

ENDUREED

SYNTHETIC THATCH ROOFING SYSTEMS

SECTION 07316

SYNTHETIC THATCH ROOFING

PERFORMANCE PALM

PERFORMANCE LINE

PART 1 – GENERAL

1.1 SUMMARY

This section specifies Endureed Performance Palm synthetic thatch roofing, an innovative fire-resistant and wind-resistant roofing system simulating the appearance and texture of natural palm thatch. The system is suitable for commercial and residential applications including new construction and retrofit projects. Performance Palm supports multiple installation configurations, including the Zip Channel system—an independently waterproof, self-spanning solution that installs directly to vertical rafters without horizontal battens. An extended eave option increases standard overhang from 18 to 30 inches.

1.2 REFERENCES

Codes and Standards:

- Florida Product Approval FL-21047
- ASTM E-108 – Standard Test Methods for Fire Tests of Roof Coverings
- ASTM E-84 – Standard Test Method for Surface Burning Characteristics
- ASTM D-3161 – Standard Test Method for Wind Resistance (Class F)
- UL 723 – Standard for Surface Burning Characteristics of Building Materials
- TAS 107-95 / TAS 100-95 – Florida Building Code wind and wind-driven rain tests
- AS/NZS 1530.3:1999 – Methods for Fire Tests on Building Materials (Australian Standard)
- ASTM E-1980 – Solar Reflectance Index

1.3 SUBMITTALS

- Product data sheets including material specifications, dimensions, and color options
- Installation instructions for all applicable substrate configurations
- Florida Product Approval certificate FL-21047
- Fire and wind test reports
- Manufacturer's warranty documentation
- Samples: two (2) samples of each color and component specified

1.4 QUALITY ASSURANCE

Manufacturer: Global Innovation LLC, 313 SW Windswept Glen, Lake City, Florida 32024

Phone: 1-877-784-2824

Website: endureed.com

Technology: Endureed Flame Core Technology™ – fire-resistant construction

1.5 DELIVERY, STORAGE, AND HANDLING

- Deliver materials in manufacturer's original packaging with labels intact
- Store shingles and zip channel in a dry, well-ventilated, weather-tight location
- Do not expose boxes to excessive moisture
- Do not remove wrapping from bulk pallet until final placement at installation location

Packaging – Field Shingle:

Box: 70 pcs per box; 37" × 28" × 11" (940 × 711 × 279 mm); 70 lbs (32 kg)

Pallet (boxed): 840 pcs per pallet (12 boxes); 40" × 48" × 89" (1,016 × 1,219 × 2,260 mm); 890 lbs (404 kg)

Bulk Stack Pallet: 1,600 pcs; 40" × 48" × 80" (1,016 × 1,219 × 2,032 mm); 1,650 lbs

Packaging – Hip/Ridge Shingle:

Box: 100 pcs per box; 37" × 28" × 11"; 70 lbs (32 kg)

Pallet (boxed): 1,200 pcs (12 boxes); 890 lbs (404 kg)

Bulk Stack Pallet: 2,000 pcs; 800 lbs (658 kg)

Packaging – Extended Eave Shingle:

Box: 70 pcs per box; 37" × 37" × 11" (940 × 940 × 279 mm); 85 lbs (32 kg)

Pallet (boxed): 630 pcs (9 boxes); 815 lbs (404 kg)

Bulk Stack Pallet: 1,000 pcs; 40" × 48" pallet; 1,250 lbs (467 kg)

Packaging – Zip Channel:

Bundle: 30 pcs per bundle; 10' × 5" × 3" (3,048 × 76 × 76 mm); 22 lbs (19 kg)

1.6 WARRANTY

Endureed Performance Palm carries a 20-Year Limited Warranty covering faults in materials and workmanship in accordance with current warranty terms. Contact manufacturer for complete warranty documentation.

PART 2 – PRODUCTS

2.1 MANUFACTURER

Global Innovation LLC
313 SW Windswept Glen
Lake City, Florida 32024
1-877-784-2824 | endureed.com

2.2 MATERIALS

Product Description:

Endureed Performance Palm is a commercial-grade synthetic palm thatch roofing system incorporating Endureed Flame Core Technology™ for fire resistance. The system is available in multiple installation configurations and supports extended eave options from 18 to 30 inches. The Zip Channel configuration installs directly to vertical rafters without horizontal battens, providing an independently waterproof solution. All configurations are available in standard Performance Palm colors.

