

NFRC 101-2017



NFRC Errata and Addendum Log

E2A11 (December 2018)

Table C.1: Thermophysical Properties of Solid Materials

Participant	Product	Density	Conductivity			Emissivity	Expiration D
		kg/m ³	W/m•K	Btu/hr•ft•F	Btu•in/hr•ft ² •°F		
Glasslam	WorldSpacer/EcoSpacer PU Desiccant Foam	1,095	0.191	0.110	1.33	0.9	12/31/2022
Westeck Windows and Doors	Thermacork	117	0.038	0.022	0.265	0.9	12/31/2022

E2A10 (October 2018)

Table C.1: Thermophysical Properties of Solid Materials

Participant	Product	Density	Conductivity			Emissivity	Expiration Date
		kg/m ³	W/m•K	Btu/hr•ft•F	Btu•in/hr•ft ² •°F		
ADCO Products, Inc.	PIB Based Sealant	1053	0.146	0.085	1.02	0.9	12/31/2022
Covestro	Baydur PUL-2500	2,127	0.219	0.127	1.522	-	7/1/20 22 18
Durango Doors, LLC	DURAGEL	1220	0.281	0.162	1.950	0.9	12/31/2022

E2A9 (August 2018)

Table C.1: Thermophysical Properties of Solid Materials

Participant	Product	Density	Conductivity			Emissivity	Expiration Date
			kg/m ³	W/m•K	Btu/hr•ft•F		
<u>JELD-WEN</u>	<u>JELD-WEN Proprietary Composite</u>	<u>1371</u>	<u>0.219</u>	<u>0.126</u>	<u>1.52</u>	<u>0.9</u>	<u>7/1/2022</u>
Leading Edge	EdgeStar Stainless	7,720	13.467	7.781	93.37	-	7/1/20 22 18
Leading Edge	ThinStar Steel	7,147	51.6	29.8	358	-	12/31/20 22 18
Milgard Mfg.	Polystyrene Foam	25.9	0.032	0.018	0.22	-	7/1/2018
Nan Ya Plastics	Neuma Door-Foam PVC	999	0.082	0.048	0.57	-	7/1/20 22 18
Nan Ya Plastics	Neuma Door-Phenolic Foam	740	0.029	0.017	0.201	-	7/1/20 22 18
Plastpro	Cellular PVC by JM Eagle	597	0.067	0.039	0.462	-	7/1/20 22 18
Plastpro	PF Frame by JM Eagle	698	0.084	0.049	0.583	-	7/1/20 22 18

E2A8 (July 2018)

Table C.1: Thermophysical Properties of Solid Materials

Participant	Product	Density	Conductivity			Emissivity	Expiration Date
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		kg/m ³	W/m•K	Btu/hr•ft•F	Btu•in/hr•ft ² •°F		

E2A7 (May 2018)

Participant	Product	Density	Conductivity			Emissivity	Expiration Date
		kg/m ³	W/m•K	Btu/hr•ft•F	Btu•in/hr•ft ² •°F		
Azon	Azo-Core 13	204	0.032	0.018	0.218	0.9	7/1/2022
Azon	Azo-Core 17	259	0.036	0.021	0.252	0.9	7/1/2022
Eagle Window and Doors	Eagle Window and Doors-Eagle Composite	1,349	0.19	0.11	1.317	-	7/1/ 2018 2022
Tremco	EnerEDGE Silicone Warm-Edge Spacer, white	1094	0.194	0.112	1.346	-	7/1/2022

In addition to these changes, ballots approved by NFRC membership at the Spring 2018 Committee Meeting in St. Louis, Missouri, were incorporated into this version:

5.1.7.1 Test Specimen Construction for Non-homogeneous [Spacer](#) Samples

[This section applied only to spacer assemblies, where any of the following conditions apply:](#)

- [The spacer material is not capable of being manufactured in a shape suitable for testing.](#)
- [There exist multiple materials within the product which cannot be separately analyzed or cannot be simulated as the individual materials.](#)

- 1) The test specimen shall be assembled of parallel lengths of the sample material with no gaps between the lengths of material that may allow for air within the test specimen assembly. If necessary, the specimen shall be prepared sandwiched between two pieces of 6.3 mm (1/4.8 in) thick clear, uncoated, annealed glass.
- 2) Orientation of the test specimen material shall be such that the heat flux in the test assembly is in the same direction across the test specimen assembly.
- 3) The test specimen assembly construction shall be such that the heat flow is predominantly uniform across the test area and that areas of localized heat flow variation is minimized.

