

Data Sheet



PART NUMBERS: TGCC2 ECO SET

DESCRIPTION:

ThermalGuard[™] CC2 ECO is a fast set, hydrofluoro-olefin (HFO) spray polyurethane foam (SPF) insulation designed for use in residential and commercial structures, exterior foundation or perimeter insulation, below grade applications, exterior tank/pipe insulation, etc. ThermalGuard CC2 ECO is applied as a liquid and expands in seconds to fill and seal building cavities of any shape and size. It exhibits superior thermal insulation, air-barrier, and sound attenuation properties compared to conventional insulation materials. Once fully cured, ThermalGuard CC2 ECO remains rigid maintaining significant structural strength and thermal insulation properties in adverse conditions across a wide variety of applications.

FEATURES AND BENEFITS:

- Class 1 fire rated.
- ICC-ES ESL-1121.
- No ozone depleting substances.
- Global warming potential (GWP) of 1.
- 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.

TYPICAL USES:

- Insulation Foam For Walls, Ceilings, Roof Decks, and Crawlspace
- Residential, Commercial, and Industrial Building Insulation

CHEMICAL PROPERTIES:

		Isocyanate (A)	Resin (B)
Specific Gravity (grams/cc)	ASTM D-1475	1.23	1.19
Viscosity (cps)	ASTM D-2196	200 – 250	600 – 900
Mix Ratio, Parts per Volume		1	1
Cream Time at 77° F (25° C)		2 - 4 seconds	
Rise Time at 77° F (25° C)		10 - 12 seconds	
Initial Cure Time (hours)		<1	
Total Cure Time (hours)		24	
Shelf Life - Unopened Containers		6 months	6 months

TYPICAL PHYSICAL PROPERTIES:

	Test	Result
Density (nominal) at 2”:	ASTM D-1622	1.8 lb/ft ³ (32 kg/m ³)
Tensile Strength (psi)	ASTM D-1623	40
Compressive Strength (psi)	ASTM D-1621	20 - 25
Closed-Cell Content (%)	ASTM D-2856	> 90
Dimensional Stability (%)	ASTM D-2126	< 4
R-Value at 72.5° F (22.5° C)	ASTM C-518	6.7/inch
Fire Rating	ASTN 84	Class 1
Flame Spread Index	ASTM E-84	≤ 25 Flame (10)
Smoke Development at 4 inches	ASTM E-84	≤ 450 Smoke (300)

PROCESS TEMPERATURE AND ENVIRONMENT CONDITIONS:

ThermalGuard CC2 ECO 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) and Resin (B) Components	Hose Temperature	Processing Pressure	Relative Humidity
120 - 130° F (54.4° C)	120 - 130°F (54.4°C)	1100 – 1500 psi	<85%
Substrate Temperature	Substrate Moisture Content	Maximum Lift Thickness	
32 – 120° F (0 - 48.9° C)	<18%	3.5"	

PREPARATION OF SUBSTRATES:

Providing the proper substrate is the responsibility of the owner, the owner’s appointed representative, the contractor, and/or inspector. It is recommended to remove dust, dirt, oil, paint, and alternative polymers from all surfaces prior to applying. See SPFA guidelines for further details on substrate prep. www.sprayfoam.org/

PRECONDITIONING:

1. If the drum temperature is 80° F (26.6° C) or higher, use caution when opening the drum! The contents will be under pressure.
2. It is recommended to precondition material to (65 - 75° F) prior to application. Material may thicken at lower temperatures which can cavitate pumps.

MIXING:

1. Do not mix.
2. Do not recirculate. Agitation, recirculation (pre-heating) of resin (B) material can cause damage to blowing agent, which can result in poor yield and foam performance.

PRESSURE SETTINGS:

1. Product should be sprayed with a high pressure plural-component proportioner capable of a minimum of 1000 psi dynamic pressure.
2. Static pressure is typically set between 1100 – 1500 psi.
3. Dynamic pressure typically operates at a minimum of 1000 psi.

TEMPERATURE SETTINGS:

1. Primary heaters and hose heaters are typically set between (120 – 130° F). Higher temperatures are utilized in winter months, lower temperatures are utilized in summer months. Thin passes (1/4" or less) are not recommended even to cold surfaces.
2. Proper application temperature setting is the responsibility of the end user. Equipment temperature varies and can be dependent on equipment, hose length, elevation, ambient temperature, substrate temperature, humidity, and other factors.

APPLICATION:

1. Clean surfaces according to “Preparation of Substrates” section.
2. If priming, follow manufacturer recommendations. Ensure primer is adequately cured prior to application.
3. Substrate temperatures should be between 32 – 120° F (0 – 48.9° C).
4. Flush an adequate amount of material through the lines/gun prior to spraying desired surface when changing between systems. Flush amount will be dependent on prior system used.
5. Can be applied up to 3.5 inches max. Allow 30 min before next pass and double each time to prevent the risk of charring or fire.
6. Before application, test material to ensure that material sprays, cures, and hardens properly.
7. Inspect applied material intermittently to ensure no problems exist. If problems are detected, discontinue application and inspect all substrates, equipment, gun, and liquid material for problem source(s).

ThermalGuard CC2 ECO 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 ECO 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.

SUBSTRATES:

ThermalGuard CC2 ECO is chemically and physically compatible with all common building materials including electrical wiring, wood, metal, concrete, plastic (PVC), copper, vinyl, and glass.

CLEANING AND MAINTENANCE:

Spray equipment must be maintained in proper operating condition. Failure to adequately maintain spray equipment may result in poor product performance. Refer to your equipment manufacturer's maintenance procedures for more details.

Contact Rhino Linings® Technical Services for long-term equipment storage recommendations.

HOW SUPPLIED:

Net weight per set is 980 pounds (449.5 kg). A set of ThermalGuard CC2 ECO consists of one (1) 55 gallon (208 L) drum of 'A' component and one (1) 55 gallon (208 L) drum of 'B' component.

STORAGE:

All resins should be stored between 50 – 90° F (10 – 32.2° C) out of direct sunlight. Do Not allow material to freeze.

SAFETY PRECAUTIONS:

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

This chemical system requires the use of proper safety equipment and procedures. Please follow the Rhino Linings product SDS 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 end users and processors

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Contact Rhino Linings Technical Support at 858-450-0411 ext. 2 for additional questions.

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