

danosa
Waterproofing Your World

Membrane Physical and Mechanical Properties

PHYSICAL AND MECHANICAL PROPERTIES

Esterdan R-36

Esterdan R-36 is an SBS modified bitumen membrane with a polyester mat reinforcement, protected with a burn-off film and/or silica sand on either side.

Property (As Manufactured)	Test Method	Units	Values
Thickness	ASTM D 5147	mils/mm	118/3.0
Weight	ASTM D 146	Lbs/ft ²	0.80
Maximum Load @ 73°F	ASTM D 5147	lbf/in	77
Maximum Load @ 0°F	ASTM D 5147	lbf/in	80
Elongation @ Maximum Load, 73°F	ASTM D 5147	%	35
Tensile-Tear Strength	ASTM D 5147	lbf	120
Compound Stability	ASTM D 5147	°F °C	215 102
Dimensional Stability	ASTM D 5147	%	<0.5



Esterdan R-36-4

Esterdan R-36-4 is an SBS modified bitumen base membrane with a polyester mat reinforcement, finished with a polyethylene film or sand on both or either side.

Property (As Manufactured)	Test Method	Units	Values
Thickness	ASTM D 5147	mils/mm	150/3.8
Weight	ASTM D 146	Lbs/ft ²	0.90
Maximum Load @ 73°F	ASTM D 5147	lbf/in	77
Maximum Load @ 0°F	ASTM D 5147	lbf/in	80
Elongation @ Maximum Load, 73°F	ASTM D 5147	%	27
Tensile-Tear Strength	ASTM D 5147	lbf	120 534
Compound Stability	ASTM D 5147	°F °C	No failure
Dimensional Stability	ASTM D 5147	%	0.5



PHYSICAL AND MECHANICAL PROPERTIES

Glasdan R-36

Glasdan R-36 is an SBS modified bitumen base membrane with a fiberglass mat reinforcement, protected with a burn-off film and or silica sand on either side.

Property (As Manufactured)	Test Method	Units	Values
Thickness	ASTM D 5147	mils/mm	118/3.0
Weight	ASTM D 146	Lbs/ft ²	0.80
Maximum Load @ 73°F	ASTM D 5147	lbf/in	83
Maximum Load @ 0°F	ASTM D 5147	lbf/in	163
Elongation @ Maximum Load, 73°F	ASTM D 5147	%	4
Tensile-Tear Strength	ASTM D 5147	lbf	120
Compound Stability	ASTM D 5147	215°F 102°C	No failure
Dimensional Stability	ASTM D 5147	%	0.1



Glasdan S-2

Glasdan S-2 is an SBS modified bitumen membrane with a fiberglass mat reinforcement, protected with burn-off film and/or sand on either side.

Property (As Manufactured)	Test Method	Units	Values
Thickness	ASTM D 5147	mils/mm	86.6 / 2.2
Weight	ASTM D 146	Lbs/ft ²	0.60
Maximum Load @ 73°F	ASTM D 5147	lbf/in	70
Maximum Load @ 0°F	ASTM D 5147	lbf/in	75
Elongation @ Maximum Load, 73°F	ASTM D 5147	%	30
Tensile-Tear Strength, min.	ASTM D 5147	lbf	130
Compound Stability	ASTM D 5147	215°F 102°C	No failure
Dimensional Stability	ASTM D 5147	%	0.1



PHYSICAL AND MECHANICAL PROPERTIES

Glasdan S-2 SA

Glasdan S-2 SA is a self-adhered SBS modified bitumen base membrane with a fiberglass mat reinforcement, protected with a release film on both sides, burn-off film or silica sand on one side.

Property (As Manufactured)	Test Method	Units	Values
Thickness	ASTM D 5147	mils/mm	87 / 2.2
Weight	ASTM D 146	Lbs/ft ²	0.60
Maximum Load @ 73°F	ASTM D 5147	lbf/in	70
Maximum Load @ 0°F	ASTM D 5147	lbf/in	85
Elongation @ Maximum Load, 73°F	ASTM D 5147	%	4
Tensile-Tear Strength, min.	ASTM D 5147	lbf	121
Compound Stability	ASTM D 5147	215°F 102°C	No failure
Dimensional Stability	ASTM D 5147	%	0.1



Esterdan RM PLUS

Esterdan RM-PLUS is an SBS modified bitumen top membrane with a heavy polyester mat reinforcement finished with ceramic granules on the top as a protection surface and a burn-off film or silica sand on the other side.

