



Rhino Linings®

thermalguard CC2^{hy1}

By  **Rhino Linings®**

Data Sheet

DESCRIPTION: ThermalGuard CC2 HY1 is a fast set, closed cell 245fa blown spray polyurethane foam (SPF) insulation, is designed for use in commercial, industrial, metal buildings, pole barns, crawl spaces, basements, etc. ThermalGuard CC2 HY1 is applied as a liquid and expands to 25x in seconds to fill and seal building cavities of any shape and size, and recommended thickness of spray should be no more than 1.5" per pass.

TYPICAL USES:

- Post Frame Buildings
- Horse Barns
- Post Frame Houses
- Steel Truss Pole Barns
- Garages/Workshops
- Pole Barns
- Airplane Hangars
- Greenhouses/Hot houses

FEATURES & BENEFITS:

- E84 Class 1 fire rated
- Low odor during application and produces no toxic vapors after application
- Seals, insulates and minimizes uncontrolled air movement into a building envelope
- Reduces energy consumption from heating and cooling
- 245fa-blown, non-ozone depleting agent

CHEMICAL PROPERTIES:

	Test	Isocyanate (A)	Resin (B)
Specific Gravity (grams/cc)	ASTM D-1475	1.23	1.13
Viscosity (cps)	ASTM D-2196	200 – 250	900 – 1200
Mix Ratio, Parts per Volume		1	1
Shelf Life - Unopened Containers		6 months	6 months

TYPICAL PHYSICAL PROPERTIES:

	Test	Result
Density (nominal):	ASTM D-1622	2.0 lb/ft ³ (32 kg/m ³)
Tensile Strength (psi)	ASTM D-1623	70
Compressive Strength (psi)	ASTM D-1621	40
Closed-Cell Content (%)	ASTM D-2856	96
Fire Rating:	ASTM E-84	Class I
Flame Spread Index	ASTM E-84	≤25
Smoke Development Index	ASTM E-84	≤450
R-Value:	ASTM C-518	6.3/inch
Service Temperature:		250° F (120° C)

PROCESS TEMPERATURE AND ENVIRONMENT CONDITIONS: ThermalGuard CC2 HY1 must be spray-applied using approved equipment. The system settings required to achieve quality spray foam application will vary depending on environmental and substrate conditions. The following recommended parameters will help ensure optimum foam quality.

Iso (A) & Resin (B) Components	Processing Pressure	Ambient Temperature
115 – 145° F (46 – 63° C)	900 – 1400 psi	20 – 105° F (-6.7 – 40.6° C)
Substrate Temperature	Substrate Moisture Content	Maximum Lift Thickness
20 – 105° F (-6.7 – 40.6° C)	<19%	1"

PREPARATION: ThermalGuard CC2 HY1 resin (B) does not require agitation. Do not pre-heat or recirculate resin (B) as doing so will result in the “boiling off” of the 245fa blowing agent which will result in poor yield and poor foam performance.

ThermalGuard™ CC2 HY1 (continued):

APPLICATION INSTRUCTIONS: ThermalGuard CC2 HY1 is installed by independent SPF contractors. It is recommended that building owners verify that the SPF insulation contractor maintains proper credentials, insurance, and licenses and is properly trained to safely install SPF insulation products.

ThermalGuard CC2 HY1 demonstrates excellent adhesion to various substrates when installed according to manufacturer specifications. Allow a minimum of 2 hours for full off-gas and cure before application of a primer, topcoat, or intumescent paint. For best results apply primer, topcoat, or intumescent coating within 72 hours of installation of foam. ThermalGuard CC2 HY1 should be installed at a maximum thickness of 1.5 inches per pass with a minimum of 30 minutes between passes. IT IS THE APPLICATOR'S RESPONSIBILITY TO TEST LIFT THICKNESS FOR A PARTICULAR APPLICATION PRIOR TO COMMENCING INSTALLATION TO ENSURE THAT THE PRODUCT CAN BE INSTALLED SAFELY AT THE DESIRED THICKNESS WITHOUT RISK OF CHARRING OR FIRE.

ThermalGuard CC2 HY1 should not be left exposed to sunlight, as UV light will rapidly degrade foam. Do not use near high heat or open flame.

ThermalGuard CC2 HY1 must be covered with an approved 15-minute thermal barrier when used as insulation for residential or commercial buildings. Installation must comply with all applicable building codes. Do not install ThermalGuard CC2 HY1 at a thickness exceeding 1.5 inches per pass and do not apply subsequent passes within 30 minutes of the previous pass.

SUBSTRATES: ThermalGuard CC2 HY1 is chemically & physically compatible with most common building materials including electrical wiring, wood, metal, concrete, plastic (PVC), copper, vinyl, and glass. It is the responsibility of the contractor to check substrate compatibility prior to starting of the job.

HOW SUPPLIED: Net weight per set is 965 pounds (437.7 kg). A set of ThermalGuard CC2 HY1 consists of one (1) 55 gallon (208 L) drum of 'A' component and one (1) 55 gallon (208 L) drum of 'B' component.

Part Numbers: Set: TGCC2 SP SET; Side A: ISO A-D; Side B: TGCC2 SP B-D.

STORAGE: ThermalGuard CC2 HY1 should be stored between 60 – 80° F (16 – 26° C) out of direct sunlight. Do not allow material to freeze.

SAFETY PRECAUTIONS: Health Considerations: Consult the Rhino Linings® Safety Data Sheets (SDS)

Chemical systems require the use of proper safety equipment and procedures. Please follow the Rhino Linings® product SDS and Safety Manual for detailed information and handling guidelines.

For Your Protection: The information and recommendations in this publication are, to the best of our knowledge, reliable. Suggestions made concerning the products and their uses, applications, storage and handling are only the opinion of Rhino Linings Corporation. Users should conduct their own tests to determine the suitability of these products for their own particular purposes and of the storage and handling methods herein suggested. The toxicity and risk characteristics of products made by Rhino Linings Corporation will necessarily differ from the toxicity and risk characteristics developed when such products are used with other materials during a manufacturing process. The resulting risk characteristics should be determined and made known to ultimate end-users and processors. Because of numerous factors affecting results, **Rhino Linings Corporation makes no warranty of any kind, express or implied**, other than that the material conforms to its applicable current Standard Specifications. Rhino Linings Corporation hereby disclaims any and all other warranties, including but not limited to those of merchantability or fitness for a particular purpose. No statements made herein may be construed as a representation or warranty. The liability of Rhino Linings Corporation for any claims arising from or sounding in breach of warranty, negligence, strict liability, or otherwise shall be limited to the purchase price of the material.

Read This Before You Buy

What You Should Know About R-values

The chart shows the R-value of this insulation. R means resistance to heat flow. The higher the R-value, the greater the insulating power. Compare insulation R-values before you buy.

There are other factors to consider. The amount of insulation you need depends mainly on the climate you live in. Also, your fuel savings from insulation will depend upon the climate, the type and size of your house, the amount of insulation already in your house, and your fuel use patterns and family size. If you buy too much insulation, it will cost you more than what you'll save on fuel.

To get the marked R-value, it is essential that this insulation be installed properly.

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