# **ELASTOPHENE®** FLAM FR GR

# **PRODUCT DATA SHEET**

### **DESCRIPTION & FEATURES**

ELASTOPHENE Flam FR GR (fire retardant, granulated) is an SBS-modified bitumen cap ply for use in approved multi-ply membrane and flashing assemblies. ELASTOPHENE Flam FR GR is composed of a proprietary formulation of elastomeric styrene butadienestyrene (SBS) polymer modified bitumen and is reinforced with a high quality random glass fiber mat. The topside is surfaced with ceramic coated granules and underside are surfaced with polyolefin burn-off film to optimize heat welding.

ELASTOPHENE Flam FR GR includes the standard white granules. Contact SOPREMA® Customer Service or your sales representative for other granule color options and special order requirements.

### STORAGE & HANDLING

Store rolls on end and maintain in an upright position to prevent damage. Store rolls in a clean dry location and cover as necessary to protect rolls from environmental damage such as extreme cold, heat, or moisture. Monitor varying environmental conditions during storage, handling and application of ELASTOPHENE Flam FR GR.

### APPLICATION

Prior to installation, unroll ELASTOPHENE Flam FR GR onto the roof surface and allow to relax. Position ELASTOPHENE Flam FR GR in desired position and back roll the product. ELASTOPHENE Flam FR GR is then heat welded to approved substrates. Refer to the SOPREMA SBS Roofing Installation Guide for additional application quidelines.

HEAT-WELDED

COOL ROOF RATING							
PRODUCT	SOL REFLEC	AR CTANCE	THEF EMIT	RMAL TANCE	S	RI	
ELASTOPHENE Flam FR GR (WH) Standard white granules	0.26 initial	0.23 3 year	0.87 initial	0.90 3 year	25 initial	23 3 year	
ELASTOPHENE Flam FR GR (SG) Highly reflective white granules	0.65 initial	0.62* 3 year	0.91 initial	0.91* 3 year	80 initial	75 3 year	
ELASTOPHENE Flam FR GRE Smog reducing granules (ECO <sub>3</sub> )	0.10 initial**	N/A	0.89 initial**	N/A	6 initial**	N/A	

\* CRRC Rapid Ratings. Refer to Cool Roof Ratings Council (CRRC). \*\*Calculated using internal testing

ACTS	ASTM	LENGTH	WIDTH	COVERAGE*	THICKNESS	ROLL WEIGHT	ROLLS/ PALLET
	STANDARD	(ft)	(in)	(ft <sup>2</sup> )	(mils)	(lb)	(pallet weight)
QUICK F	<b>D6163</b> Type 1, Grade G	<b>32.8</b> (10.0 m)	<b>39.4</b> (1.0 m)	<b>97.9</b> (9.1 m <sup>2</sup> )	<b>140</b> (3.5 mm)	<b>106</b> (48.1 kg)	<b>25</b> (2,700 lb/ 1,225 kg)

\* Coverage rate as reported assumes installation using side and end lap recommendations.



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### **ELASTOPHENE®** FLAM FR GR

PRODUCT # 03864 (WH) 05008 (SG) 03805 (ECO<sub>2</sub>)



### ELASTOPHENE® FLAM FR GR

## **TECHNICAL INFORMATION & TESTING**

	SHEET PROPERTIES					
Reinforcement	Glass fiber					
Elastomeric bitumen	Proprietary blend of bitumen and SBS polymers					
Top surfacing	Ceramic coated granules					
Back surfacing	Polyolefin film					
Selvage surface	Polyolefin film					
Selvage width, in (mm)	3 (76)					
End lap, in (mm)	6 (152)					

DIMENSIONS & MASS							
PROF	TEST METHOD						
Thickness, mils (mm)	140 (3.5)	ASTM D5147					
Thickness @ selvage, mils (mm)	98 (2.5)	ASTM D5147					
Net mass per unit area, lb/100ft <sup>2</sup> (g/m <sup>2</sup> )	98.5 (4808)	ASTM D5147					
Bottom coating thickness, mils (mm)	≥ 40 (1.0)	ASTM D5147					

