurate Insulation* combines a patented high-performance polyisocyanurate foam core with a trilaminate aluminum/poly/kraft facer on both sides to achieve strength, high R-value** and moisture resistance.

Isocast™ R Insulation is designed for use in concrete panel walls (precast, tilt-up or poured in place), where it is sandwiched between two layers of concrete with connectors holding together the finished panel. The polyisocyanurate core provides superior insulation, while the facer makes the board virtually moisture resistant. Because it has no exposed metal facings, Isocast™ R will not corrode or react chemically with the concrete in sandwich panel applications.

Ease of Installation

Isocast™ R Insulation boards:

- Are lightweight – easy to handle, cut and install
- Feature trilaminate (aluminum/poly/kraft) facers for moisture resistance
- Provide economical thermal performance under harsh vapor drive conditions often exhibited in precast concrete panels in cold climates
- Will not corrode or react chemically with concrete

Sustainable Solutions

Isocast™ R Insulation is manufactured with hydrocarbon blowing agents, which have no ozone depletion potential.

PROPERTIES

Isocast™ R exhibits physical properties as indicated in Table 1 when tested as represented. Review all instructions and (Material) Safety Data Sheet ((M)SDS) before use. Please contact DuPont at 1-866-583-2583 when additional guidance is required for writing specifications that include this product.

TABLE 1: Typical Physical Properties of Isocast™ R Polyisocyanurate Insulation

Property and Test Method	Value
Thermal Resistance ⁽¹⁾ , per inch, ASTM C518 @ 75°F mean temp., ft ² ·°F/Btu, R-value, min.	6.5
Compressive Strength ⁽²⁾ , ASTM D1621, psi, min.	25
Flexural Strength, ASTM C203, psi, min.	40
Water Absorption, ASTM C209, % by volume, max.	0.1
Water Vapor Permeance, ASTM E96, perms, max.	<0.03
Maximum Use Temperature, °F	190
Surface Burning Characteristics, ASTM E84 for both foam core and finished product	Class A
Flame Spread	25
Smoke Developed	<450

¹ R-values are consistent with criteria of ASTM C578 and the requirements of the FTC R-value rule (16 CFR Part 460).

² Vertical compressive strength is measured at 10 percent deformation or at yield, whichever occurs first.

* Isocast™ R Polyisocyanurate Insulation is a former product of The Dow Chemical Company.

** R means resistance to heat flow. The higher the R-value, the greater the insulating power. R-value determined by ASTM C518.

TESTING

Applicable Standards

DuPont™ Isocast™ R Polyisocyanurate Insulation meets ASTM C1289 – Standard Specification for Faced Rigid Cellular Polyisocyanurate Thermal Insulation Board, Type I. Applicable standards include:

- **C203** – Standard Test Methods for Breaking Load and Flexural Properties of Block-Type Thermal Insulation **Isocast™ R**
- **C209** – Standard Test Methods for Cellulosic Fiber Insulating Board
- **C518** – Standard Test Method for Steady-State Thermal Transmission Properties by Means of the Heat Flow Meter Apparatus
- **D1621** – Standard Test Method for Compressive Properties of Rigid Cellular Plastics
- **D2126** – Standard Test Method for Response of Rigid Cellular Plastics to Thermal and Humid Aging
- **E96** – Standard Test Methods for Water Vapor Transmission of Materials
- **D1623** – Standard Test Method for Tensile and Tensile Adhesion Properties of Rigid Cellular Plastics

Notice

Isocast™ R complies with the following codes:

- International Residential Code 2009 (IRC) Section 316
- International Building Code (IBC) Section 2603
- ICC-ES ESR 3089

Application and system code requirements vary. Contact your DuPont sales representative or local authorities for state and local building code requirements and acceptances.

Warranty

Warranties are available as described at building.dupont.com/warranties.

HANDLING

WARNING: For Professional Use Only – Read and follow the entire Handling section and the Safety Data Sheets (SDSs, formerly MSDSs or Material Safety Data Sheets) carefully before use. The information below is designed to protect the user and allow for safe use and handling of DuPont products.

Precautionary Statements

- **Isocast™ R Insulation** should be used only in strict accordance with product application instructions.
- **Isocast™ R** is combustible; protect from high heat sources. Local building codes may require a protective or thermal barrier. For more information, consult MSDS, call DuPont at 1-866-583-2583 or contact your local building inspector.
- Follow all applicable federal, state, local and employer regulations.

Disposal

Dispose of any residual **Isocast™ R** product, coated debris, or solvent in accordance with applicable federal, state, and local government regulations.



**For more information visit
building.dupont.com/isocast
or call 1-866-583-2583**

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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 call the DuPont Contact Center at 866-583-2583 or contact your local building inspector. For emergencies contact Chemtrec 800-424-9300, CCN (Contract Number) 7442.

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

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