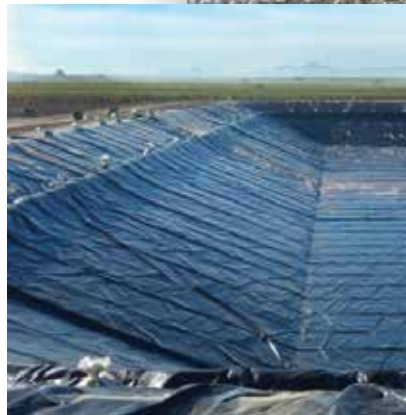




**STRONGER  
LIGHTER  
FASTER  
GEOMEMBRANE  
SOLUTIONS**



*AquaMaster*<sup>®</sup>  
**STRONGER LIGHTER FASTER**



# AQUAMASTER® GEOMEMBRANES



From agricultural irrigation to industrial applications, AquaMaster® is the proven choice for your site requirements.

AquaMaster from IPG® provides sound solutions for water resource management and a wide range of civic and industrial applications such as conventional and non-conventional oil and gas extraction, above ground tank liners, irrigation reservoirs and canals, mining applications and temporary waste covers. With enhanced hydrostatic resistance and our high tear strength scrim technology, our AquaMaster lining is guaranteed to meet your containment needs.

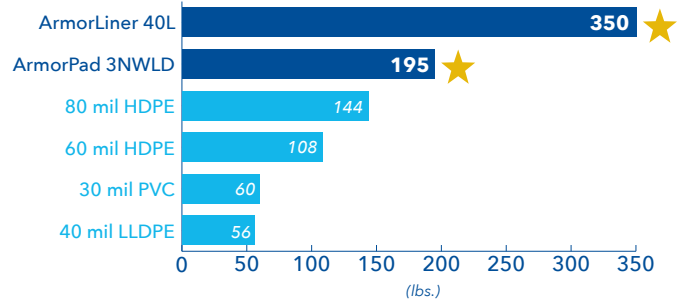
Our geomembrane portfolio is comprised of two product families: NovaLiner™ for standard applications with warranties up to 15 years and our ArmorLiner™ for more demanding applications, with warranties up to 20 years.

## DESIGNED FOR EASY INSTALLATION AND LONG LIFE

AquaMaster® woven coated fabric liners & covers incorporate exclusive polyolefin coatings for maximum toughness and abrasion resistance. These liners are available in heavy, medium and lightweight fabrics with varying coating thicknesses and colors depending on your site requirements.

AquaMaster liners & covers feature unique benefits that make it the most effective and economical choice.

### PUNCTURE RESISTANCE ASTM D4833



## DESIGNED FOR CONTAINMENT

Whether your jobsite is in the arid regions of the American South West or the Canadian Arctic, IPG has the right product for your needs. The exclusive AquaMaster product line is the perfect choice for a wide range of containment applications. Our product line is certified drinking water safe to NSF-61, the most respected independent water testing organization in America.



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*AquaMaster*  
STRONGER LIGHTER FASTER



**ARMOR  
PAD**



**ARMOR  
LINER**

**NOVA GRIP**

**NOVA LINER**

Learn more about AquaMaster by going to [www.itape.com/aquamaster](http://www.itape.com/aquamaster) or by scanning the QR code and check out the video on our website that features the installation of IPG's AquaMaster Geomembrane - ArmorLiner.





## BENEFITS

- Lighter weight for more cost effective transportation
- Wider widths which mean fewer field seams
- Can be factory prefabricated for faster and easier installations
- Added strength for puncture and tear resistance
- Engineered coatings provide exceptional hydrostatic resistance and heat seaming weldability
- Technologically designed for UV resistance
- Custom colors available

## APPLICATIONS

### Water Management

- Settling basins
- Landfill reservoirs
- Golf course ponds and other aesthetic features
- Snowmaking water reserve ponds
- Canal linings

### Municipal

- Fire reservoirs
- Road construction and other D.O.T. applications
- Storm water detention and retention ponds
- Drainage systems
- Waste water containment
- Secondary containment

### Oil & Gas

- Hydraulic fracturing wastewater containment
- Evaporation ponds
- Temporary and permanent oilfield pit liners
- Above ground impoundments
- Containment booms

### Aquacultural & Agricultural

- Algae harvesting support ponds
- Irrigation canals and ponds
- Aquaculture tank liners
- Raceway ponds

**STRONGER** than HDPE

**LIGHTER** roll weight

**FASTER** installation time

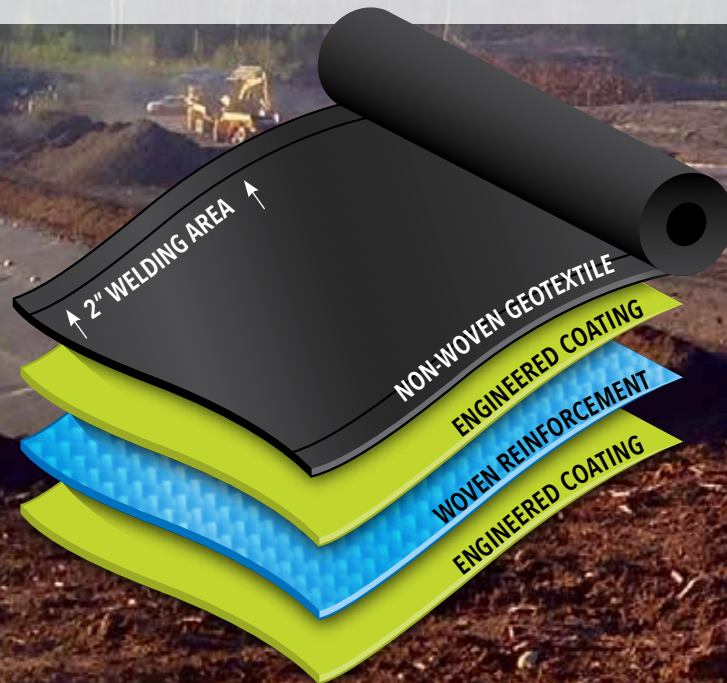


# DOUBLE NON-WOVEN LAMINATE

ArmorPad™ 3NWL (non-woven laminate) is a medium weight woven coated geomembrane with a single lightweight non-woven laminated to one side. This provides a strong and reliable barrier to water, industrial contaminants and other fluids. The non-woven layer reduces slip occurrence on the top surface, or provides adhesion for concrete, while increasing the puncture resistance when placed facing down.

