

# PARADIENE 40 FR TG BW



## Commercial Product Data Sheet

### Product Description

Paradiene 40 FR TG BW is a high performance, torch grade modified bitumen finish ply designed for use in homogeneous multi-layer modified bitumen roof membrane systems. Paradiene 40 FR TG BW consists of a fiberglass scrim/fiberglass mat composite impregnated and coated with high quality styrene-butadiene-styrene (SBS) modified bitumen, and surfaced with highly reflective, white mineral granules. The back surface is coated with a high performance modified asphalt adhesive layer specifically formulated for torch applications. The adhesive layer is manufactured using a special process that embosses the surface with a grooved pattern to provide optimum burnoff of the plastic film and maximize application rates.

### Product Uses

Paradiene 40 FR TG BW is used as a finish ply in multi-layer Paradiene Systems, and as a base flashing. Paradiene 40 FR TG BW is lapped 3 inches (7.6) at sides and 6 inches (15.2 cm) at ends, and is applied by torch.

### Product Approvals

Paradiene 40 FR TG BW is approved by FM Approvals (FM Standard 4470) for use in Paradiene 20/40 FR TG BW Class 1 insulated steel roof deck constructions and insulated and non-insulated concrete roof deck constructions, subject to FM conditions and limitations.

Paradiene 40 FR TG BW is classified by Underwriters Laboratories for use in UL Classified Paradiene 20/40 FR TG BW roof systems. Paradiene 20/40 FR TG BW has been classified by Underwriters Laboratories as a Class A roofing system over non-combustible, insulated non-combustible, insulated combustible decks, and as a Class B roofing system over combustible decks.

Paradiene 40 FR TG BW meets or exceeds the requirements of ASTM D 6163 Type II, Grade G, and CSA A123.23-15 Type B, Grade 1 for SBS modified bituminous sheet materials using glass fiber reinforcements.

Paradiene 40 FR TG BW meets the reflectance and emittance requirements of Title 24 Part 6 for the state of California. CRRC rated product ID is 0742-0018. Additionally, Paradiene 40 FR TG BW qualifies for LEED certification points as defined by the United States Green Building Council. Please contact Siplast for specific information on reflective and emittance properties associated with energy regulations and guidelines.

Siplast roofing systems also have received the approval of many regional and local authorities. Please contact Siplast for specific information as required.

### COMMERCIAL PRODUCT INFORMATION

Unit:	Roll		
Coverage:	0.75 Square	(7.0 m <sup>2</sup> )	
Coverage Weight Per Square:	Min: 108 lb	(5.3 kg/m <sup>2</sup> )	
Roll Length:	Min: 25.25 ft	(7.70 m)	
Roll Width:	Avg: 3.28 ft	(1.00 m)	
Thickness:	Avg: 153 mils	(3.9 mm)	
Thickness at Selvage:	Avg: 130 mils	(3.3 mm)	
	Min: 126 mils	(3.2 mm)	
Selvage Width:	Avg: 3.0 in	(7.6 cm)	
Selvage Surfacing:	Burn-off Polyolefin Film		

Top Surfacing: Specially formulated bright white mineral granules.

Back Surfacing: Polyolefin Film

Lines: A laying line is placed 3 in (7.6 cm) from selvage edge of the material. The line color for this material is orange.

Packaging: Rolls are wound onto a compressed paper tube. The rolls are placed upright on ends opposite the selvage on pallets cushioned with corrugated cardboard and are adhered with adhesive at the labels. The top of the palletted rolls is covered with foiled Kraft paper. The palletted material is protected by a heat shrink polyethylene shroud.

Pallet: 41 in X 48 in (104 cm X 122 cm) wooden pallet.  
Number Rolls Per Pallet: 25  
Number Pallets Per Truckload: 18  
Minimum Roll Weight: 81 lb (36.7 kg)

Storage and Handling: All Siplast roll roofing products should be stored on end on a clean flat surface. Care should be taken that rolls are not dropped on ends or edges and are not stored in a leaning position. Deformation resulting from these actions will make proper installation difficult. All roofing should be stored in a dry place, out of direct exposure to the elements, and should not be double stacked. Material should be handled in such a manner as to ensure that it remains dry prior to and during installation.

