



# TUFF-R™ Commercial and Super TUFF-R™ Commercial Insulation

## 1. PRODUCT NAME

TUFF-R™ Commercial and Super TUFF-R™ Commercial Insulation

## 2. MANUFACTURER

The Dow Chemical Company  
Dow Building Solutions  
200 Larkin Midland, MI 48674  
1-866-583-BLUE (2583)  
Fax 1-989-832-1465

[www.dowbuildingsolutions.com](http://www.dowbuildingsolutions.com)

## 3. PRODUCT DESCRIPTION

TUFF-R™ Commercial and Super TUFF-R™ Commercial polyisocyanurate insulation products consist of a patented, high-insulating-value, closed-cell polyisocyanurate foam core sandwiched between a choice of durable, exterior facers.

TUFF-R™ Commercial insulation has reflective foil facers on both sides of the board. When additional durability is required, Super TUFF-R™ Commercial insulation is the product of choice. The Super TUFF-R™ facers are composed of a reinforced, coated three-ply polymer/foil facer on one side. The other side is an equally reinforced polymer/foil super Tri-Plex non-reflective facer. The three-ply facers of Super TUFF-R™ improve shipping, storage and job site durability.

TUFF-R™ Commercial and Super TUFF-R™ Commercial insulation products offer high, long-term Rvalue\*. The facers reduce intrusion by water and water vapor into the foam insulation core, and allow the foam R-value to stabilize at a higher value. TUFF-R™ Commercial and Super TUFF-R™ Commercial insulation can be detailed as an air barrier.

## Basic Use

TUFF-R™ Commercial and Super TUFF-R™ Commercial insulation products can be used in commercial interior wall construction behind a minimum 1/2" gypsum board or equivalent thermal barrier interior finish.

## Sizes

Product thicknesses and R-values are shown in Table 1. Not all products are available in all parts of the country. Other product sizes are available by custom order. Consult a Dow representative for board sizes and additional thickness information.

## 4. TECHNICAL DATA

### Applicable Standards

TUFF-R™ Commercial and Super TUFF-R™ Commercial insulation meet ASTM C1289 – Standard Specification for Faced Rigid Cellular Polyisocyanurate Thermal Insulation Board, Type I. Applicable standards include:

- D1621 – Standard Test Method for Compressive Properties of Rigid Cellular Plastics

- C209 – Standard Test Methods for Cellulosic Fiber Insulating Board
- E96 – Standard Test Methods for Water Vapor Transmission of Materials
- D1622 – Standard Test Method for Apparent Density of Rigid Cellular Plastics
- C203 – Standard Test Methods for Breaking Load and Flexural Properties of Block-Type Thermal Insulation
- C236 – Standard Test Method for Steady-State Thermal Performance of Building Assemblies by Means of a Guarded Hot Box
- C518 – Standard Test Method for Steady-State Thermal Transmission Properties by Means of the Heat Flow Meter Apparatus

### Physical Properties

TUFF-R™ Commercial and Super TUFF-R™ Commercial insulation products exhibit physical properties as indicated in Table 2 when tested as represented.

### Environmental Data

TUFF-R™ Commercial and Super TUFF-R™ Commercial insulation products are manufactured with hydrocarbon blowing agents, which have no ozone depletion potential.

**TABLE 1: Sizes and R-Values for TUFF-R™ Commercial and Super TUFF-R™ Commercial Insulation**

Nominal Board Thickness <sup>(1)</sup> (in.)	R-Value	
	TUFF-R™	Super TUFF-R™
1.0	6.5	6.5
1.5	9.8	9.8
1.75	N/A	11.4
2.0	13.0	13.0

<sup>(1)</sup> Not all product sizes are available in all regions.

<sup>(2)</sup> R means resistance to heat flow. The higher the R-value, the greater the insulating power. R-values are expressed in ft<sup>2</sup>•h•°F/Btu. R-value determined by ASTM C518.

## Fire Protection

TUFF-R™ Commercial and Super TUFF-R™ Commercial insulation products are combustible; protect from high heat sources. Local building codes may require a protective or thermal barrier. CAUTION: This product is combustible and shall only be used as specified by the local building code with respect to flame spread classification and to the use of a suitable 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.

## Code Compliances

TUFF-R™ Commercial and Super TUFF-R™ Commercial insulation products comply with the following standards and codes:

- 2009 IRC – International One and Two-Family Dwelling Code, Section 316; 2009 International Building Code, Section 2603
- ICC-ES ESR 3089

## 5. INSTALLATION

TUFF-R™ Commercial and Super TUFF-R™ Commercial insulation boards are easy to handle, cut and install. They can be cut with a utility knife or any sharp blade. Contact a local Dow representative or access the literature library at [www.dowbuildingsolutions.com](http://www.dowbuildingsolutions.com) for more specific instructions.

## 6. AVAILABILITY

TUFF-R™ Commercial and Super TUFF-R™ Commercial insulation products are distributed through an extensive network. For more information, contact your local Dow representative or call 1-800-232-2436.

## 7. WARRANTY

A 15-year limited thermal warranty is available. Ask your Dow representative for details.

## 8. MAINTENANCE

Not applicable.

## 9. TECHNICAL SERVICES

Dow can provide technical information to help address questions when using TUFF-R™ Commercial and Super TUFF-R™ Commercial insulation products. 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](http://www.dowbuildingsolutions.com)  
[www.sweets.com](http://www.sweets.com)

**TABLE 2: Physical Properties of TUFF-R™ Commercial and Super TUFF-R™ Commercial Insulation**

Property and Test Method	Value
Compressive Strength, ASTM D1621, psi, min.	25
Water Absorption, ASTM C272, % by volume, core foam, max.	0.1
Water Vapor Permeance, ASTM E96, perm	<0.03
Maximum Use Temperature, °F	190
Flexural Strength for 1" core foam, ASTM C203, psi, min.	40



In the U.S.

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**1-800-363-6210** (French)

For Sales Information:

**1-800-232-2436** (English)  
**1-800-565-1255** (French)

[dowbuildingsolutions.com](http://dowbuildingsolutions.com)

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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, 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

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