**Recommended Applications:** Canal Lining, Well Pads

**Warranty:** 2 years (exposed); 20 years (buried or with the non-woven not exposed)



## ArmorPad 3NWL

Property	ASTM	Specification
Base Fabric		Black HDPE
Coating		LDPE + PP Nonwoven
Weight oz/sq yd (gsm)	D5261	13.9 (471) +/- 5%
Thickness (w/o Non-woven) mils (mm)	D1777	24 (0.60) +/- 10%
Grab Tensile lb (N)	D7004	MD 300 (1332) / TD 250 (1110)
Tongue Tear - Large Scale lb (N)	D5884	MD 100 (444) / TD 100 (444)
Mullen Burst psi (kPa)	D751	530 (3652)
Hydrostatic Resistance psi (kPa)	D751	400 (2756)
Hydraulic Conductivity cm/s	Calc. MVTR E96	$7.73 \times 10^{-12}$
Puncture Resistance lb (N)	D4833	195 (866)
CBR Static Puncture lb (N)	D6241	1128 (5016)
Dimensional Stability %	D1204	MD -3.6 / TD -2.5
Low Temperature Flex	D2136	MD&TD: Pass @ -40°C (-40°F)
Accelerated UV Weathering* % Retained Strength	G154	>90
Limited Warranty (Exposed) Years		2
Limited Warranty (Buried) Years		20

\*Q.U.V [A-340 Lamps]; 8 hrs UV @ 60°C; 4 hrs condensation @ 50°C



# DOUBLE NON-WOVEN LAMINATE

## ArmorPad 3NWLD

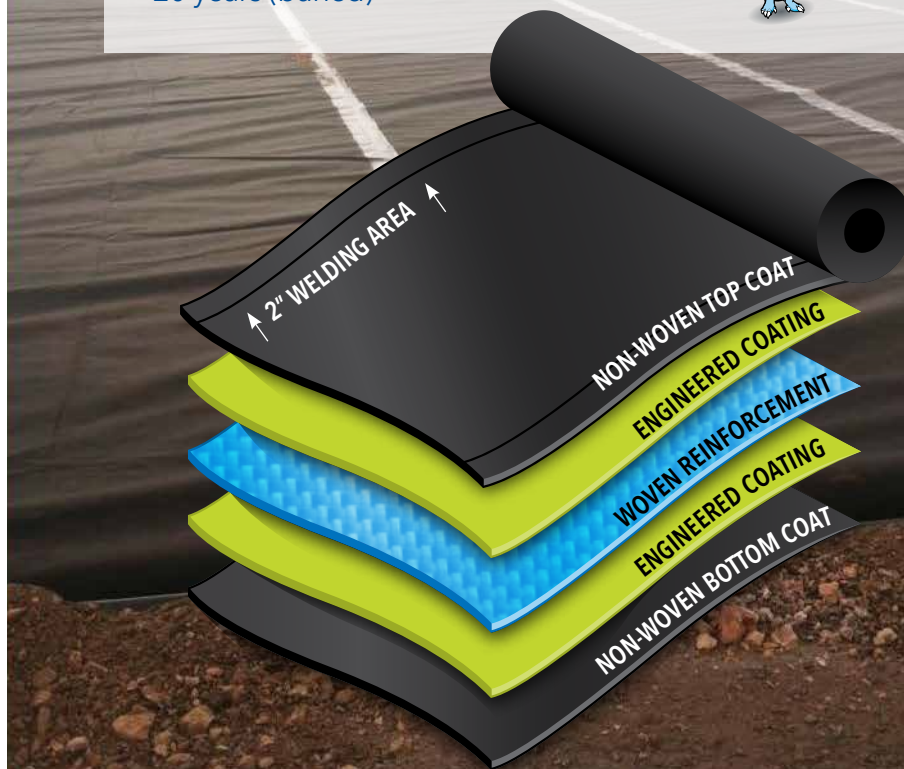
Property	ASTM	Specification
Base Fabric		Black HDPE
Coating		LDPE
Weight oz/sq yd (gsm)	D5261	18 (610) +/- 5%
Thickness mils (mm)	D1777	24 (0.60) +/- 10%
Grab Tensile lb (N)	D7004	MD 400 (1776) / TD 300 (1332)
Tongue Tear - Large Scale lb (N)	D5884	MD 100 (444) / TD 100 (444)
Mullen Burst psi (kPa)	D751	650 (4479)
Hydrostatic Resistance psi (kPa)	D751	400 (2756)
Hydraulic Conductivity cm/s	Calc. MVTR E96	$7.73 \times 10^{-12}$
Puncture Resistance lb (N)	D4833	195 (866)
CBR Static Puncture lb	D6241	1351 (5998)
Dimensional Stability %	D1204	MD -3.6 / TD -2.5
Low Temperature Flex	D2136	MD&TD: Pass @ -40°C (-40°F)
Accelerated UV Weathering* % Retained Strength	G154	>90
Limited Warranty (Exposed) Years		2
Limited Warranty (Buried) Years		20

\*Q.U.V [A-340 Lamps]; 8 hrs UV @ 60°C; 4 hrs condensation @ 50°C

ArmorPad™ 3NWLD is a medium weight woven coated geomembrane with a double lightweight non-woven laminated layer, which provide increased barrier to water, other fluids and industrial contaminants. The non-woven layer on the top reduces slip occurrence, or provides adhesion for concrete, while the non-woven bottom layer increases puncture and tear resistance.