E2A6 (March 2018)

Table C.1: Thermophysical Properties of Solid Materials

Participant	Product	Density	Conductivity			Emissivity	Expiration Date
		kg/m ³	W/m•K	Btu/hr•ft•F	Btu•in/hr•ft ² •°F		
Tremco	EnerEDGE Silicone Warm-Edge Spacer, <u>non-white</u>	<u>745657</u>	<u>0.1050.118</u>	<u>0.064068</u>	<u>0.726817</u>	-	7/1/2020 <u>12/31/2021</u>

E2A5 (February 2018)

Table C.1: Thermophysical Properties of Solid Materials

Participant	Product	Density	Conductivity			Emissivity	Expiration Date
		kg/m ³	W/m•K	Btu/hr•ft•F	Btu•in/hr•ft ² •°F		
<u>Ensinger</u>	<u>Tecafoil LeF Low-E Foil</u>	<u>2193</u>	<u>160</u>	<u>92.4</u>	<u>1109</u>	<u>0.03</u>	<u>12/31/2021</u>

E2A4 (January 2018)

Table C.1: Thermophysical Properties of Solid Materials

Participant	Product	Density	Conductivity			Emissivity	Expiration Date
			kg/m ³	W/m•K	Btu/hr•ft•F		
Allmetal	3 mil Stainless Steel	7110	15.3	8.83	106	-	12/31/ 2017 2021
Allmetal	4.5 mil Stainless Steel	7380	14.7	8.47	102	-	12/31/ 2017 2021
Allmetal	6 mil Stainless Steel	7570	14.9	8.64	104	-	12/31/ 2017 2021
Allmetal	8 mil Stainless Steel	7690	15.5	8.94	107	-	12/31/ 2017 2021
Andersen Corporation	Andersen Extruded Polystyrene Foam	35.8	0.026	0.015	0.183	0.9	12/31/ 2017 2021
Colonial Metal	SST	7,688	12.933	7.473	89.673	-	12/31/ 2017 2021
Colonial Metal	Tin Plated Steel	7,660	50.2	29.05	348.6	-	12/31/ 2017 2021
Quanex Building Products	Super Spacer Material nXt	740	0.114	0.066	0.789		7/1/2017
Quanex Building Products	Butyl 761-71X	1210	0.177	0.102	1.23	0.9	12/31/ 2017 2021
Quanex Building Products	XTD Composite	493	0.052	0.030	0.362	-	12/31/ 2017 2021
Viracon	ExtremEdge Polymer	77.4	0.180	0.104	1.25	-	12/31/ 2017 2021

Viracon	VTS Thermal Plastic Spacer	1142	0.196	0.113	1.36		12/31/2021
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E2A3 (July 2017)

Table C.1: Thermophysical Properties of Solid Materials

Participant	Product	Density	Conductivity			Emissivity	Expiration Date
		kg/m ³	W/m•K	Btu/hr•ft•F	Btu•in/hr•ft ² •°F		
Andersen Corporation	Fibrex-Vinyl Coated Composite Material	1,389	0.199	0.115	1.38	0.9	7/1/2017
Andersen Corporation	Fibrex EZ+	21.8	0.202	0.117	1.40	0.9	7/1/2021

E2A2 (May 2017)

Table C.1: Thermophysical Properties of Solid Materials

Participant	Product	Density	Conductivity			Emissivity	Expiration Date
		kg/m ³	W/m•K	Btu/hr•ft•F	Btu•in/hr•ft ² •°F		
Cardinal Industries	Stainless Steel	7,808	14.187	8.197	98.37	-	7/1/2021
Chelsea Building Products	Composite PVC	1,698	0.292	0.169	2.023	-	7/1/2021
Chelsea Building Products	PVC Adapter	702	0.092	0.053	0.639	-	7/1/2021
GED	Intercept Ultra	7,473	13.63	7.877	94.52	-	7/1/2021

