

**SUMMARY OF TESTS**

A wide variety of test methods have been developed for roofing materials and products. Some of the more commonly specified procedures are listed below, along with the general topic. They are listed in various categories even though there are no clear distinctions between them in many cases. This is particularly true when considering the influence of wind on structural performance, attachment to the deck and water infiltration. Due to copyright restrictions, please visit the test standard's web sites for an in-depth description.

**ASTM-** [www.astm.org](http://www.astm.org)

**Underwriter Laboratories-** [www.ul.com](http://www.ul.com)

**American Architectural Manufacturers Association-** [www.aamanet.org](http://www.aamanet.org)

**ICC Evaluation Service-** [www.icc-es.org](http://www.icc-es.org)

**FM Approvals-** [www.fmglobal.com](http://www.fmglobal.com)

**Mechanical Property and Corrosion Tests of Materials**

ASTM E 8 – Tensile Test

ASTM G 155 – Accelerated Weathering

ASTM B117 – Salt Spray Test

**Structural Tests**

ASTM E 72 – Various structural tests

ASTM E 330 – Curtain Walls, Windows, etc.

ASTM E 1592 – Metal Roof and Siding Systems

**[Wind] Uplift Tests**

UL 580 – Roof Assemblies

UL 1897 – Roof Covering Systems

TAS 125 – Uplift

FMRC 4471 - Uplift

**Wind Resistance Tests**

UL 997 – Roof Covering Materials

**Air / Water Infiltration Tests**

ASTM E 283 – Air Leakage through Walls, etc.

ASTM E 331 – Water Penetration through Walls, etc.

ASTM E 1680 – Air Leakage through Metal Roofs

ASTM E 1646 – Water Penetration through Metal Roofs

TAS 100 – Wind Driven Rain

Metro-Dade PA 100 – Wind Driven Rain for Discontinuous Roofs

AAMA 501.1 – Wind Driven Rain

PA 114 – Leakage

**Fire Resistance**

ASTM E 108 – Roof Coverings

UL 790 – Roof Coverings

ASTM E84 – Flame Spread

**Hail/ Impact Tests**

UL 2218 – Prepared Roof Coverings

FM 4471 – Class 1 Metal Roofs

PA 201 – Impact

**Foot Traffic Tests**

ICC-ES AC166, Paragraph 4.2 – Metal Roofing (previously ICBO AC166)

FM 4471 – Class 1 Metal Roofs

ASTM E 380 – Foot Traffic

Summary of Tests and Approvals

Product	SKU	Load Tables	UL 790/ASTM E 108	UL 580	TAS 125	PA 125	UL 1897	ASTM E 1592	FMRC 4471 Uplift	ASTM E 330	ASTM E 283	ASTM E 331	ASTM E 1646	ASTM E 1680	TAS 100	PA 100-95 (R&D only)	AAMA 501.1	PA 114 Leakage	UL 2218	PA 201 Impact	ASTM E 84 Flame Spread	Paint Performance Tests	ASTM E 380 Foot Traffic	FMRC 4471 Foot Traffic	ICBO AC166 Penetration	ICC Report	FBC Approval	MCA Roofing Certification
Monarch Batten Seam	MRB	X	X	X							X	X							X		X	X					X	
Dutch Seam	MRD	X	X	X	X			X		X	X	X			X		X		X		X	X			X		X	X
Field-Lok Panel 2 3/8"	FLS	X		X			X	X	X				X	X							X	X		X			X	X
Field-Lok Panel 2"	FLR	X	X	X	X		X	X			X	X			X			X		X	X	X						X
Field-Lok Panel 1 1/2"	FLM		X	X		X	X	X			X	X							X		X	X	X					X
Field-Lok Panel 1"	FLL		X	X			X												X		X	X						X
PC Systems	PCP		X	X							X	X							X		X	X						X
Advanta Shingle	HAS300		X	X			X												X		X	X			X	X	X	X
Standing Seam Shingle	HSS		X	X												X			X		X	X			X			X
Permashake	HPS106															X					X	X			X			
Rumba Shake	HBS090	X	X					X			X	X							X		X	X						
Castletop Shingle	HCT160		X				X									X			X		X	X			X		X	X
Granutile	HGT144			X	X		X									X					X				X		X	
ScanRoof	SCP163		X	X	X										X				X		X	X			X	X	X	X
Techo Tile	SCT400		X	X	X		X								X	X					X	X			X		X	X
Multi-Purpose	MP	X	X	X							X	X					X		X		X	X						
Corra-Lok	MFC	X																			X	X						
Metafor	MFP120	X																			X	X						
Rigid Wall	MFR160	X									X	X									X	X						
Design System	DS	X	X								X	X									X	X						
Opaline	OP	X																			X	X						
Belvedere	BW	X	X								X	X									X	X						
InSpire	BWS390	X																			X	X						
Versa-Lok	VSL																				X	X						
Versa-Seam	VSS																				X	X						
Arc-Metafor	MF120	X																			X	X						
Curved PC System	PCX999		X	X							X	X							X		X	X						
Curved Standing Seam	FLX		X	X							X	X							X		X	X						
Curved Corrugated Panel	BWX374	X	X																		X	X						
Ceiling and Soffit	LCR, LCB, MPV120, MPS120	X																			X	X						