PHYSICAL PROPERTIES							
PROPERTY	MD	XMD	TEST METHOD				
Peak load @ 0°F (-18°C), lbf/in (kN/m)	110 (19.3)	95 (16.6)	ASTM D5147				
Elongation at peak load @ 0°F (-18°C), %	4	4	ASTM D5147				
Peak load @ 73.4°F (23°C), lbf/in (kN/m)	50 (8.8)	40 (7.0)	ASTM D5147				
Elongation at peak load @ 73.4°F (23°C), %	5	4	ASTM D5147				
Ultimate elongation @ 73.4°F (23°C), %	50	50	ASTM D5147				
Tear strength @ 73.4°F (23°C), lbf (N)	60 (267)	60 (267)	ASTM D5147				
Low temperature flexibility, °F (°C)	-15 (-26)	-15 (-26)	ASTM D5147				
Dimensional stability, %	< 0.1	< 0.1	ASTM D5147				
Compound stability, °F (°C)	250 (121)	250 (121)	ASTM D5147				
Granule embedment, g	1.5 avg; 2.0	1.5 avg; 2.0 max for SG					
Cyclic fatigue, condition 4	Pa	ATSM D5147					

\* Data is represented by average values, unless noted otherwise.

### TESTING & APPROVALS





FLORIDA BUILDING CODE



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APPROVED

# ELASTOPHENE® FR GR

# PRODUCT DATA SHEET

### **DESCRIPTION & FEATURES**

ELASTOPHENE FR GR (fire retardant, granulated) is an SBS-modified bitumen cap ply for use in approved multi-ply membrane and flashing assemblies. ELASTOPHENE FR GR is composed of a proprietary formulation of elastomeric styrene-butadiene-styrene (SBS) polymer modified bitumen and is reinforced with a high quality random glass fiber mat. The topside is surfaced with ceramic coated granules and the underside is surfaced with fine mineral aggregate to facilitate cold adhesive and hot asphalt applications.

ELASTOPHENE FR GR includes the standard white granules. Contact SOPREMA® Customer Service or your sales representative for other granule color options and special order requirements.

### STORAGE & HANDLING

Store rolls on end and maintain in an upright position to prevent damage. Store rolls in a clean dry location and cover as necessary to protect rolls from environmental damage such as extreme cold, heat, or moisture. Monitor varying environmental conditions during storage, handling and application of ELASTOPHENE FR GR.

APPLICATION

Prior to installation, unroll ELASTOPHENE FR GRonto the roof surface and allow to relax. Place ELASTOPHENE FR GR in desired position and back roll the product. Apply approved cold adhesive or hot asphalt following manufacturer specifications. ELASTOPHENE FR GR is then rolled into the cold adhesive or hot asphalt and subsequently broomed in if utilizing hot asphalt or cold adhesives. Refer to the SOPREMA SBS Roofing Installation Guide for additional application guidelines.



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COLD ADHESIVE HOT ASPHALT

COOL ROOF RATING								
PRODUCT	SOLAR REFLECTANCE		THERMAL EMITTANCE		SRI			
ELASTOPHENE FR GR Standard white granules (WH)	0.26 initial	0.25 3 year	0.88 initial	0.90 3 year	25 initial	23 3 year		
ELASTOPHENE FR GR Highly reflective white granules (SG)	0.65 initial	0.62* 3 year	0.91 initial	0.91* 3 year	81 initial	75 3 year		
ELASTOPHENE FR GR Smog reducing granules (ECO3)	0.10 initial	pending	0.89 initial	pending	6 initial	pending		

\*CRRC Rapid Ratings. Refer to Cool Roof Ratings Council (CRRC). \*\*Calculated using internal testing

AUIS	ASTM	LENGTH	WIDTH	COVERAGE*	THICKNESS	ROLL WEIGHT	ROLLS/ PALLET
	STANDARD	(ft)	(in)	(ft <sup>2</sup> )	(mils)	(lb)	(pallet weight)
	<b>D6163</b> Type 1, Grade G	<b>32.8</b> (10.0 m)	<b>39.4</b> (1.0 m)	<b>97.9</b> (9.1 m <sup>2</sup> )	<b>140</b> (3.5 mm)	<b>107</b> (48.5 kg)	<b>30</b> (3,260 lb/ 1,479 kg )

\* Coverage rate as reported assumes installation using side and end lap recommendations.