**Recommended Applications:** Canal Lining, Well Pads

**Warranty:** 2 years (exposed);  
20 years (buried)

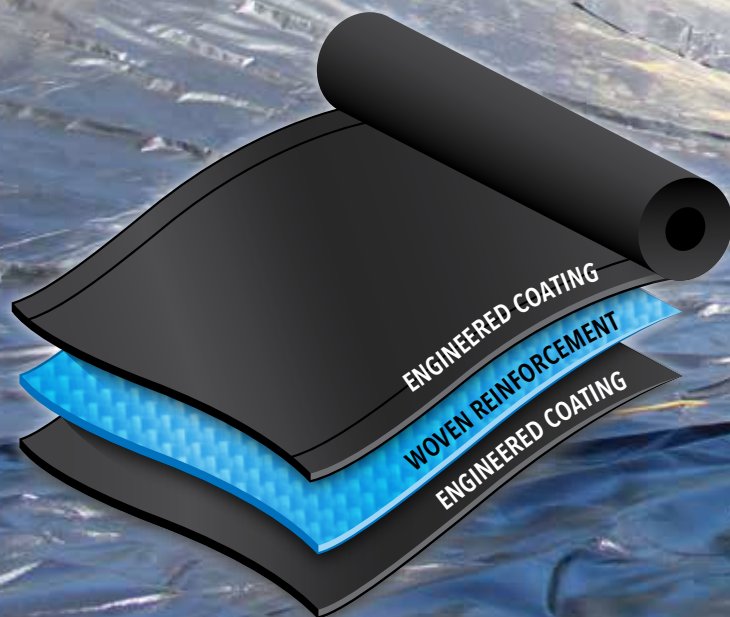


# PREMIUM LINER/COVER

Our AquaMaster ArmorLiner 24 is a premium reinforced geomembrane with a woven HDPE fabric that increases puncture resistance. This tough membrane is still flexible enough for easy installation in complex projects. ArmorLiner 24 has superior tear resistance and is perfect for long term exposure applications.

**Recommended Applications:** Decorative Ponds, Canal Reservoirs, Waste Water Containment, Secondary Containment

**Warranty:** 10 years (exposed);  
20 years (buried)



## ArmorLiner 24

Property	ASTM	Specification
Base Fabric		Black HDPE
Coating		LDPE
Weight oz/sq yd (gsm)	D5261	11.5 (390)
Thickness mils (mm)	D1777	24 (0.60) +/- 10%
Grab Tensile lb (N)	D7004	MD 350 (1554) / TD 335 (1487)
Tongue Tear - Large Scale lb (N)	D5884	MD 110 (488) / TD 110 (488)
Mullen Burst psi (kPa)	D751	525 (3617)
Hydrostatic Resistance psi (kPa)	D751	425 (2928)
Hydraulic Conductivity cm/s	Calc. MVTR E96	$1.4 \times 10^{-12}$
Puncture Resistance lb (N)	D4833	182 (808)
CBR Static Puncture lb (N)	D6241	1157 (5137)
Dimensional Stability %	D1204	MD -4.7 / TD -1.6
Low Temperature Flex	D2136	MD&TD: Pass @ -65°C (-85°F)
Accelerated UV Weathering* % Retained Strength	D7238	>90
Limited Warranty (Exposed) Years		10
Limited Warranty (Buried) Years		20

\*Q.U.V [A-340 Lamps]; 20 hrs UV @ 75°C;  
4 hrs condensation @ 60°C



# PREMIUM LINER/COVER

## ArmorLiner 30

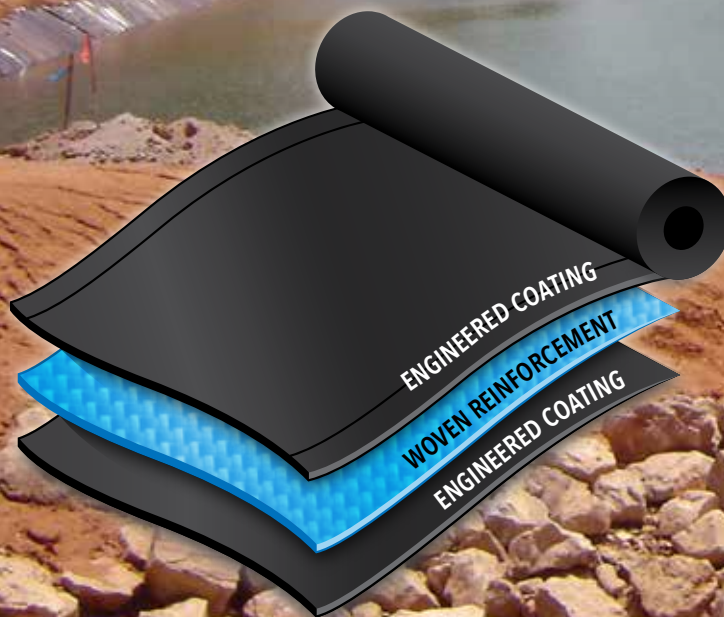
Property	ASTM	Specification
Base Fabric		Black HDPE
Coating		LDPE
Weight oz/sq yd (gsm)	D5261	15 (509)
Thickness mils (mm)	D1777	30 (0.75) +/- 10%
Grab Tensile lb (N)	D7004	MD 340 (1510) / TD 520 (2309)
Tongue Tear - Large Scale lb (N)	D5884	MD 45 (200) / TD 55 (244)
Mullen Burst psi (kPa)	D751	700 (4823)
Hydrostatic Resistance psi (kPa)	D751	610 (4203)
Hydraulic Conductivity cm/s	Calc. MVTR E96	$1.87 \times 10^{-12}$
Puncture Resistance lb (N)	D4833	200 (888)
CBR Static Puncture lb (N)	D6241	1481 (6576)
Dimensional Stability %	D1204	MD -4.4 / TD -1.8
Low Temperature Flex	D2136	MD&TD: Pass @ -65°C (-85°F)
Accelerated UV Weathering* % Retained Strength	G154	>90
Limited Warranty (Exposed) Years		15
Limited Warranty (Buried) Years		20

\*Q.U.V [A-340 Lamps]; 8 hrs UV @ 60°C; 4 hrs condensation @ 50°C

Our AquaMaster ArmorLiner 30 is a premium reinforced geomembrane with a woven HDPE fabric that increases puncture and tear resistance. This membrane has an advanced coating, as well as superior hydrostatic resistance, while maintaining its flexibility. ArmorLiner 30 is perfect for potable water applications.