Current copies of all Siplast Commercial Product Data Sheets are posted on the Siplast Web site at [www.Siplast.com](http://www.Siplast.com).

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## Physical and Mechanical Properties

UNITED STATES TEST STANDARDS			CANADA TEST STANDARDS	
Property (as Manufactured)	Values/Units	Test Method	Property (as manufactured)	Test Method CSA A123.23-15 Values/Units
Thickness (average)	154 mils (3.9 mm)	ASTM D 5147 section 6	Thickness (minimum)	3.9 mm (154 mils)
<sup>1</sup> Thickness at selvage (minimum) (average)	126 mils (3.2 mm) 130 mils (3.3 mm)	ASTM D 5147 section 6	<sup>1</sup> Thickness at selvage (minimum) (average)	3.2 mm (126 mils) 3.3 mm (130 mils)
<sup>2</sup> Peak Load @ 73°F (23°C) (average)	80 lbf/inch (14.1 kN/m)	ASTM D 5147 section 7	<sup>2</sup> Peak Load 23°C (73°F) (average)	14.1 kN/m (80 lbf/inch)
<sup>2</sup> Peak Load @ 0°F (-17°C) (average)	150 lbf/inch (26.5 kN/m)	ASTM D 5147 section 7	<sup>2</sup> Peak Load @ -17°C (0°F) (average)	26.5 kN/m (150 lbf/inch)
<sup>2</sup> Elongation @ Peak Load, 73°F (23°C) (average)	3%	ASTM D 5147 section 7	<sup>2</sup> Elongation @ Peak Load, 23°C (73°F) (average)	3%
<sup>2</sup> Elongation @ Peak Load, 0°F (-17°C) (average)	3%	ASTM D 5147 section 7	<sup>2</sup> Elongation @ Peak Load, -17°C (0°F) (average)	3%
<sup>2</sup> Ultimate Elongation @ 73°F (23°C) (average)	80%	ASTM D 5147 section 7	<sup>2</sup> Ultimate Elongation @ 23°C (73°F) (average)	80%
<sup>2</sup> Tear Strength (average)	120 lbf (0.54 kN)	ASTM D 5147 section 8	N/A	N/A
Water Absorption (maximum)	1%	ASTM D 5147 section 10	N/A	N/A
Dimensional Stability (maximum)	0.1%	ASTM D 5147 section 11	Dimensional Stability (maximum)	0.1%
Low Temperature Flexibility (maximum)	-5°F (-21°C)	ASTM D 5147 section 12	Low Temperature Flexibility (maximum)	-21°C (-5°F)
Granule Embedment Max. avg. loss Max. individual loss	1.5 grams per sample 2.0 grams per sample	ASTM D 5147 section 15	Granule Embedment Max. avg. loss Max. individual loss	1.5 grams per sample 2.0 grams per sample
Compound Stability (minimum)	250°F (121°C)	ASTM D 5147 section 16	Compound Stability (minimum)	121°C (250°F)
Coating Thickness - Back Surface	≥ 40 mils (1 mm)	ASTM D 5147 section 17	Coating Thickness - Back Surface	1 mm (≥ 40 mils)
Solar Reflectance (Avg)	0.74	ASTM C1549	Solar Reflectance (Avg)	0.74
Thermal Emittance (Avg)	0.91	ASTM C1371	Thermal Emittance (Avg)	0.91
Solar Reflectance Index (Avg)	92	ASTM E1980	Solar Reflectance Index (Avg)	92
Cyclic Fatigue	Paradiene 40 FR TG BW, bonded to an acceptable Paradiene 20 base ply with an approved method of attachment, passes ASTM D 5849 both as-manufactured and after heat conditioning according to ASTM D 5147.		Mass Per Unit Minimum	5.3 kg/m <sup>2</sup> (108 lb/sq)

1. Measured on the selvage edge excluding the granule surfacing.