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#### ELASTOPHENE® FR GR PRODUCT # 01159 (WH) 05016 (SG) 01103 (ECO3)

### ELASTOPHENE® FR GR

## TECHNICAL INFORMATION & TESTING

	SHEET PROPERTIES					
Reinforcement Glass fiber						
Elastomeric bitumen	Proprietary blend of bitumen and SBS polymers					
Top surfacing	Ceramic coated granules					
Back surfacing	Sanded					
Selvage surface	Sanded					
Selvage width, in (mm)	3 (76)					
End lap, in (mm)	6 (152)					

DIMENSIONS & MASS							
PROF	TEST METHOD						
Thickness, mils (mm)	140 (3.5)	ASTM D5147					
Thickness @ selvage, mils (mm)	110 (2.8)	ASTM D5147					
Net mass per unit area, lb/100 ft <sup>2</sup> (g/m <sup>2</sup> )	99.4 (4853)	ASTM D5147					

	PHYSICAL PROPERTIES							
PROPERTY	MD	XMD	TEST METHOD					
Peak load @ 0°F (-18°C), lbf/in (kN/m)	110 (19.3)	95 (16.6)	ASTM D5147					
Elongation at peak load @ 0°F (-18°C), %	4	4	ASTM D5147					
Peak load @ 73.4°F (23°C), lbf/in (kN/m)	50 (8.8)	40 (7.0)	ASTM D5147					
Elongation at peak load @ 73.4°F (23°C), %	5	4	ASTM D5147					
Ultimate elongation @ 73.4°F (23°C), %	50	50	ASTM D5147					
Tear strength @ 73.4°F (23°C), lbf (N)	60 (267)	60 (267)	ASTM D5147					
Low temperature flexibility, °F (°C)	-15 (-26)	-15 (-26)	ASTM D5147					
Dimensional stability, %	< 0.1	< 0.1	ASTM D5147					
Compound stability, °F (°C)	250 (121)	250 (121)	ASTM D5147					
Granule embedment, g	< 1.5 avg; 2.	< 1.5 avg; 2.0 max for SG						
Cyclic fatigue, condition 4	Pa	ASTM D5849						

\* Data is represented by average values, unless noted otherwise.

## TESTING & APPROVALS





# **SOPRALENE® 180 FR GR**

# **PRODUCT DATA SHEET**

### **DESCRIPTION & FEATURES**

SOPRALENE 180 FR GR (fire retardant, granulated) is an SBS-modified bitumen cap ply for use in approved multi-ply membrane and flashing assemblies. SOPRALENE 180 FR GR is composed of a proprietary formulation of elastomeric styrene-butadienestyrene (SBS) polymer modified bitumen and is reinforced with a tough, dimensionally stable non-woven polyester mat. The topside is surfaced with ceramic coated granules and the underside is surfaced with fine mineral aggregate to facilitate cold adhesive and hot asphalt applications.

SOPRALENE 180 FR GR includes the standard white granules. Contact SOPREMA® Customer Service or your sales representative for other granule color options and special order requirements.

### **STORAGE & HANDLING**

Store rolls on end and maintain in an upright position to prevent damage. Store rolls in a clean dry location and cover as necessary to protect rolls from environmental damage such as extreme cold, heat, or moisture. Monitor varying environmental conditions during storage, handling and application of SOPRALENE 180 FR GR.

### **APPIICATION**

Prior to installation, unroll SOPRALENE 180 FR GRonto the roof surface and allow to relax. Place SOPRALENE 180 FR GR in desired position and back roll the product. Apply approved cold adhesive or hot asphalt following manufacturer specifications. SOPRALENE 180 FR GR is then rolled into the cold adhesive or hot asphalt and subsequently broomed in if utilizing hot asphalt or cold adhesives. Refer to the SOPREMA SBS Roofing Installation Guide for additional application guidelines.