**Recommended Applications:** Large Exposed Reservoirs, Water Ski Lakes, Waste Water Containment, Secondary Containment

**Warranty:** 15 years (exposed);  
20 years (buried)



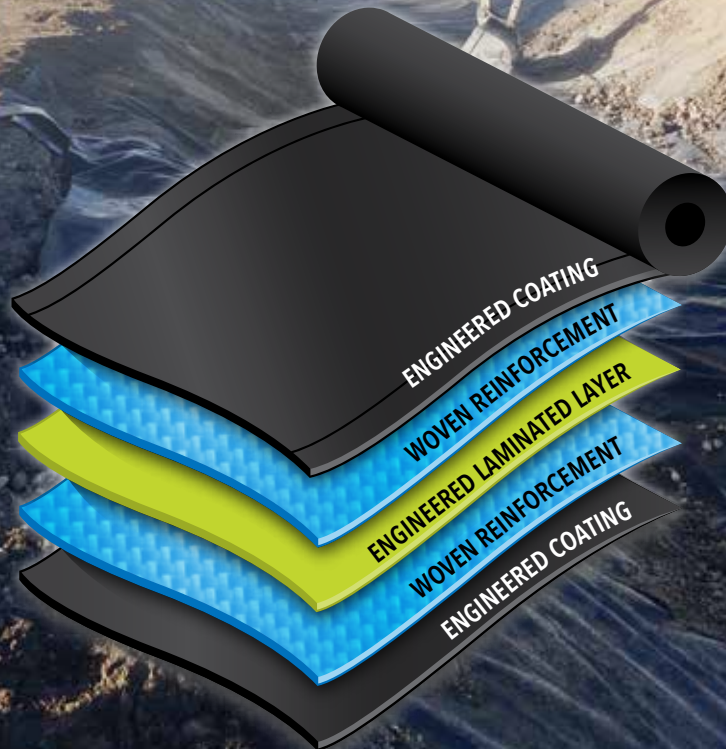


# DOUBLE SCRIM LAMINATE

ArmorLiner 40L is our premium double scrim membrane that has one of the highest puncture resistance values in the industry. With excellent UV resistance, this product will survive long term, exposed applications.

**Recommended Applications:** Mining, Coal/Ash Remediation, Large Reservoirs, Waste Water Containment, Secondary Containment

**Warranty:** 20 years (exposed);  
25 years (buried)



## ArmorLiner 40L

Property	ASTM	Specification
Base Fabric		Black HDPE
Coating		LDPE
Weight oz/sq yd (gsm)	D5261	18.5 (627)
Thickness mils (mm)	D1777	40 (1.0) +/- 10%
Grab Tensile lb (N)	D7004	MD 680 (3019) / TD 680 (3019)
Tongue Tear - Large Scale lb (N)	D5884	MD 140 (622) / TD 135 (599)
Mullen Burst psi (kPa)	D751	1300 (8957)
Hydrostatic Resistance psi (kPa)	D751	685 (4720)
Hydraulic Conductivity cm/s	Calc. MVTR E96	$2.65 \times 10^{-12}$
Puncture Resistance lb (N)	D4833	350 (1554)
CBR Static Puncture lb (N)	D6241	2356 (10461)
Dimensional Stability %	D1204	MD -3.8 / TD -1.8
Low Temperature Flex	D2136	MD&TD: Pass @ -65°C (-85°F)
Accelerated UV Weathering* % Retained Strength	D7238	>90
Limited Warranty (Exposed) Years		20
Limited Warranty (Buried) Years		25

\*Q.U.V [A-340 Lamps]; 20 hrs UV @ 75°C;  
4 hrs condensation @ 60°C

# DOUBLE SCRIM LAMINATE

## ArmorLiner 45L

Property	ASTM	Specification
Base Fabric		Black HDPE
Coating		LDPE
Weight oz/sq yd (gsm)	D5261	23 (780)
Thickness mils (mm)	D1777	45 (1.12)
Grab Tensile lb (N)	D7004	MD 655 (2908) / TD 880 (3907)
Tongue Tear - Large Scale lb (N)	D5884	MD 105 (466) / TD 110 (488)
Mullen Burst psi (kPa)	D751	1300 (8957)
Hydrostatic Resistance psi (kPa)	D751	880 (6063)
Hydraulic Conductivity cm/s	Calc. MVTR E96	$2.29 \times 10^{-12}$
Puncture Resistance lb (N)	D4833	365 (1621)
CBR Static Puncture lb (N)	D6241	2265 (10057)
Dimensional Stability %	D1204	MD -3.1 / TD -1.5
Low Temperature Flex	D2136	MD&TD: Pass @ -65°C (-85°F)
Accelerated UV Weathering* % Retained Strength	D7238	>90
Limited Warranty (Exposed) Years		20
Limited Warranty (Buried) Years		25

\*Q.U.V [A-340 Lamps]; 20 hrs UV @ 75°C;  
4 hrs condensation @ 60°C

ArmorLiner 45L is our 45 mil double scrim membrane with extremely high puncture resistance and tensile strength, far surpassing the physical properties of other reinforced 45 mil polyethylene or polypropylene products. With the excellent hydrostatic resistance and superior UV resistance, you can count on the long-term performance even in demanding exposed applications.

**Recommended Applications:** Mining, Coal/Ash Remediation, Large Reservoirs, Waste Water Containment, Secondary Containment

**Warranty:** 20 years (exposed);  
25 years (buried)





# DOUBLE SCRIM LAMINATE

ArmorLiner 60L is a double scrim, heavyweight geomembrane fabric incorporating a special weave pattern to enhance thickness, flatness, and tear properties. The coating recipe is designed to improve toughness and abrasion resistance for exposed applications up to 20 years.

**Recommended Applications:** Mining, Coal/Ash Remediation, Large Reservoirs, Oil & Gas Rig Site Containment, Long Term Liners

**Warranty:** 20 years (exposed);  
25 years (buried)



## ArmorLiner 60L

Property	ASTM	Specification
Base Fabric		Black HDPE
Coating		LDPE
Weight oz/sq yd (gsm)	D5261	26.7 (905)
Thickness mils (mm)	D1777	60 (1.5)
Grab Tensile lb (N)	D7004	MD 650 (2886) / TD 750 (3330)
Tongue Tear - Large Scale lb (N)	D5884	MD 45 (200) / TD 80 (355)
Mullen Burst psi (kPa)	D751	1000 (6895)
Hydrostatic Resistance psi (kPa)	D751	1154 (7957)
Hydraulic Conductivity cm/s	Calc. MVTR E96	$3.11 \times 10^{-12}$
Puncture Resistance lb (N)	D4833	330 (1468)
CBR Static Puncture lb (N)	D6241	2126 (9457)
Dimensional Stability %	D1204	MD -3.2 / TD -2.2
Low Temperature Flex	D2136	MD&TD: Pass @ -65°C (-85°F)
Accelerated UV Weathering* % Retained Strength	D7238	>90
Limited Warranty (Exposed) Years		20
Limited Warranty (Buried) Years		25

