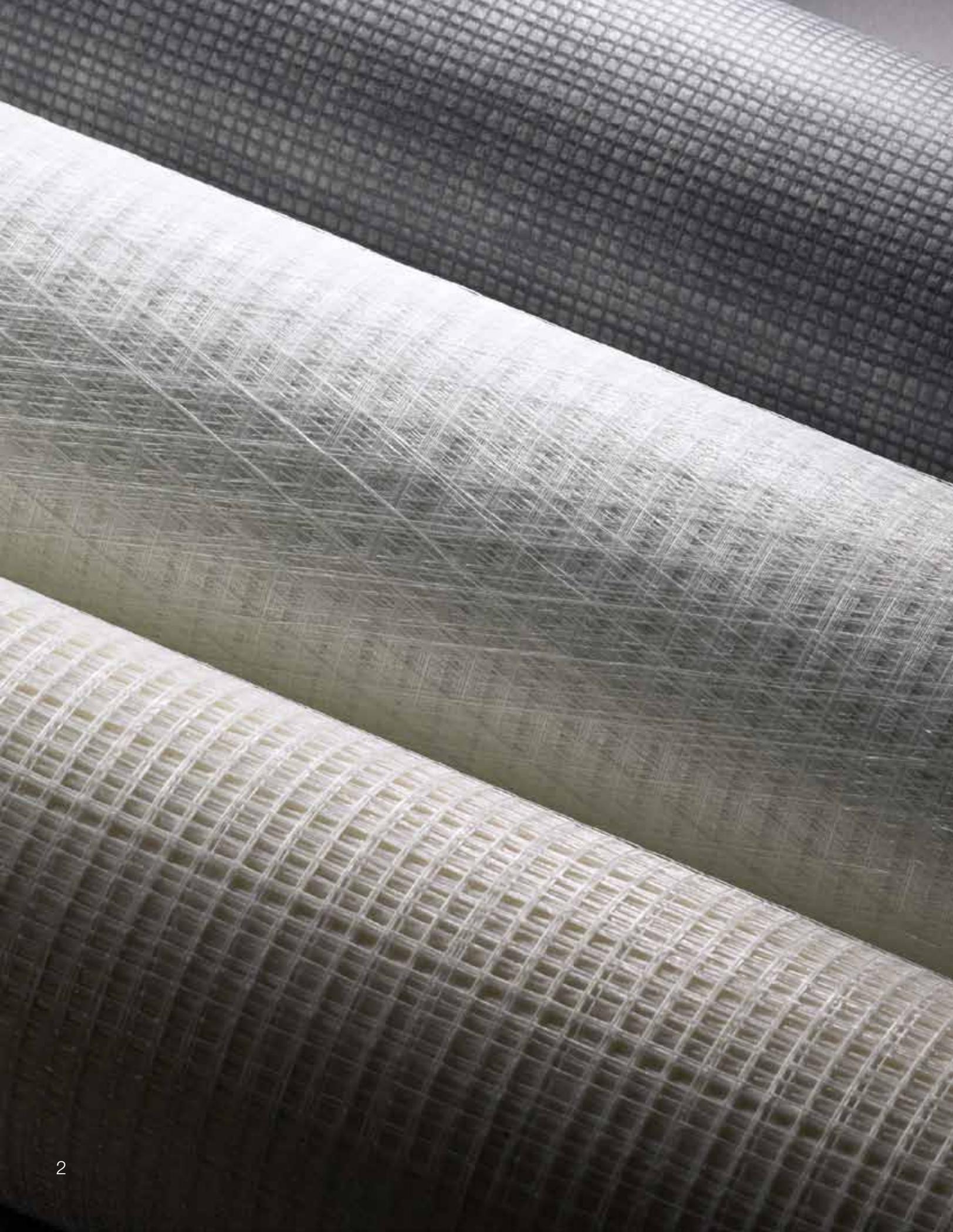




high-performance scrims for the products of tomorrow

Stronger ideas for a sustainable world.





ADFORS: your partner for innovative reinforcement solutions

ADFORS has been developing laid scrim for more than thirty years. Our strength is utilizing high-tenacity yarns to create innovative, cost-effective materials that offer superior structural reinforcement with less bulk and weight.

We can create infinite combinations of traditional high-quality square scrim, as well as our unique off-angle scrim, from a wide variety of fibers set at various angles to achieve the flexibility, durability and appearance you require. The resulting products help make your engineered solutions stronger and lighter, enabling your design team to reach new product development frontiers.

Scrim basics

Scrim is a cost-effective reinforcing fabric made from continuous filament yarn in an open mesh construction, commonly used to increase tear strength, dimensional stability, facilitate handling or act as a carrier of adhesive to be used in secondary bonding. It is typically used when woven fabrics are too bulky and knitted products are too pliable for the application.