Participant	Product	Density	Conductivity			Emissivity	Expiration Date
			kg/m ³	W/m•K	Btu/hr•ft•F		
	Stainless Steel						
Guardian Industries	Corrugated SST	7,440	13.87	8.025	96.296	0.9	7/1/2021
JELD-WEN	LFI Door Skin sample-30% CaCO3	1	0.134	0.077	0.929	-	7/1/2021
JELD-WEN	LFI Door Skin sample-no CaCO3	1,464	0.17	0.098	1.18	-	7/1/2021
JELD-WEN	EPS Door Core Material	18.58	0.033	0.019	0.229	-	7/1/2021
Kalwall	Insulation A	4.54	0.115	0.066	0.794	-	7/1/2021
Kalwall	Insulation B	4.06	0.093	0.054	0.648	-	7/1/2021
Kalwall	Insulation C	12.82	0.047	0.027	0.327	-	7/1/2021
Kalwall	Insulation D	38.98	0.032	0.019	0.222	-	7/1/2021
Kalwall	Insulation E	8	0.04	0.023	0.277	0.9	7/1/2021
Major Industries	Translucent Thermal Insulation 15	6.94	0.079	0.046	0.549	0.9	7/1/2021
Major Industries	Translucent Thermal Insulation 24	4.31	0.098	0.057	0.68	0.9	7/1/2021
Major Industries	Ultimate Series FRP	1,236	0.143	0.083	0.993	0.9	7/1/2021
Major Industries	10 Light Transmitting Insulation	9.58	0.07	0.041	0.487	-	7/1/2021

Participant	Product	Density	Conductivity			Emissivity	Expiration Date
			kg/m ³	W/m•K	Btu/hr•ft•F		
Major Industries	IMG 125 Light Transmitting Insulation	6.92 (@ 1.25")	0.037	0.021	0.258	-	7/1/2021
Pella Windows and Doors	Duracast (Unpainted)	1,808.43	0.166	0.096	1.152	0.9	7/1/2021
Royal/Kömmerling	Kodispace 4SG	1191.74	0.241	0.139	1.67	-	7/1/2020
Royal/Kömmerling	PIB-8 HSNB Gray	1,060	0.155	0.089	1.073	-	7/1/2021
Technoform Glass Insulation NA, Inc.	TGI NA Spacer M Stainless Steel	7710	14.0	8.09	97.1	0.2	7/1/2021

E1A1 (April 2017)

Table C.1: Thermophysical Properties of Solid Materials

Participant	Product	Density	Conductivity			Emissivity	Expiration Date
			kg/m ³	W/m•K	Btu/hr•ft•F		
SaftiFirst	Fire Resistant Inner Layer	1160	0.307	0.178	2.13	0.9	7/1/2021

E1A0 (February 2017)

Table C.1: Thermophysical Properties of Solid Materials

Participant	Product	Density	Conductivity			Emissivity	Expiration Date
			kg/m ³	W/m•K	Btu/hr•ft•F		
Andersen Corporation	CPA Fiberglass Material	1675	0.159	0.092	1.105		12/31/ 2019 <u>2020</u>
Zola Windows	V2 -V1 Foam Insulation	538	0.071	0.041	0.489	-	12/31/2020
Zola Windows	V1 -V2 Foam Insulation	205	0.039	0.023	0.270	-	12/31/2020

E0A0 (January 2017)

Table C.1: Thermophysical Properties of Solid Materials

Participant	Product	Density	Conductivity			Emissivity	Expiration Date
			kg/m ³	W/m•K	Btu/hr•ft•F		
3M™	VHB™ Structural Glazing Tapes-4972	720	0.143	0.083	0.992	-	5/11/2016 <u>7/1/2020</u>
3M™	VHB™ Structural Glazing Tapes-B23F	720	0.138	0.08	0.957	-	5/11/2016 <u>7/1/2020</u>
3M™	VHB™ Structural Glazing Tapes-G23F	720	0.137	0.079	0.95	-	5/11/2016 <u>7/1/2020</u>
Royal/Kömmerling	Kodispace 4SG	1191.74	0.241	0.139	1.67	-	6/11/2016

Participant	Product	Density	Conductivity			Emissivity	Expiration Date
			kg/m ³	W/m•K	Btu/hr•ft•F		
							<u>7/1/2020</u>
Andersen Corporation	CPA Fiberglass Material	1675	0.159	0.092	1.105		1/8/2017 <u>12/31/2019</u>

In addition to these changes, ballots approved by NFRC membership at the Fall 2016 Membership Meeting in Denver, Colorado, were incorporated into the 2017 document. These ballots may be reviewed via this page: <https://nfrcommunity.site-ym.com/page/BallotListF16>.