\*Q.U.V [A-340 Lamps]; 8 hrs UV @ 60°C; 4hrs condensation @ 50°C



# SINGLE FILM LAMINATE

## ArmorLiner 30SFL

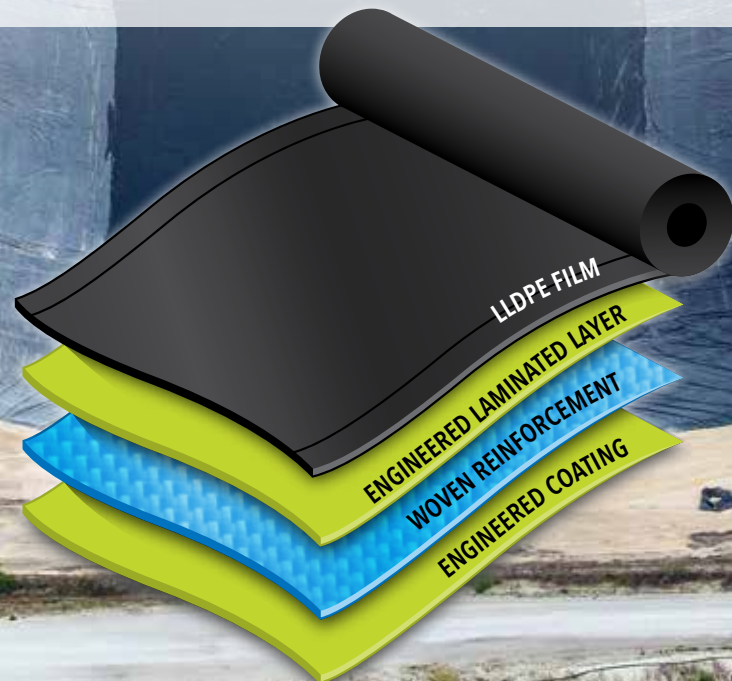
Property	ASTM	Specification
Base Fabric		Black HDPE
Coating		LDPE
Weight oz/sq yd (gsm)	D5261	14.7 (498)
Thickness mils (mm)	D1777	30 (0.75)**
Grab Tensile lb (N)	D7004	MD 410 (1820) / TD 400 (1776)
Tongue Tear - Large Scale lb (N)	D5884	MD 79 (351) / TD 81 (360)
Mullen Burst psi (kPa)	D751	622 (4289)
Hydrostatic Resistance psi (kPa)	D751	635 (4375)
Hydraulic Conductivity cm/s	Calc. MVTR E96	$2.06 \times 10^{-12}$
Puncture Resistance lb (N)	D4833	195 (866)
CBR Static Puncture lb (N)	D6241	1272 (5658)
Dimensional Stability %	D1204	MD -2.9 / TD -1.0
Low Temperature Flex	D2136	MD&TD: Pass @ -65°C (-85°F)
Accelerated UV Weathering* % Retained Strength	D7238	>90
Limited Warranty (Exposed) Years		20
Limited Warranty (Buried) Years		25

\*Q.U.V [A-340 Lamps]; 20 hrs UV @ 75°C; 4 hrs condensation @ 60°C

The ArmorLiner 30SFL (Single Film Laminate) is a 30 mil heavy duty membrane that offers superior puncture and hydrostatic resistance properties. ArmorLiner 30SFL is the proven choice for demanding geomembrane water containment applications. The exclusive ArmorLiner 30SFL is technologically designed to provide the characteristics that you demand from both an installation and performance standpoint.

**Recommended Applications:** Hydraulic Fracturing, Tank Liners, Water Reservoirs, Heavy Duty Containment Projects

**Warranty:** 20 years (exposed);  
25 years (buried)





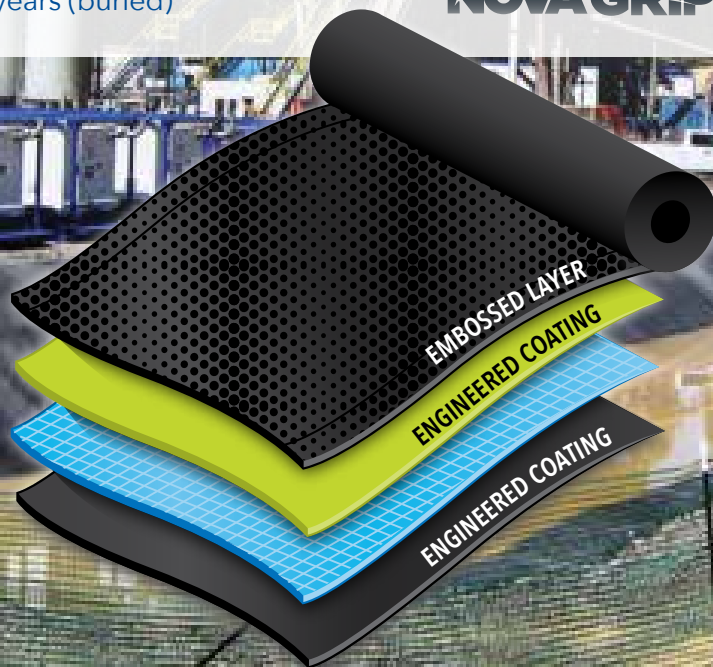
# TEXTURED GEOMEMBRANE

NovaGrip 30 is a 30 mil geomembrane with an aggressive raised embossed pattern on one side of the membrane. This textured surface can be used to provide a slip resistant surface or to hold soil on a side slope. NovaGrip 30 is an effective safeguard against slips & falls on job-site locations. As always, our geomembranes are resistant to a range of chemicals and hydrocarbons, helping our customers keep the environment safe from contaminants.