Property (As Manufactured)	Test Method	Units	Values
Thickness	ASTM D 5147	mils/mm	197/5.0
Weight	ASTM D 146	Lbs/ft ²	1.14
Maximum Load @ 73°F	ASTM D 5147	lbf/in	102
Maximum Load @ 0°F	ASTM D 5147	lbf/in	105
Elongation @ Maximum Load, 73°F	ASTM D 5147	%	50
Tensile-Tear Strength	ASTM D 5147	lbf	145
Low Temperature Flexibility	ASTM D 5147	°F °C	-13 -25
Compound Stability	ASTM D 5147	°F °C	215 102
Dimensional Stability	ASTM D 5147	%	<0.4
Granule Embedment Max. Avg. Loss	ASTM D 5147	gr./sample	1.5



PHYSICAL AND MECHANICAL PROPERTIES

Esterdan RM-4

Esterdan RM-4 is an SBS modified bitumen top membrane with a polyester mat reinforcement, finished with ceramic granules as top as a protection surface area and a burn-off film or silica sand on the other side.

Property (As Manufactured)	Test Method	Units	Values
Thickness	ASTM D 5147	mils/mm	150/3.8
Weight	ASTM D 146	Lbs/ft ²	0.99
Maximum Load @ 73°F	ASTM D 5147	lbf/in	81
Maximum Load @ 0°F	ASTM D 5147	lbf/in	105
Elongation @ Maximum Load, 73°F	ASTM D 5147	%	44
Tensile-Tear Strength	ASTM D 5147	lbf	123
Compound Stability	ASTM D 5147	215°F 102°C	No failure
Dimensional Stability	ASTM D 5147	%	0.5
Granule Embedment Max. Avg. Loss	ASTM D 5147	gr./sample	1.7



Esterdan RM-4 SA

Esterdan RM-4 SA is a self-adhered SBS modified bitumen top membrane with a polyester mat reinforcement, finished with ceramic granules as top as a protection surface area and a burn-off film or silica sand on the other side.

Property (As Manufactured)	Test Method	Units	Values
Thickness	ASTM D 5147	mils/mm	150/3.8
Weight	ASTM D 146	Lbs/ft ²	0.99
Maximum Load @ 73°F	ASTM D 5147	lbf/in	81
Maximum Load @ 0°F	ASTM D 5147	lbf/in	105
Elongation @ Maximum Load, 73°F	ASTM D 5147	%	44
Tensile-Tear Strength	ASTM D 5147	lbf	123
Compound Stability	ASTM D 5147	215°F 102°C	No failure
Dimensional Stability	ASTM D 5147	%	0.5
Granule Embedment Max. Avg. Loss	ASTM D 5147	gr./sample	1.7



PHYSICAL AND MECHANICAL PROPERTIES

Esterdan RM-5

Esterdan RM-5 is an SBS modified bitumen membrane with a polyester mat reinforcement, finished with ceramic granules as top as a protection surface area and a burn-off film or silica sand on the other side.

Property (As Manufactured)	Test Method	Units	Values
Thickness	ASTM D 5147	mils/mm	157/4.0
Weight	ASTM D 146	Lbs/ft ²	1.09
Maximum Load @ 73°F	ASTM D 5147	lbf/in	81
Maximum Load @ 0°F	ASTM D 5147	lbf/in	105
Elongation @ Maximum Load, 73°F	ASTM D 5147	%	44
Tensile-Tear Strength	ASTM D 5147	lbf	123
Compound Stability	ASTM D 5147	215°F 102°C	No failure
Dimensional Stability	ASTM D 5147	%	<0.4
Granule Embedment Max. Avg. Loss	ASTM D 5147	gr./sample	<1.7



Glasdan AL-80 Pearl White

Glasdan AL-80-PEARL WHITE is an SBS modified bitumen top membrane with a fiberglass mat reinforcement, finished with white aluminum clad on the top as a protection surface and a burn-off film on the other side.

Property (As Manufactured)	Test Method	Units	Values
Thickness	ASTM D 5147	mils/mm	130/3.3
Weight	ASTM D 146	Lbs/ft ²	0.79
Back Surface Coating Thickness	ASTM D 5147	mils/mm	40/1
Maximum Load @ 73°F	ASTM D 5147	lbf/in	75
Maximum Load @ 0°F	ASTM D 5147	lbf/in	120
Elongation @ Maximum Load, 73°F	ASTM D 5147	%	4
Tensile-Tear Strength, min.	ASTM D 5147	lbf	130
Compound Stability	ASTM D 5147	225°F 107°C	No failure
Dimensional Stability	ASTM D 5147	%	0.1
Water Absorption max	ASTM D 5147	%	0.2



PHYSICAL AND MECHANICAL PROPERTIES

Glasdan AL-80-3

Glasdan AL-80-3 is an SBS modified bitumen top membrane with a fiberglass mat reinforcement, finished with coated aluminum clad on the top as a protection surface and a burn-off film on the other side.

