ISOCAST™ R Polyisocyanurate Insulation

1. PRODUCT NAME
ISOCAST™ R Polyisocyanurate Insulation

2. MANUFACTURER
The Dow Chemical Company
Dow Building Solutions
200 Larkin Center, 1605 Joseph Drive
Midland, MI 48674
1-866-583-BLUE (2583)
Fax 1-989-832-1465
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3. PRODUCT DESCRIPTION
ISOCAST™ R 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.

Basic Use
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.

4. TECHNICAL DATA
Applicable Standards
ISOCAST™ R 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
- C209 – Standard Test Methods for Cellulosic Fiber Insulating Board
- D2126 – Standard Test Method for Response of Rigid Cellular Plastics to Thermal and Humid Aging

Code Compliances
ISOCAST™ R insulation 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 Dow sales representative or local authorities for state and local building code requirements and acceptances.

TYPICAL PHYSICAL PROPERTIES
ISOCAST™ R insulation exhibits the properties and characteristics indicated in Table 1 when tested as represented.

ENVIRONMENTAL DATA
ISOCAST™ R insulation is manufactured with hydrocarbon blowing agents, which have no ozone depletion potential.

FIRE information ISOCAST™ R insulation is combustible; protect from high heat sources. Local building codes may require a protective or thermal barrier. 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.

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

<table>
<thead>
<tr>
<th>Property and Test method</th>
<th>Value</th>
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</thead>
<tbody>
<tr>
<td>Thermal Resistance*, per inch, ASTM C518 @ 75°F mean temp., ft²•°F/Btu, R-value, min.</td>
<td>6.5</td>
</tr>
<tr>
<td>Compressive Strength**, ASTM D1621, psi, min.</td>
<td>25</td>
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<tr>
<td>Flexural Strength, ASTM C203, psi, min.</td>
<td>40</td>
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<tr>
<td>Water Absorption, ASTM C209, % by volume, max.</td>
<td>0.1</td>
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<tr>
<td>Water Vapor Permeance, ASTM E96, perms, max.</td>
<td>&lt;0.03</td>
</tr>
<tr>
<td>Maximum Use Temperature, °F</td>
<td>190</td>
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</tbody>
</table>

(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.

TABLE 1: Typical Physical properties of ISOCAST™ R Polyisocyanurate Insulation
5. INSTALLATION
Boards of ISOCAST™ R insulation are lightweight and easy to handle, cut and install. In concrete panel applications, the insulation boards are sandwiched between two layers of concrete and the assembly is held together with connectors.

6. AVAILABILITY
ISOCAST™ R insulation is distributed through an extensive network. For more information, call 1-800-232-2436.

7. WARRANTY

8. MAINTENANCE
Not applicable.

9. TECHNICAL SERVICES
Dow can provide technical information regarding the physical properties of ISOCAST™ R insulation. Technical personnel are available to assist with any insulation project. For technical assistance, call 1-866-583-BLUE (2583).

10. FILING SYSTEMS
• www.dowbuildingsolutions.com
• www.sweets.com