**Recommended Applications:** Oil & Gas Rig Sites, Soil Stabilization, Secondary Containment, Landfill Cap, Water Containment Pond

**Warranty:** 10 years (exposed);  
20 years (buried)

**NOVAGRIP™**



## NovaGrip 30

Property	ASTM	Specification
Base Fabric		Black HDPE
Coating		LDPE
Weight oz/sq yd (gsm)	D5261	14.5 (493) +/- 5%
Thickness mils (mm)	D1777	27 (0.68) +/- 10%
Asperity Height mils (mm)	D7466	>20 (>0.5)
Grab Tensile lb (N)	D7004	MD 325 (1443) / TD 270 (1199)
Tongue Tear - Large Scale lb (N)	D5884	MD 65 (289) / TD 70 (311)
Mullen Burst psi (kPa)	D751	560 (3858)
Hydrostatic Resistance psi (kPa)	D751	370 (2549)
Hydraulic Conductivity cm/s	Calc. MVTR E96	2.65 x 10 <sup>-12</sup>
Puncture Resistance lb (N)	D4833	150 (666)
CBR Static Puncture lb (N)	D6241	985 (4379)
Dimensional Stability %	D1204	MD -2.8 / TD -1.6
Low Temperature Flex	D2136	MD&TD: Pass @ -65°C (-85°F)
Limited Warranty (Exposed) Years		10
Limited Warranty (Buried) Years		20

# STANDARD GRADE LINER/COVER

## NovaLiner 12

Property	ASTM	Specification
Base Fabric		Black HDPE
Coating		LDPE
Weight oz/sq yd (gsm)	D5261	5.2 (176)
Thickness mils (mm)	D1777	12 (0.30) +/- 10%
Grab Tensile lb (N)	D7004	MD 180 (799) / TD 125 (555)
Tongue Tear - Large Scale lb (N)	D5884	MD 50 (222) / TD 50 (222)
Mullen Burst psi (kPa)	D751	275 (1895)
Hydrostatic Resistance psi (kPa)	D751	130 (896)
Hydraulic Conductivity cm/s	Calc. MVTR E96	$0.88 \times 10^{-12}$
Puncture Resistance lb (N)	D4833	76 (337)
CBR Static Puncture lb (N)	D6241	530 (2353)
Dimensional Stability %	D1204	MD -3.60 / TD -2.42
Low Temperature Flex	D2136	MD&TD: Pass @ -40°C (-40°F)
Accelerated UV Weathering* % Retained Strength	G154	>90
Limited Warranty (Exposed) Years		5
Limited Warranty (Buried) Years		10

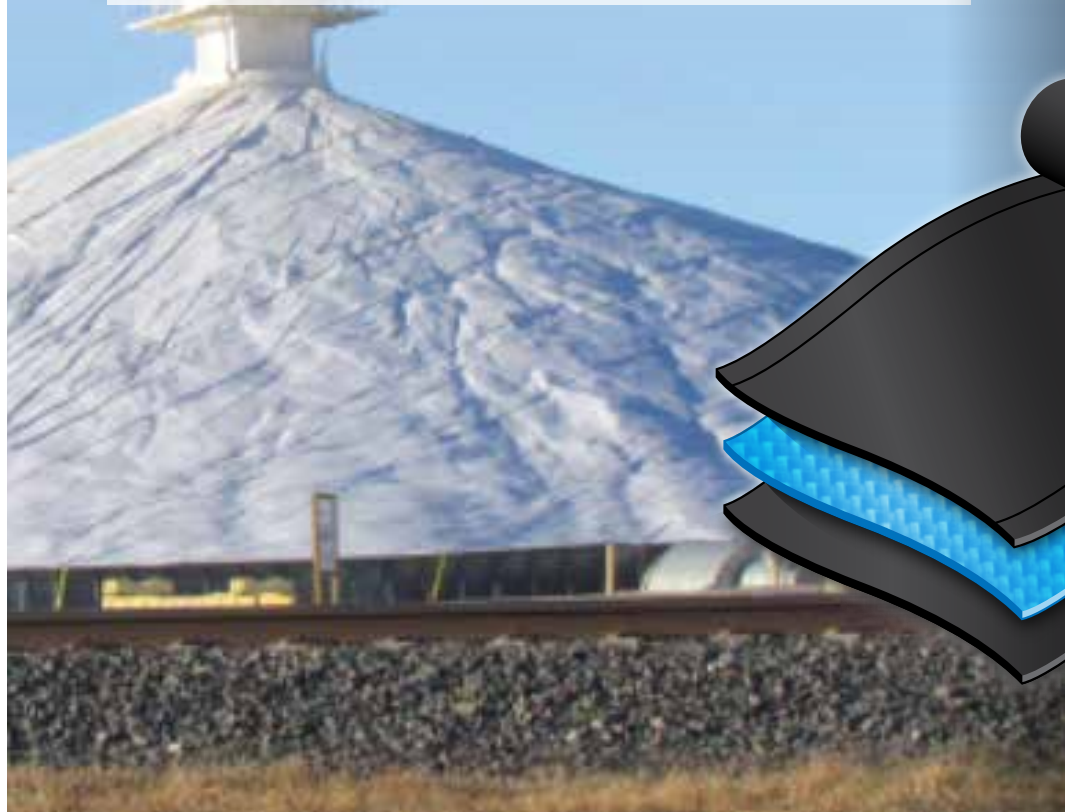
\*Q.UV [A-340 Lamps]; 8 hrs UV @ 60°C; 4 hrs condensation @ 50°C

NovaLiner 12 is our lightweight, but extremely strong liner/cover for temporary applications up to 5 years exposed. This 12 mil reinforced polyethylene material provides excellent protection against rain and UV exposure, protecting the covered products from the harsh environment.

**Recommended Applications:** Grain Covers, Temporary Landfill Covers, Short-term Liners

**Warranty:** 5 years (exposed);  
10 years (buried)

**NOVA LINER**





# STANDARD GRADE LINER/COVER

NovaLiner 16 utilizes a thicker scrim and coating for increased puncture and tensile strength. This 16 mil thick material is perfect for temporary applications requiring a lightweight, but tough, liner or cover.

**Recommended Applications:** Grain Covers, Temporary Landfill Covers

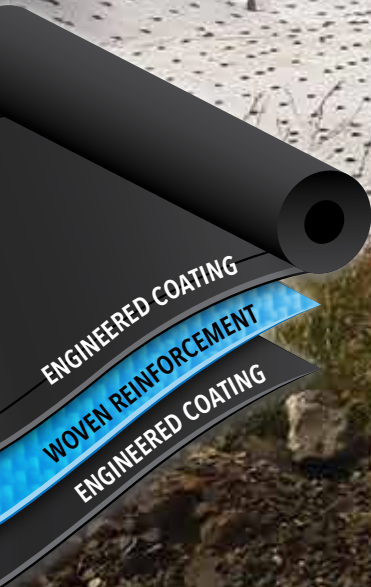
**Warranty:** 5 years (exposed);  
10 years (buried)