\* CRRC Rapid Ratings. Refer to Cool Roof Ratings Council (CRRC). \*\*Calculated using internal testing

ASTM	LENGTH	WIDTH	COVERAGE*	THICKNESS	ROLL WEIGHT	ROLLS/ PALLET
STANDARD	(ft)	(in)	(ft <sup>2</sup> )	(mils)	(lb)	(pallet weight)
<b>D6164</b> Type 1, Grade G	<b>32.8</b> (10.0 m)	<b>39.4</b> (1.0 m)	<b>97.9</b> (9.1 m <sup>2</sup> )	<b>160</b> (4.0 mm)	<b>117</b> (53.1 kg)	

\* Coverage rate as reported assumes installation using side and end lap recommendations.



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#### SOPRALENE® 180 FR GR **PRODUCT # 01365 (WH)** 05006 (SG) 01323 (ECO3)



### **SOPRALENE®** 180 FR GR

## **TECHNICAL INFORMATION & TESTING**

SHEET PROPERTIES				
Reinforcement Non-woven polyester				
Elastomeric bitumen	Proprietary blend of bitumen and SBS polymers			
Surfacing	Ceramic coated granules			
Back surfacing	Sanded			
Selvage surface	face Sanded			
Side lap, in (mm) 3 (76)				
End lap, in (mm)	6 (152)			

DIMENSIONS & MASS					
PROPERTY TEST METHOD					
Thickness, mils (mm)	160 (4.0)	ASTM D5147			
Thickness @ selvage, mils (mm)	130 (3.3)	ASTM D5147			
Net mass per unit area, lb/100ft² (g/m²)	109 (5322)	ASTM D5147			

PHYSICAL PROPERTIES					
PROPERTY	MD	XMD	TEST METHOD		
Peak load @ 0°F (-18°C), lbf/in (kN/m)	115 (4.0)	90 (15.8)	ASTM D5147		
Elongation at peak load @ 0°F (-18°C), %	35	40	ASTM D5147		
Peak load @ 73.4°F (23°C), lbf/in (kN/m)	85 (14.9)	65 (11.4)	ASTM D5147		
Elongation at peak load @ 73.4°F (23°C), %	55	60	ASTM D5147		
Ultimate elongation @ 73.4°F (23°C), %	65	80	ASTM D5147		
Tear strength @ 73.4°F (23°C), lbf (N)	125 (556)	85 (378)	ASTM D5147		
Low temperature flexibility, °F (°C)	-15 (-26)	-15 (-26)	ASTM D5147		
Dimensional stability, %	< 0.5	< 0.5	ASTM D5147		
Compound stability, °F (°C)	240 (116)	240 (116)	ASTM D5147		
Granule embedment, g	1.5 avg; 2.0	ASTM D5147			
Cyclic fatigue, condition 5	Pa	ASTM D5849			

\* Data is represented by average values, unless noted otherwise.

### **TESTING & APPROVALS**





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# SOPRALENE® FLAM 180 FR GR

# PRODUCT DATA SHEET

### **DESCRIPTION & FEATURES**

SOPRALENE Flam 180 FR GR (fire retardant, granulated) is an SBS-modified bitumen cap ply for use in approved multi-ply membrane and flashing assemblies. SOPRALENE Flam 180 FR GR is composed of a proprietary formulation of elastomeric styrene-butadienestyrene (SBS) polymer modified bitumen and is reinforced with a tough, dimensionally stable non-woven polyester mat. The topside is surfaced with ceramic coated granules and underside is surfaced with polyolefin burn-off film to optimize heat welding.

SOPRALENE Flam 180 FR GR includes the standard white granules. Contact SOPREMA® Customer Service or your sales representative for other granule color options and special order requirements.

### STORAGE & HANDLING

Store rolls on end and maintain in an upright position to prevent damage. Store rolls in a clean dry location and cover as necessary to protect rolls from environmental damage such as extreme cold, heat, or moisture. Monitor varying environmental conditions during storage, handling and application of SOPRALENE Flam 180 FR GR.

