

# TECHNICAL DATA SHEET

Material Specification Criteria | Project Submittal Data



## Thermoseal CCX

### Medium Density • Closed Cell Spray Foam Insulation

ThermoSeal CCX is a two component, semi-rigid, medium density, 2 lb closed cell polyurethane foam insulation system which simultaneously insulates and air-seals your building structure. ThermoSeal CCX requires the use of an "A" component (ISO) and a blended "B" component (RESIN), which contains ZERO ozone depleting catalysts, polyols and fire retarding materials. ThermoSeal CCX is designed to make homes more energy efficient, quieter, healthier and more comfortable. ThermoSeal CCX is applied as a liquid spray which expands approximately 15 times its initial mass and cures within seconds into a semi-rigid mass. ThermoSeal CCX fills all building cavities completely sealing all cracks, crevices, and voids where air loss and infiltration are most common.

#### Physical Properties

Property	Value	Test Method
R-Value	6.7 Summer@1"/6.9 Winter@1"	ASTM C 518
Core Density	2.23 lb/ft <sup>3</sup> Summer/2.17 lb/ft <sup>3</sup> Winter	ASTM D 1622
Closed Cell Content	>= 93%	ASTM D 6226
Water Vapor Transmission - Permeance	Perms: <1@ 1"	ASTM E 96
Air Leakage Rate	<.02 L/sm <sup>2</sup> @ 75Pa@1"	ASTM E 283
Compressive Strength (PSI)	18 psi Summer/23 psi Winter	ASTM D 1621
Tensile Strength (PSI)	18 psi Summer/54 psi Winter	ASTM D 1623
Dimensional Stability	5.45% Summer/4.14% Winter	ASTM D 2126
Water Absorbtion (volume)	0.87% Summer/0.81% Winter	ASTM D 2842
VOC Emmissions	Meets Criteria	UL (Greenguard Gold)
Fungi Resistance	Zero Rating	ASTM C 1338

#### Fire Properties

Property	Value	Test Method
Surface Burning Charateristics • Flame Spread • Smoke Index	Class 1 Pass 5 350 Summer/450 Winter	ASTM E 84
Ignition Barrier	• Compliant with 2009, 2012 & 2015 IBC, IRC and ICC-ES AC377 Appendix X requirements for use in attics and crawlspaces without a prescriptive ignition barrier or intumescent coating.	ICC- ES AC377 Appendix X
Thermal Barrier	• Compliant with 2009, 2012 & 2015 IBC and IRC without a 15 minute Thermal Barrier when coated with IFTI's DC315 at (88.88 sq. ft./gal @ 18 mils wet and 12 mils dry) coverage rate of 1.136 gallons (4.3 L) per 100 square feet (9.3 m2)	NFPA 286

#### Evaluation Report

Evaluation Report	#ESR-4137	ICC Council
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### Storage and Processing Information

#### Liquid Component Properties

Property	A Side - PMDI	B Side- Thermoseal CCX
Color	Brown	Blue
Viscosity @ 77°F (25°C)	185 - 230 cps	200 - 350 cps
Specific Gravity	1.25	1.17 - 1.22
Storage Temperature	50°F-80°F (10°C-27°C)	59°F-77°F (15°C-25°C)
Mixing Ratio (By Volume)	1:1	1:1
Shelf Life • Of unopened drums stored within specified range	1 Year	6 Months

#### Recommended Processing Parameters

Recirculation Target	Do not recirculate. Gradually warm drums to 77°F prior to use.	
Primary Heater Target (Initial)	100°F	38°C
Primary Hose Target (Initial)	100°F	38°C
Target Processing Pressure	1200 psi	8274 kPa
Substrate & Ambient Temp	>10°F (Winter)/ >50 °F (Summer)	>-12°C (Winter)/ >10 °C (Summer)
Moisture Content of Substrate	<19%	<19%
Moisture Content of Concrete • Must be clean, dry and free of dust and debris	<10%	<10%

**Processing** - Application processing temperatures can vary and are dependent upon indoor ambient temperature, outdoor ambient temperature, substrate temperature, humidity, elevation, substrate type, equipment, and other factors. While manufacturing polyurethane foam plastic on site, the applicator must continuously observe the characteristics of the sprayed foam and adjust the processing temperatures and pressures to maintain optimal cell structure, adhesion, and overall foam quality. **It is the sole responsibility of the applicator** to manufacture Thermoseal polyurethane foam plastic on-site within our specifications. When applying Thermoseal, all substrates must be 10°F degrees above the dew point and free of all debris including frost, oil, rust, dust, or other debris. The equipment being used must be set to deliver a consistent 1:1 ratio by volume and must be capable of achieving at least 1200 psi and the target processing temperatures outlined in this manual. To maintain warranty status on all Thermoseal products, the Applicator's Thermoseal Training Certificate must be current. Thermoseal Training is free and can be conducted on our website at <http://www.ThermosealUSA.com>.

DISCLAIMER: To the best of our knowledge, all technical data contained herein is true and accurate as of the date of issuance and subject to change without prior notice. User must contact Thermoseal, llc to verify correctness before specifying or ordering. We guarantee our products to conform to the quality control standards established by Thermoseal, llc. We assume no responsibility for coverage, performance or injuries resulting from use. Liability, if any, is limited to replacement of the product. NO OTHER WARRANTY OR GUARANTEE OF ANY KIND IS MADE BY THERMOSEAL USA EXPRESSED OR IMPLIED; STATUTORY, BY OPERATION OF LAW, OR OTHERWISE, INCLUDING MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.