

PARADIENE 20 TS S



Commercial Product Data Sheet

Product Description

Paradiene 20 TS S is a uniquely designed, high performance, semi-adhered, modified bitumen base ply designed for use in homogeneous multi-layer modified bitumen roof membrane systems. Paradiene 20 TS S consists of a lightweight random fibrous glass mat impregnated and coated with an elastomeric styrene-butadiene-styrene (SBS) modified bitumen. The unique back surface design consists of factory applied, heat-activated adhesive stripes combined with a proprietary acrylic coating between the stripes, which provides for uniform bonding of 50% of the total surface area of the sheet.

Product Uses

Paradiene 20 TS S is the first ply of all semi-adhered Siplast Paradiene 20 TS S/Paradiene 30 Systems. It is lapped 3 inches (7.6 cm) on sides and ends. An alternative to the standard end lap method is seaming end joints using a 12-inch (30.4 cm) wide strip of Paradiene 20 TG. Paradiene 20 TS S is designed for direct application to primed structural concrete decks, approved insulations, and other approved substrates. Paradiene 20 TS S can only be torch applied. Contact Siplast for specific approval on the other product uses.

Product Approvals

Paradiene 20 TS S is approved by Underwriters Laboratories as an acceptable substitute for Paradiene 20 TG in all cUL_{US} approved listings and assemblies.

Paradiene 20 TS S is approved by Factory Mutual Research for use as a base ply in Siplast Paradiene 20 TS S/30 TG, Paradiene 20 TS S/Veral, and Paradiene 20 TS S/Parafor non-insulated concrete roof deck constructions, subject to FM conditions and limitations.

Paradiene 20 TS S meets or exceeds the requirements of ASTM D 6163 Type I, Grade S, for SBS-modified bituminous sheet materials using glass fiber reinforcements.

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

Current copies of all Siplast Commercial Product Data Sheets are posted on the Siplast Web site at www.Siplast.com.

COMMERCIAL PRODUCT INFORMATION

Unit:	Roll	
Coverage:	1.0 Square	(9.3 m ²)
Coverage Weight Per Square:	Min: 76 lb	(3.7 kg/m ²)
Roll Length:	Min: 33.5 ft	(10.21 m)
Roll Width:	Avg: 3.28 ft	(1.00 m)
Thickness:*	Avg: 91 mils	(2.3 mm)
	Min: 87 mils	(2.2 mm)
Selvage Width:	Avg: 3 in	(76 mm)
Top Surfacing:	Silica Parting Agent	
Back Surfacing:	Adhesive Stripes, Acrylic Coating between the Stripes, and Polyolefin Burnoff Film	

Packaging: Rolls are wound onto a compressed paper tube. The rolls are placed upright on pallets cushioned with corrugated cardboard and are adhered with adhesive at the labels. The top of the palleted rolls is covered with foiled Kraft paper. The palleted 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: 20
Minimum Roll Weight: 76 lb (34.5 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.

* Thickness does not include the thickness of the adhesive stripes.

PARADIENE 20 TS S

Physical and Mechanical Properties

Property (as Manufactured)	Values/Units	Test Method
¹ Thickness (minimum)	87 mils (2.2 mm)	ASTM D 5147 section 5
¹ Thickness (average)	91 mils (2.3 mm)	ASTM D 5147 section 5
² Peak Load @ 73°F (average)	30 lbf/inch (5.3 kN/m)	ASTM D 5147 section 6
² Peak Load @ 0°F (average)	70 lbf/inch (12.3 kN/m)	ASTM D 5147 section 6
² Elongation @ Peak Load, 73°F (average)	3%	ASTM D 5147 section 6
² Elongation @ Peak Load, 0°F (average)	3%	ASTM D 5147 section 6
² Ultimate Elongation @ 73°F (average)	50%	ASTM D 5147 section 6
² Tear Strength (average)	40 lbf (0.18 kN)	ASTM D 5147 section 7
Water Absorption (maximum)	1%	ASTM D 5147 section 9
Dimensional Stability (maximum)	0.1 %	ASTM D 5147 section 10
Low Temperature Flexibility (maximum)	-13°F (-25 °C)	ASTM D 5147 section 11
High Temperature Stability (minimum)	250°F (121°C)	ASTM D 5147 section 15
Coating Thickness - Back Surface (including adhesive stripes)	≥ 40 mils (1 mm)	ASTM D 5147 section 16
Cyclic Fatigue	Paradiene 20 TS S, bonded to an acceptable Paradiene 30, Paradiene 40 FR, or Parafor 50 LT cap sheet with an approved method of attachment, passes ASTM D 5849 both as-manufactured and after heat conditioning according to ASTM D5147.	

1. Thickness does not include the thickness of the adhesive stripes.
2. The value reported is the lower of either MD or XD.