**NOVA LINER**

## NovaLiner 16

Property	ASTM	Specification
Base Fabric		Black HDPE
Coating		LDPE
Weight oz/sq yd (gsm)	D5261	7.2 (244)
Thickness mils (mm)	D1777	16 (0.40) +/- 10%
Grab Tensile lb (N)	D7004	MD 210 (932) / TD 190 (844)
Tongue Tear - Large Scale lb (N)	D5884	MD 60 (266) / TD 60 (266)
Mullen Burst psi (kPa)	D751	375 (2584)
Hydrostatic Resistance psi (kPa)	D751	97 (668)
Hydraulic Conductivity cm/s	Calc. MVTR E96	$1.97 \times 10^{-12}$
Puncture Resistance lb (N)	D4833	113 (502)
CBR Static Puncture lb (N)	D6241	922 (4094)
Dimensional Stability %	D1204	MD -3.60 / TD -3.40
Low Temperature Flex	D2136	MD&TD: Pass @ -40°C (-40°F)
Accelerated UV Weathering* % Retained Strength	G154	>90
Limited Warranty (Exposed) Years		5
Limited Warranty (Buried) Years		10

\*Q.U.V [A-340 Lamps]; 8 hrs UV @ 60°C; 4 hrs condensation @ 50°C





# STANDARD GRADE LINER/COVER

## NovaLiner 20

Property	ASTM	Specification
Base Fabric		Black HDPE
Coating		LDPE
Weight oz/sq yd (gsm)	D5261	9 (305)
Thickness mils (mm)	D1777	20 (0.50) +/- 10%
Grab Tensile lb (N)	D7004	MD 250 (1110) / TD 340 (1510)
Tongue Tear - Large Scale lb (N)	D5884	MD 75 (333) / TD 75 (333)
Mullen Burst psi (kPa)	D751	550 (3790)
Hydrostatic Resistance psi (kPa)	D751	139 (958)
Hydraulic Conductivity cm/s	Calc. MVTR E96	$1.97 \times 10^{-12}$
Puncture Resistance lb (N)	D4833	140 (622)
CBR Static Puncture lb (N)	D6241	973 (4320)
Dimensional Stability %	D1204	MD -4.30 / TD -1.80
Low Temperature Flex	D2136	MD&TD: Pass @ -65°C (-85°F)
Accelerated UV Weathering* % Retained Strength	G154	>90
Limited Warranty (Exposed) Years		5
Limited Warranty (Buried) Years		10

\*Q.U.V [A-340 Lamps]; 8 hrs UV @ 60°C; 4 hrs condensation @ 50°C

NovaLiner 20 is our medium weight liner/cover that incorporates our special weave pattern to enhance flatness and tear properties. The special coating is designed to provide toughness and abrasion resistance while maintaining its excellent UV protection.

**Recommended Applications:** Interim Landfill Covers, Containment Liners

**Warranty:** 5 years (exposed);  
10 years (buried)

**NOVA LINER**



# STANDARD GRADE LINER/COVER

Novaliner 24 is our 24 mil fabric that utilizes a special scrim to enhance thickness, flatness, and tear properties. The coating recipe is designed to improve toughness and abrasion resistance. This product is intended for exposed applications up to 5 years.

**Recommended Applications:** Interim Landfill Covers, Containment Liners

**Warranty:** 5 years (exposed);  
10 years (buried)

**NOVA LINER**

## Novaliner 24

Property	ASTM	Specification
Base Fabric		Black HDPE
Coating		LDPE
Weight oz/sq yd (gsm)	D5261	9.1 (309)
Thickness mils (mm)	D1777	24 (0.60) +/- 10%
Grab Tensile lb (N)	D7004	MD 294 (1305) / TD 242 (1074)
Tongue Tear - Large Scale lb (N)	D5884	MD 90 (400) / TD 92 (408)
Mullen Burst psi (kPa)	D751	530 (3652)
Hydrostatic Resistance psi (kPa)	D751	262 (1805)
Hydraulic Conductivity cm/s	Calc. MVTR E96	$1.77 \times 10^{-12}$
Puncture Resistance lb (N)	D4833	150 (666)
CBR Static Puncture lb (N)	D6241	993 (4409)
Dimensional Stability %	D1204	MD -3.60 / TD -1.00
Low Temperature Flex	D2136	MD&TD: Pass @ -65°C (-85°F)
Accelerated UV Weathering* % Retained Strength	D7238	>90
Limited Warranty (Exposed) Years		5
Limited Warranty (Buried) Years		10

\*Q.U.V [A-340 Lamps]; 20 hrs UV @ 75°C; 4 hrs condensation @ 60°C

ENGINEERED COATING  
WOVEN REINFORCEMENT  
ENGINEERED COATING

# STANDARD GRADE LINER/COVER

## NovaLiner 30

Property	ASTM	Specification
Base Fabric		Black HDPE
Coating		LDPE
Weight oz/sq yd (gsm)	D5261	12.2 (414)
Thickness mils (mm)	D1777	30 (0.75) +/- 10%
Grab Tensile lb (N)	D7004	MD 282 (1252) / TD 320 (1421)
Tongue Tear - Large Scale lb (N)	D5884	MD 70 (311) / TD 85 (377)
Mullen Burst psi (kPa)	D751	585 (4031)
Hydrostatic Resistance psi (kPa)	D751	423 (2914)
Hydraulic Conductivity cm/s	Calc. MVTR E96	$1.87 \times 10^{-12}$
Puncture Resistance lb (N)	D4833	165 (733)
CBR Static Puncture lb (N)	D6241	1025 (4551)
Dimensional Stability %	D1204	MD -4.40 / TD -1.80
Low Temperature Flex	D2136	MD&TD: Pass @ -65°C (-85°F)
Accelerated UV Weathering* % Retained Strength	D7238	>90
Limited Warranty (Exposed) Years		10
Limited Warranty (Buried) Years		20

\*Q.U.V [A-340 Lamps]; 20 hrs UV @ 75°C; 4 hrs condensation @ 60°C

NovaLiner 30 is a popular universal material utilizing a heavy-duty scrim that increases puncture strength properties. The extra heavy coating provides ease of field welding and maximizes Hydrostatic Resistance for demanding water containment applications.

**Recommended Applications:** Water Reservoirs, Canals, Oil & Gas Frac Pits

**Warranty:** 10 years (exposed);  
20 years (buried)

**NOVA LINER**





# STANDARD GRADE LINER/COVER

NovaLiner 40 is our heaviest “Standard Grade” material which incorporates a heavy duty scrim for increased puncture and tensile properties. This product, like all AquaMaster products, can be fabricated and rolled into large panels while being very competitive with standard non-reinforced HDPE and LLDPE materials.