### APPLICATION

Prior to installation, unroll SOPRALENE Flam 180 FR GR onto the roof surface and allow to relax. Position SOPRALENE Flam 180 FR GR in desired position and back roll the product. SOPRALENE Flam 180 FR GR is then heat welded to approved substrates. Refer to the SOPREMA SBS Roofing Installation Guide for additional application guidelines.



HEAT-WELDED

COOL ROOF RATING						
PRODUCT	SOLAR REFLECTANCE		THERMAL EMITTANCE		SRI	
SOPRALENE Flam 180 FR GR Standard white granules (WH)	0.27 initial	0.24 3 year	0.87 initial	0.90 3 year	27 initial	234 3 year
SOPRALENE Flam 180 FR GR Highly reflective white granules (SG)	0.66 initial	0.62* 3 year	0.91 initial	0.91* 3 year	81 initial	75 3 year
SOPRALENE Flam 180 FR GR Smog reducing granules (ECO3)	0.10 initial**	N/A	0.89 initial**	N/A	6 initial**	N/A

\*CRRC Rapid Ratings. Refer to Cool Roof Ratings Council (CRRC). \*\*Calculated using internal testing

ACTS	ASTM	LENGTH	WIDTH	COVERAGE*	THICKNESS	ROLL WEIGHT	ROLLS/ PALLET
	STANDARD	(ft)	(in)	(ft <sup>2</sup> )	(mils)	(lb)	(pallet weight)
QUICK F	<b>D6164</b> Type 1, Grade G	<b>32.8</b> (10.0 m)	<b>39.4</b> (1.0 m)	<b>97.9</b> (9.1 m <sup>2</sup> )	<b>160</b> (4.0 mm)	<b>118</b> (53.5 kg)	<b>25</b> (3,000 lb/ 1,361 kg)

 $^{\star}$  Coverage rate as reported assumes installation using side and end lap recommendations.



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#### SOPRALENE® FLAM 180 FR GR PRODUCT # 03961 (WH) 05003 (SG) 03942 (ECO3)



## **TECHNICAL INFORMATION & TESTING**

SHEET PROPERTIES				
Reinforcement	Non-woven polyester			
Elastomeric bitumen	Proprietary blend of bitumen and SBS polymers			
Top surfacing	Ceramic coated granules			
Back surfacing	Polyolefin film			
Selvage surface	Polyolefin film			
Selvage width, in (mm)	3 in (76 mm)			
End lap, in (mm)	6 in (152 mm)			

DIMENSIONS & MASS					
PROF	TEST METHOD				
Thickness, mils (mm)	160 (4.0)	ASTM D5147			
Thickness @ selvage, mils (mm)	118 (3.0)	ASTM D5147			
Net mass per unit area, lb/100ft² (g/m²)	110 (5371)	ASTM D5147			
Bottom coating thickness, mils (mm)	≥ 40 (1.0)	ASTM D5147			

PHYSICAL PROPERTIES						
PROPERTY	MD	XMD	TEST METHOD			
Peak load @ 0°F (-18°C), lbf/in (kN/m)	115 (20.1)	90 (15.8)	ASTM D5147			
Elongation at peak load @ 0°F (-18°C), %	35	40	ASTM D5147			
Peak load @ 73.4°F (23°C), lbf/in (kN/m)	85 (14.9)	65 (11.4)	ASTM D5147			
Elongation at peak load @ 73.4°F (23°C), %	55	60	ASTM D5147			
Ultimate elongation @ 73.4°F (23°C), %	65	80	ASTM D5147			
Tear strength @ 73.4°F (23°C), lbf (N)	125 (556)	85 (378)	ASTM D5147			
Low temperature flexibility, °F (°C)	-15 (-26)	-15 (-26)	ASTM D5147			
Dimensional stability, %	< 0.5	< 0.5	ASTM D5147			
Compound stability, °F (°C)	240 (116)	240 (116)	ASTM D5147			
Granule embedment, g	< 1.5 avg; 2.0 max SG		ASTM D5147			
Cyclic fatigue, condition 5	Pass		ASTM D5849			

\* Data is represented by average values, unless noted otherwise.

### TESTING & APPROVALS

