Rhino Linings®

thermalguard™ OC1

Data Sheet

Part #: TGOC1 Set

DESCRIPTION: ThermalGuard OC1 is a fast set, open-cell, 100% water-blown spray polyurethane foam (SPF) insulation system designed to reduce energy consumption in residential & commercial structures by up to 50% by insulating and air sealing the thermal envelope in a single step. ThermalGuard OC1 is applied as a liquid and then expands over 40x in seconds to fill and seal building cavities of any shape or size. It exhibits superior thermal insulation, air-barrier, and sound attenuation properties compared to conventional insulation materials. Once fully cured ThermalGuard OC1 is semi-flexible which will allow for some movement of the substrate or building over time while maintaining proper insulation & air sealing of the building envelope.

TYPICAL USES:

- Insulation foam for walls, ceilings, roof decks, crawlspaces
- Residential, commercial and industrial building insulation

FEATURES & BENEFITS:

- No ozone depleting substances, VOCs, HFCs and is PBDE-free
- 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

CHEMICAL PROPERTIES:		**Isocyanate (A)**	**Resin (B)**
Specific Gravity (grams/cc)	ASTM D-1475	1.22	1.10
Viscosity (cps)	ASTM D-2196	200 – 250	350 – 400
Mix Ratio, Parts per Volume		1	1
Cream Time @ 25 °C (77 °F)		3 – 5 seconds	
Rise Time @ 25 °C (77 °F)		8 – 14 seconds	
Total Cure Time		4 hours	
Shelf Life - Unopened Containers		6 months	6 months

TYPICAL PHYSICAL PROPERTIES:	**Test**	**Result**
Density (nominal):	ASTM D-1622	1.0 lb/ft3 (16 kg/m3)
Tensile Strength (psi)	ASTM D-1623	13
Compressive Strength (psi)	ASTM D-1621	7
Open-Cell Content (%)	ASTM D-2856	>90
Vapor Permeability* (perm @ 5.5" (139.7 mm))	ASTM E-96	3.6
Air Leakage** (L/s/m² @ 75 Pa @ 3")	ASTM E-283	0.002
Dimensional Stability (%)	ASTM D-2126	<2Δ
R-Value:	ASTM C-518	4.7/inch

PROCESS TEMPERATURE: ThermalGuard OC1 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	Substrate Temp.	Substrate Moisture Content
115 – 150 °F (46 – 66 °C)	900 – 1500 psi	>30 °F (-1 °C)**	<19%

**Winter-grade formulas are recommended and may be required below 45 °F (7 °C)

PREPARATION: ThermalGuard OC1 resin (B) component requires agitation for a minimum of 30 minutes prior to installation if material. Depending on conditions, continuous agitation may be required during application to prevent phasing or separation if material is not used within 24 – 48 hours of initial mixing.

APPLICATION INSTRUCTIONS: ThermalGuard OC1 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. To apply, use 1:1 ratio proportioning system that can achieve the specified temperature and pressure requirements.

(continued)

THERMALGUARD OC1 *(continued)*:

ThermalGuard OC1 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 OC1 should be installed at a maximum thickness of 3 inches per pass.

ThermalGuard OC1 should be used for exterior applications, as UV light will rapidly degrade foam. It should not be used where foam wills tay submerged in water or below grade where back-fill material may crush or damage the product. Do not use near high heat or open flame.

Federal, state or local building codes may require ThermalGuard OC1 to be covered with an approved 15-minute thermal barrier. Installation must comply with all applicable building codes. Consult your local building code official for approvals and recommendations.

SUBSTRATES: ThermalGuard OC1 is chemically and 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 950 pounds (430.9 kg). A set of ThermalGuard OC1 consists of one (1) 55 gallon (208 L) drum of 'A' component and one (1) 55 gallon (208 L) drum of 'B' component.

Part A - Iso Pt A, part #: FFPF-ISO A
Part B - ThermalGuard OC1 part B, part #: FFPF-PUOC1.0P PB

STORAGE: ThermalGuard OC1 should be stored between 50 – 90° F (10 – 32° 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 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.

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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.

Rhino Linings®
PROTECTION NEVER LOOKED SO GOOD™

Rhino Linings Corporation
9747 Businesspark Avenue, San Diego, CA 92131
858-450-0441 • Fax 858-450-6881
1-800-422-2603
www.rhinolinings.com