**Recommended Applications:** Water Reservoirs, Canals, Oil & Gas Frac Pits

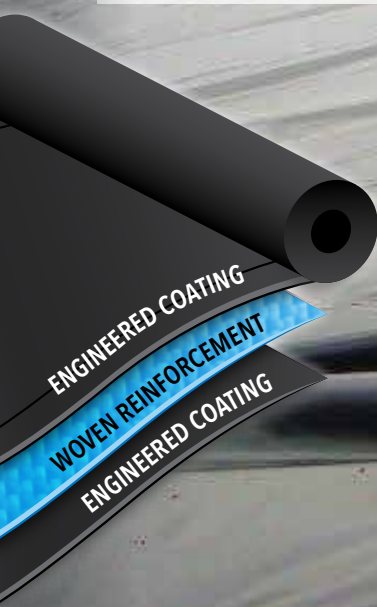
**Warranty:** 15 years (exposed);  
20 years (buried)

**NOVA LINER**

## NovaLiner 40

Property	ASTM	Specification
Base Fabric		Black HDPE
Coating		LDPE
Weight oz/sq yd (gsm)	D5261	14.2 (481)
Thickness mils (mm)	D1777	40 (1.0) +/- 10%
Grab Tensile lb (N)	D7004	MD 450 (1998) / TD 450 (1998)
Tongue Tear - Large Scale lb (N)	D5884	MD 80 (355) / TD 100 (444)
Mullen Burst psi (kPa)	D751	750 (5168)
Hydrostatic Resistance psi (kPa)	D751	612 (4217)
Hydraulic Conductivity cm/s	Calc. MVTR E96	$3.15 \times 10^{-12}$
Puncture Resistance lb (N)	D4833	200 (888)
CBR Static Puncture lb (N)	D6241	1558 (6918)
Dimensional Stability %	D1204	MD -4.40 / TD -1.80
Low Temperature Flex	D2136	MD&TD: Pass @ -65°C (-85°F)
Accelerated UV Weathering* % Retained Strength	D7238	>90
Limited Warranty (Exposed) Years		15
Limited Warranty (Buried) Years		20

\*Q.U.V [A-340 Lamps]; 20 hrs UV @ 75°C; 4 hrs condensation @ 60°C



## NORTH AMERICA

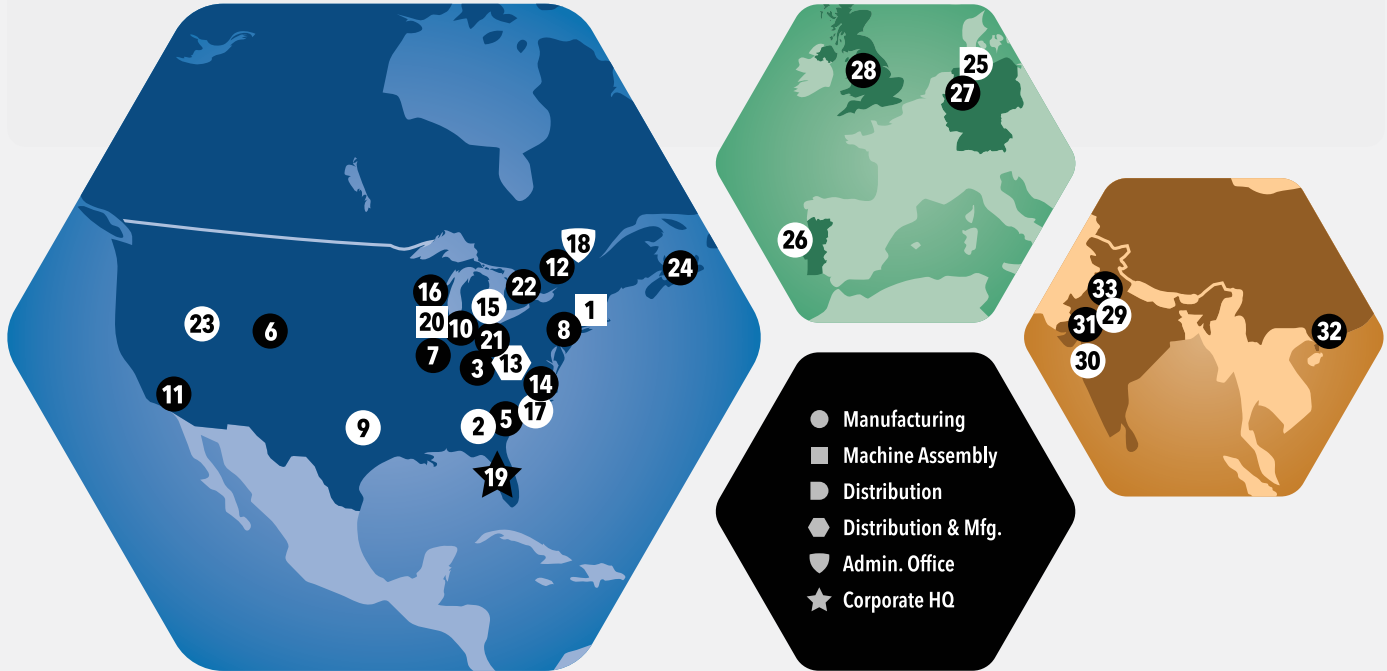
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|----------------------|-------------------|--------------------|---------------------|
| 1. Ansonia, CT       | 8. Carlstadt, NJ  | 14. Everetts, NC   | 20. Schaumburg, IL  |
| 2. Atlanta, GA       | 9. Carrollton, TX | 15. Marysville, MI | 21. Springfield, OH |
| 3. Bardstown, KY (2) | 10. Chicago, IL   | 16. Menasha, WI    | 22. Toronto, ON     |
| 5. Blythewood, SC    | 11. Corona, CA    | 17. Midland, NC    | 23. Tremonton, UT   |
| 6. Brighton, CO      | 12. Cornwall, ON  | 18. Montreal, QC   | 24. Truro, NS       |
| 7. Carbondale, IL    | 13. Danville, VA  | 19. Sarasota, FL   |                     |

## EUROPE

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|------------------------|
| 25. Flensburg, Germany |
| 26. Porto, Portugal    |
| 27. Soest, Germany     |
| 28. Widnes, UK         |

## ASIA

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|--------------------------|
| 29. Chopanki, India      |
| 30. Daman, India         |
| 31. Dahej, India         |
| 32. Jiangmen City, China |
| 33. Karoli, India        |



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