Key Features:

- 20-Year Limited Warranty
- Manufactured in the USA
- Fire and Wind Resistant – Endureed Flame Core Technology™
- Florida Product Approval FL-21047
- No maintenance required
- Extended eave option (18" to 30" overhang)
- Zip Channel system available (no horizontal battens required)

Part Numbers:

Component	Weathered Palm	New Palm
Fanned Field Shingle	TF-HD-02-301-FS	TF-HD-02-302-FS
Folded Field Shingle	TF-HD-03-301-FS	TF-HD-03-302-FS
Hip/Ridge Shingle	TF-HD-01-301-HR	TF-HD-01-302-HR
Extended Eave Shingle	TF-HD-05-301-EE	TF-HD-05-302-EE
Zip Channel	RF-AL-901-120	RF-AL-901-120

Component Specifications:

Component	Size	Weight	Exposure	Coverage	Material
Fanned Field Shingle	32" × 27" × 0.030"	1.0 lb (0.45 kg)	9" (229 mm)	1.88 sq ft	HDPE
Folded Field Shingle	32" × 27" × 0.030"	1.0 lb (0.45 kg)	9" (229 mm)	1.88 sq ft	HDPE
Hip/Ridge Shingle	27" × 27" × 0.030"	0.7 lb (0.32 kg)	6" (152 mm)	0.5 LF	HDPE
Extended Eave Shingle	32" × 32" × 0.030"	1.2 lb (0.54 kg)	N/A	2.5 LF	HDPE
Zip Channel	10' × 0.71" (3,048 × 18 mm)	0.73 lb (0.363 kg)	10 LF	N/A	5052 Aluminum

2.3 FIRE AND WIND PERFORMANCE

Test Standard	Result
Florida Product Approval	FL-21047
(Fire) ASTM E-108	Class A
(Fire) ASTM E-84	Flame Spread 15
(Fire) ASTM E-84	Ceiling SDI 300
(Fire) UL 723	Flame Spread 15 / Ceiling SDI 300
(Wind) ASTM D-3161	Class F
(Wind) TAS 107-95	110 MPH (Maximum test speed)
(Wind + Rain) TAS 100-95	Pass
(Fire) AS/NZS 1530.3:1999	Ignitability Index: 12; Flame Spread Index: 3; Heat Evolved: 2; Smoke: 3
(Solar) ASTM E-1980 – New Palm	Solar Reflectance: 0.25; Thermal Emittance: 0.88; SRI: 25
(Solar) ASTM E-1980 – Weathered Palm	Solar Reflectance: 0.15; Thermal Emittance: 0.90; SRI: 13

2.4 ACCESSORIES

Fasteners:

- All substrates: 6 fasteners per shingle
- 11-gauge 1.25" (32 mm) ring shank roofing nails, or 1.25" #8 truss head screws
- Metal deck only: 11-gauge 1" (25 mm) ring shank roofing nails

Underlayment:

- Plywood deck: Single layer Tan Soprema Elastophene Stick HR FR+ GR Cap Sheet adhered to plywood (complies with FL-21047)

PART 3 – EXECUTION

3.1 EXAMINATION

Examine substrates and conditions prior to installation. Verify compliance with manufacturer's requirements.

Minimum Roof Pitch:

4:12 (18°) or greater. Total installed system thickness: 1-1/2" (38.1 mm).

3.2 PREPARATION

- Verify substrate is clean, dry, and structurally sound prior to installation
- Horizontal battens: install at 8" (203 mm) on-center
- Plywood deck: install Soprema cap sheet underlayment prior to shingle installation

3.3 INSTALLATION

Horizontal Batten Substrate:

Performance Palm installed over horizontal battens at 8" (203 mm) O.C. The system functions as both waterproofing layer and interior ceiling finish.

- Fasten with 6 per shingle: 11-gauge 1.25" ring shank nails or 1.25" #8 truss head screws

Plywood Deck Substrate:

Complies with Florida Product Approval FL-21047.

- Minimum 15/32" (12 mm) plywood deck over rafters per local code
- Install Soprema Elastophene Stick HR FR+ GR granulated underlayment adhered to plywood
- Fasten with 6 per shingle: 11-gauge 1.25" ring shank nails or 1.25" #8 truss head screws

Metal Deck Substrate:

Performance Palm installed over metal deck using PT pine 1" × 4" battens at 8" (203 mm) O.C.

- Fasten with 6 per shingle: 11-gauge 1" (25 mm) ring shank nails or 1.25" #8 truss head screws

Concrete Substrate:

Performance Palm installed over concrete deck using PT pine 1" × 4" battens at 8" (203 mm) O.C.

- Fasten with 6 per shingle: 11-gauge 1" ring shank nails or 1.25" #8 truss head screws

3.4 CLEANING AND PROTECTION

- Remove all installation debris upon project completion
- No ongoing maintenance required under normal conditions

END OF SECTION 07316