Property (As Manufactured)	Test Method	Units	Values
Thickness	ASTM D 5147	mils/mm	130/3.3
Weight	ASTM D 146	Lbs/ft ²	0.79
Back Surface Coating Thickness	ASTM D 5147	mils/mm	40/1
Maximum Load @ 73°F	ASTM D 5147	lbf/in	75
Maximum Load @ 0°F	ASTM D 5147	lbf/in	120
Elongation @ Maximum Load, 73°F	ASTM D 5147	%	4
Tensile-Tear Strength, min.	ASTM D 5147	lbf	130
Compound Stability	ASTM D 5147	°F °C	No failure
Dimensional Stability	ASTM D 5147	%	0.1
Water Absorption max	ASTM D 5147	%	0.2



Glasdan AL-80-3 Pearl White

Glasdan AL-80-3 PEARL WHITE is an SBS modified bitumen top membrane with a fiberglass mat reinforcement, finished with white aluminum clad on the top as a protection surface and a burn-off film on the other side.

Property (As Manufactured)	Test Method	Units	Values
Thickness	ASTM D 5147	mils/mm	130/3.3
Weight	ASTM D 146	Lbs/ft ²	0.79
Back Surface Coating Thickness	ASTM D 5147	mils/mm	40/1
Maximum Load @ 73°F	ASTM D 5147	lbf/in	75
Maximum Load @ 0°F	ASTM D 5147	lbf/in	120
Elongation @ Maximum Load, 73°F	ASTM D 5147	%	4
Tensile-Tear Strength, min.	ASTM D 5147	lbf	130
Compound Stability	ASTM D 5147	225°F 107°C	No failure
Dimensional Stability	ASTM D 5147	%	0.1
Water Absorption max	ASTM D 5147	%	0.2



PHYSICAL AND MECHANICAL PROPERTIES

Glasdan AL-80-3 SA

Glasdan AL-80-3 SA is a self-adhered SBS modified bitumen top membrane with a fiberglass mat reinforcement, finished with aluminum clad on the top as a protection surface and a release film on the other side.

Property (As Manufactured)	Test Method	Units	Values
Thickness	ASTM D 5147	mils/mm	130/3.3
Weight	ASTM D 146	lb/ft ²	0.79
Back Surface Coating Thickness	ASTM D 5147	mils/mm	40/1
Maximum Load @ 73°F	ASTM D 5147	lb/in	75
Maximum Load @ 0°F	ASTM D 5147	lb/in	120
Elongation @ Maximum Load, 73°F	ASTM D 5147	%	4
Tensile-Tear Strength, min.	ASTM D 5147	lbf	130
Compound Stability	ASTM D 5147	215°F 102°C	No failure
Dimensional Stability	ASTM D 5147	%	0.1
Water Absorption max	ASTM D 5147	%	0.2
Solar Reflectance	ASTM E903	-	0.80
Emissivity	ASTM C1371	-	0.79
SRI	ASTM E1980	-	97



Glasdan AL-80-4

Glasdan AL-80-4 is a SBS modified bitumen top membrane with a fiberglass mat reinforcement, finished with aluminum clad on the top as a protection surface and a burn-off film on the other side.

Property (As Manufactured)	Test Method	Units	Values
Thickness	ASTM D 5147	mils/mm	142/3.6
Weight	ASTM D 146	lb/ft ²	0.88
Back Surface Coating Thickness	ASTM D 5147	mils/mm	40/1
Maximum Load @ 73°F	ASTM D 5147	lb/in	75
Maximum Load @ 0°F	ASTM D 5147	lb/in	120
Elongation @ Maximum Load, 73°F	ASTM D 5147	%	4
Tensile-Tear Strength, min.	ASTM D 5147	lbf	130
Compound Stability	ASTM D 5147	215°F 102°C	No failure
Dimensional Stability	ASTM D 5147	%	0.1
Water Absorption max	ASTM D 5147	%	0.2
Solar Reflectance	ASTM E903	-	0.76
Emissivity	ASTM C1371	-	0.48
SRI	ASTM E1980	-	84

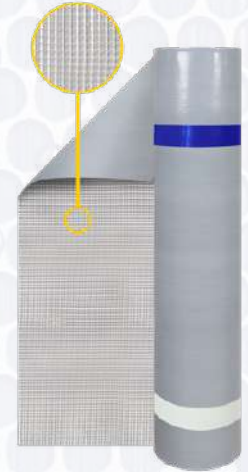


PHYSICAL AND MECHANICAL PROPERTIES

Glasdan AL-80-4 SA

Glasdan AL-80-4 SA is a self-adhered SBS modified bitumen top membrane with a fiberglass mat reinforcement, finished with aluminum clad on the top as a protection surface and a release liner on the other side.

