



Technical Data

FI-FOIL® RBI SHIELD™

FI-FOIL® RBI Shield™ is a premium Reflective Bubble Insulation (RBI) with a **Limited Lifetime Warranty**. Researched & developed, tested, and manufactured in the U.S.A. to the highest quality standards. FI-FOIL® RBI consists of a premium reflective film and a blend of several compounds to ensure the surface won't delaminate, crack, pit, chalk, peel or discolor. The premium core is formulated for greater strength and elasticity including an added blend of antioxidants, sunscreen, and color stabilizing compounds to provide a premium white polymer surface that won't fade over time.

Fi-Foil RBI serves as a vapor retarder. A unique manufacturing process that bonds the polymer and reflective film together in one-step allows trapping and maintaining more air in each bubble for a higher quality insulation and improved energy efficiency year-round.

TECHNICAL DATA

	DOUBLE BUBBLE		SINGLE BUBBLE	
	RWDB WHITE DOUBLE BUBBLE REFLECTIVE	RRDB REFLECTIVE DOUBLE BUBBLE REFLECTIVE	RWSB WHITE SINGLE BUBBLE REFLECTIVE	RRSB REFLECTIVE SINGLE BUBBLE REFLECTIVE
FLAMMABILITY				
ASTM E84 In accordance with E2599	CLASS A	CLASS A	CLASS A	CLASS A
ASTM E84 Flame Spread	0	0	0	0
ASTM E84 Smoke Developed	<50	<50	<50	<50
STRENGTH & PERFORMANCE				
ASTM E96 Water Vapor Permeance	≤1.0 perm	≤1.0 perm	≤1.0 perm	≤1.0 perm
ASTM C1371 Thermal Emittance	0.06	0.06	0.06	0.06
ASTM C518 Thermal Resistance	0.89 ft ² ·h·°F/Btu	1.03 ft ² ·h·°F/Btu	0.51 ft ² ·h·°F/Btu	0.53 ft ² ·h·°F/Btu
ASTM C1258 Temp & Humidity Resistance	No Corrosion or Delamination	No Corrosion or Delamination	No Corrosion or Delamination	No Corrosion or Delamination
ASTM C1338 Fungi Resistance	PASS	PASS	PASS	PASS
ASTM C1224 Pliability	No Cracking or Delamination	No Cracking or Delamination	No Cracking or Delamination	No Cracking or Delamination
ASTM C1224 Bleeding & Delamination	No Bleeding or Delamination	No Bleeding or Delamination	No Bleeding or Delamination	No Bleeding or Delamination
ASTM C411 Hot Surface Performance	n/a	<250°F ¹	n/a	<250°F ¹
ASTM G154 UV Exposure	105% Retention after 2k hrs	-	105% Retention after 2k hrs	-
ASTM D882 Tensile Strength	PASS	-	PASS	-
ASTM D2261 Tear Resistance (MD)	13.26 lb _f	11.56 lb _f	9.42 lb _f	8.62 lb _f
ASTM D2261 Tear Resistance (CMD)	14.23 lb _f	16.95 lb _f	9.66 lb _f	10.32 lb _f
ASTM C165 Compression Strength (@10%)	0.26 lb _f /in ²	0.33 lb _f /in ²	0.12 lb _f /in ²	0.28 lb _f /in ²
ASTM F1306 Slow Rate Penetration	1.04 lb _f ·in	0.97 lb _f ·in	0.83 lb _f ·in	1.37 lb _f ·in
Nominal Thickness	5/16"	5/16"	3/16"	3/16"

1 Not for use in direct contact on surfaces that exceed 180°F.

COMPLIANCE & VERIFICATION

Compliance with the following codes:

- 2024, 2021 International Building Code (IBC)
- 2024, 2021 International Residential Code (IRC)
- 2024, 2021 International Energy Conservation Code (IECC)



Testing to ASTM E84-23a verified by [Capital Testing and Certification Services](#)

Reports for DB: RW- [T-17578](#), [T-17579](#), [T-17580](#) Aug 30, 2024

Reports for DB: RR- [T-17576](#), [T-17577](#) Aug 30, 2024

Reports for SB: RW- [T-17583](#), [T-17584](#), [T-17585](#) Sept 3, 2024

Reports for SB: RR- [T-17581](#), [T-17582](#) Sept 5, 2024

Testing to ASTM standards under D2261, F1306, C165, C411 verified by [R&D Services, Inc.](#)

Reports for DB: RW- [RD241155](#), RR- [RD241156](#) Nov 11, 2024

Reports for SB: RW- [RD241153](#), RR- [RD241154](#) Dec 5, 2024

Testing to ASTM standards under C1224 verified by [R&D Services, Inc.](#)

Reports for DB: RW- [RD24923](#), RR- [RD24922](#) Oct 28, 2024

Reports for SB: RW- [RD24925](#), RR- [RD24924](#) Oct 23, 2024



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