TECHNICAL INFORMATION SHEET

401
09/25/2006

Firestone BUILDING PRODUCTS

APP 160

Meets ASTM D 6222, Type I, Grade S
Tested in Accordance with D 5147

Firestone Item Number: W70APP0162

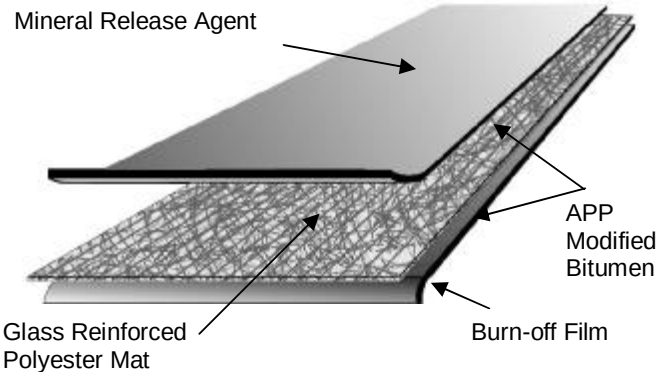
DESCRIPTION:
Firestone APP 160 is a smooth surfaced APP modified bitumen membrane. It consists of select asphalt, modified with atactic polypropylene, and reinforced with a non-woven 190 g/m^2 (5.6 oz./yd^2) polyester mat, enhanced with continuous glass fiber strands in the machine direction. The combination results in a flexible, yet durable roofing membrane that exceeds the performance requirements of ASTM D 6222 Type I, Grade S.

APP 160 is ideal for both new construction and re-roofing applications as a base ply, cap sheet, or as a flashing sheet in single or multi-ply applications. Low slope roofs of any size, even those with numerous penetrations, may accommodate a Firestone APP 160 application.

APPLICATION METHOD:
APP 160 shall be fully heat welded to the substrate.

STORAGE:
All material must be stored out of the weather in a clean, dry area in its original unopened packaging at a minimum of 40° F (4° C) and a maximum of 140° F (60° C) so that it will be a minimum of 40° F (4° C) at the time of application.

If material must be stored temporarily on the roof before application, it must be elevated from the roof surface on a pallet, stored on end, and covered from the weather with a light colored opaque tarp in a neat, safe manner not to exceed the allowable live load of the storage area.



Manufactured in an ISO 9001 Registered Facility

Roll Width:	**3.3 ft (1 m)**
Roll Length:	**32' 10" (10 m)**
Net Coverage:	**98 sq. ft (9.1 sq. m)**
Roll Weight:	**87 lb (38.6 kg)**
Pallet Size:	**45" x 39" (1.1 m x 1 m)**
Rolls Per Pallet:	**20**
Weight Per Pallet:	**1,785 lb (809.7 kg)**
Pallets Per Truckload:	**26**

PRECAUTIONS:
Take care when transporting and handling Firestone Modified Bitumen rolls to avoid punctures and other types of physical damage. Isolate waste products, petroleum products, grease, oil (mineral and vegetable) and animal fats from all Firestone Modified Bitumen membranes. This product is not intended for application in hot applied asphalt. Contact Firestone Roof Solutions Department for specific recommendations.

Stack Firestone APP 160 Squarely In Original Unopened Packaging No More Than Two (2) Pallets High

LEED INFORMATION:

Post Consumer Recycled Content:	8%
Post Industrial Recycled Content:	0%
Manufacturing Location:	Beech Grove, IN Bristol, CT

FM APPROVED
Certificate Number
FM 38812
FM 38431

CLASSIFIED cULus US
Membrane for Roofing Systems
As to an external Fire Exposure Only
61P2
See UL Directory of Products
Certified for Canada
and UL Roofing Materials
R9516

MIAMI-DADE COUNTY
Miami-Dade County
Product Control Approved

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Dimensions and Mass	English			Metric		
Property	**Unit**	**ASTM Minimum**	**Firestone Nominal**	**Unit**	**ASTM Minimum**	**Firestone Nominal**
Product Thickness	mil	140	150	mm	3.5	3.8
Net Mass	lb/100 ft^2	70	82	g/m^2	3,417	4,003
Bottom Coating	mil	30	50	mm	0.8	1.3

Physical Properties

Peak Load at 0° F (-18° C) (Tensile Strength)	lbf/in	60	MD	169	kN/m	14.0	MD	30
			XMD	137			XMD	24
Elongation at Peak Load at 0° F (-18° C)	%	10	MD	52	%	10	MD	52
			XMD	39			XMD	39
Peak Load at 73.4° F (25° C) (Tensile Strength)	lbf/in	50	MD	75	kN/m	8.8	MD	16
			XMD	58			XMD	14
Elongation at Peak Load at 73.4° F (25° C)	%	23	MD	48	%	23	MD	48
			XMD	52			XMD	52
Ultimate Elongation (at 5% of Peak Load) at 73.4° F (25° C)	%	30	MD	57	%	30	MD	57
			XMD	60			XMD	60
Tear Strength at 73.4° F (25° C)	lbf	70	MD	122	N	311.5	MD	543
			XMD	91			XMD	405
Dimensional Stability	% Change	1	MD	-0.07	% Change	1	MD	-0.07
			XMD	0.3			XMD	0.3
Low Temperature Flexibility	°F	32	14		°C	0	-10	
High Temperature Stability	°F	230	270		°C	110	132	

Physical Properties After Heat Conditioning

Peak Load at 73.4° F (25° C) (Tensile Strength)	lbf/in	50	MD	90	kN/m	8.8	MD	16
			XMD	62			XMD	11
Elongation at Peak Load at 73.4° F (25° C)	%	23	MD	43	%	23	MD	43
			XMD	38			XMD	38
Low Temperature Flexibility	°F	32	10.0		°C	0	-12.2	