Property (As Manufactured)	Test Method	Units	Values
Thickness	ASTM D 5147	mils/mm	142/3.6
Weight	ASTM D 146	lb/ft ²	0.88
Back Surface Coating Thickness	ASTM D 5147	mils/mm	40/1
Maximum Load @ 73°F	ASTM D 5147	lbf/in	75
Maximum Load @ 0°F	ASTM D 5147	lbf/in	120
Elongation @ Maximum Load, 73°F	ASTM D 5147	%	4
Tensile-Tear Strength, min.	ASTM D 5147	lbf	130
Compound Stability	ASTM D 5147	215°F 102°C	No failure
Dimensional Stability	ASTM D 5147	%	0.1
Water Absorption max	ASTM D 5147	%	0.2
Solar Reflectance	ASTM E903	-	0.76
Emissivity	ASTM C1371	-	0.48
SRI	ASTM E1980	-	84



Glasdan RM-4

Glasdan RM-4 is a SBS modified bitumen top membrane with a fiberglass mat reinforcement, finished with ceramic granules on the top as a protection surface and a burn-off film or silica sand on the other side.

Property (As Manufactured)	Test Method	Units	Values
Thickness	ASTM D 5147	mils/mm	150/3.8
Weight	ASTM D 146	Lbs/ft ²	0.99
Maximum Load @ 73°F	ASTM D 5147	lbf/in	70
Maximum Load @ 0°F	ASTM D 5147	lbf/in	85
Elongation @ Maximum Load, 73°F	ASTM D 5147	%	4
Tensile-Tear Strength	ASTM D 5147	lbf	120
Compound Stability	ASTM D 5147	215°F 102°C	No failure
Dimensional Stability	ASTM D 5147	%	0.1
Granule Embedment Max. Avg. Loss	ASTM D 5147	gr./sample	1.7

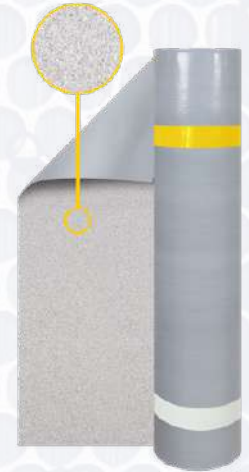


PHYSICAL AND MECHANICAL PROPERTIES

Glasdan RM-4 SA

Glasdan RM-4 SA is a self-adhered SBS modified bitumen top membrane with a fiberglass mat reinforcement, finished with ceramic granules on the top as a protection surface and a release film on the back side.

Property (As Manufactured)	Test Method	Units	Values
Thickness	ASTM D 5147	mils/mm	134/3.4
Weight	ASTM D 146	Lbs/ft ²	0.87
Maximum Load @ 73°F	ASTM D 5147	lbf/in	72
Maximum Load @ 0°F	ASTM D 5147	lbf/in	100
Elongation @ Maximum Load, 73°F	ASTM D 5147	%	4
Tensile-Tear Strength, min.	ASTM D 5147	lbf	140
Compound Stability	ASTM D 5147	215°F 102°C	No failure
Dimensional Stability	ASTM D 5147	%	0.1
Granule Embedment Max. Avg. Loss	ASTM D 5147	gr./sample	1.5



Glasdan RM-5

Glasdan RM-5 is a SBS modified bitumen membrane with a fiberglass mat reinforcement, finished with ceramic granules on the top as a protection surface and a burn-off film or silica sand on the other side.

Property (As Manufactured)	Test Method	Units	Values
Thickness	ASTM D 5147	mils/mm	157 mils (4.0mm)
Weight	ASTM D 146	Lbs/ft ²	1.09
Maximum Load @ 73°F	ASTM D 5147	lbf/in	75
Maximum Load @ 0°F	ASTM D 5147	lbf/in	85
Elongation @ Maximum Load, 73°F	ASTM D 5147	%	4
Tensile-Tear Strength	ASTM D 5147	lbf	140
Compound Stability	ASTM D 5147	215°F 102°C	No failure
Dimensional Stability	ASTM D 5147	%	0.1
Granule Embedment	ASTM D 5147	gr./sample	1.6



PHYSICAL AND MECHANICAL PROPERTIES

Glasdan RM-5 SA

Glasdan RM-5 SA is a self-adhered SBS modified bitumen top membrane with a fiberglass mat reinforcement, finished with ceramic granules on the top as a protection surface and a release film on the back side.

Property (As Manufactured)	Test Method	Units	Values
Thickness	ASTM D 5147	mils/mm	157 mils (4.0mm)
Weight	ASTM D 146	Lbs/ft ²	0.99
Maximum Load @ 73°F	ASTM D 5147	lbf/in	75
Maximum Load @ 0°F	ASTM D 5147	lbf/in	85
Elongation @ Maximum Load, 73°F	ASTM D 5147	%	4
Tensile-Tear Strength, min.	ASTM D 5147	lbf	140
Compound Stability	ASTM D 5147	215°F 102°C	No failure
Dimensional Stability	ASTM D 5147	%	0.1
Granule Embedment Max. Avg. Loss	ASTM D 5147	gr./sample	1.6



WR CAP

WR CAP is a SBS modified bitumen top membrane with a fiberglass mat reinforcement, finished with highly reflective white granules on the top surface and a burn-off film or sand on the other side.

Property (As Manufactured)	Test Method	Units	Values
Thickness	ASTM D 5147	mm/mils	3.5/138
Weight	ASTM D 146	lb/ft ²	0.95
Back Surface Coating Thickness	ASTM D 5147	mils/mm	40/1
Maximum Load @ 73°F	ASTM D 5147	lbf/in	75
Maximum Load @ 0°F	ASTM D 5147	lbf/in	120
Elongation @ Maximum Load, 73°F	ASTM D 5147	%	4
Tensile-Tear Strength	ASTM D 5147	lbf	120
Compound Stability	ASTM D 5147	215°F 102°C	No failure
Water Absorption max	ASTM D 5147	%	0.2
Dimensional Stability	ASTM D 5147	%	0.1
Solar Reflectance	ASTM E903	-	0.84
Emmissivity	ASTM C1371	-	0.89
SRI	ASTM E1980	-	105



PHYSICAL AND MECHANICAL PROPERTIES

WR Smooth

WR SMOOTH is a SBS modified bitumen top membrane with a fiberglass mat reinforcement, finished with highly reflective and resilient film on the top surface and a burn-off film on the other side.

Property (As Manufactured)	Test Method	Units	Values
Thickness	ASTM D 5147	mm/mils	3.5/138
Weight	ASTM D 146	lb/ft ²	0.95
Back Surface Coating Thickness	ASTM D 5147	mils/mm	40/1
Maximum Load @ 73°F	ASTM D 5147	lbf/in	75
Maximum Load @ 0°F	ASTM D 5147	lbf/in	120
Elongation @ Maximum Load, 73°F	ASTM D 5147	%	4
Tensile-Tear Strength	ASTM D 5147	lbf	120
Compound Stability	ASTM D 5147	215°F 102°C	No failure
Water Absorption max	ASTM D 5147	%	0.2
Dimensional Stability	ASTM D 5147	%	0.1
Solar Reflectance	ASTM E903	-	0.84
Emmissivity	ASTM C1371	-	0.87
SRI		-	104



WR Smooth Polyester

WR SMOOTH POLYESTER is a SBS modified bitumen top membrane with a heavy polyester mat reinforcement, finished with highly reflective and resilient film on the top surface and a burn-off film on the other side.

Property (As Manufactured)	Test Method	Units	Values
Thickness	ASTM D 5147	mm/mils	3.5/138
Weight	ASTM D 146	lb/ft ²	0.95
Back Surface Coating Thickness	ASTM D 5147	mils/mm	40/1
Maximum Load @ 73°F	ASTM D 5147	lbf/in	77
Maximum Load @ 0°F	ASTM D 5147	lbf/in	80
Elongation @ Maximum Load, 0°F	ASTM D 5147	%	20
Tensile-Tear Strength	ASTM D 5147	lbf	120
Compound Stability	ASTM D 5147	215°F 102°C	No failure
Water Absorption max	ASTM D 5147	%	0.2
Dimensional Stability	ASTM D 5147	%	<0.5
Solar Reflectance	ASTM E903	-	0.84
Emmissivity	ASTM C1371	-	0.87
SRI	ASTM E1980	-	104



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