The laid scrim manufacturing process chemically bonds non-woven yarns together, enhancing the scrim with unique characteristics. This allows for customized effects that increase the strength and life of scrims for our clients.

Features and benefits include:

- Dimensional stability
- Tensile strength
- Alkali resistance
- Tear resistance
- Fire resistance
- Anti-microbial properties
- Water resistance

Fibers typically used are:

- Fiberglass
- Polyester
- Aramid
- Dyneema®
- Spectra®
- PBO Zylon®
- Vectran®
- Carbon
- Natural fibers and high-modulus yarns can also be processed

Binders include:

- Polyvinyl alcohol
- Polyvinyl chloride
- Acrylic
- Thermoplastic
- Styrene butadiene rubber
- Plastisol

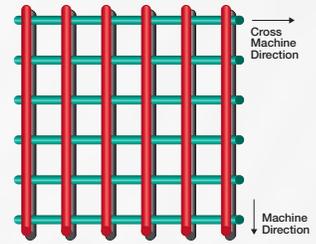
Applications:

- Composite reinforcements
- Flexible membranes
- Flooring reinforcement
- Insulation
- Packaging
- Roofing and waterproofing
- Ship/Marine industry
- Wall reinforcements
- Custom applications



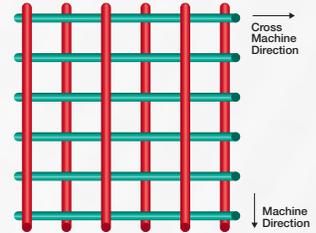
Side by side

The simplest laid scrim pattern, the yarns from the top and bottom warp (machine direction) yarns lie next to each other with the fill (cross machine) yarns in between set at a 90° angle.



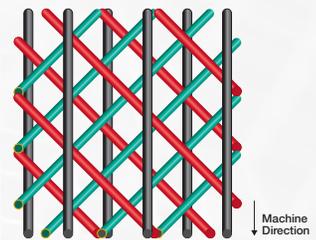
Over/Under

Yarns from the two warp sheets lie directly on top of each other. The fill yarns are also set at a 90° angle. This construction offers increased dimensional stability.



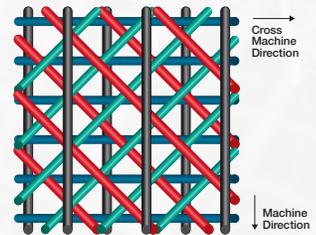
Tri-directional

Angled fill yarns are added to provide better aesthetics and redistributed strength.



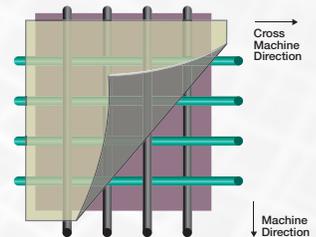
Quad-directional

Various scrims are bonded together chemically or thermally for increased strength and dimensional stability.



Complexes

Scrim can be used individually or can be bonded to other substrates such as glass mat, synthetics, film and more.



Specialty

For more than twenty years, ADFORS has been the world-exclusive provider of off-angle specialty scrims. Through a proprietary process, we create scrims that reinforce load requirements off the 0–90 degree axis. We can create infinite combinations from a variety of high tensile strength fibers set at various angles to achieve the flexibility, durability and appearance you require.

Fibers used include: polyester, aramid, Dyneema®, Spectra®, PBO Zylon®, Vectran® and carbon.

Custom scrims as unique as your ideas.

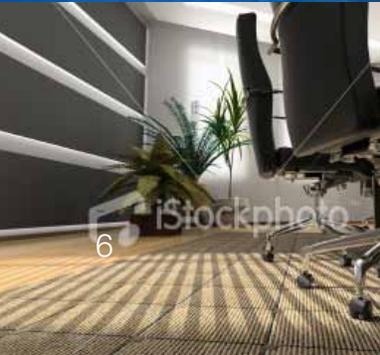
ADFORS has a long history of partnering with top companies, offering a range of custom solutions from medical to sailcloth, disposables to cleaning supplies, and roofing to flooring. Every one of our scrims is made to order, as every customer need varies based on yarn type, count, binder, width, roll length and other factors.

You can depend on us to work diligently and efficiently to solve your issues in a timely manner, as we understand the pressures of delivery most industries demand. Aside from reacting quickly to your current needs, we are also progressive and work proactively to determine future requirements of multiple industries and devise solutions that help our clients develop the next state-of-the-industry products.

The ADFORS Process

When we begin our partnership with a new client, we find the right product by completing the following steps:

- Define the customer's application, process and which attributes are most important, i.e., UV resistant, recyclable, water-resistant, etc.
- Determine if the scrim will be:
 - LAMINATED
 - Thermal lamination
Two or more different layers are brought together and consolidated with heat and pressure.
 - Wet lamination
A liquid adhesive is applied to one or more substrates. The materials are brought together and dried.
 - COATED
 - Coating
Impart attributes like impact resistance, fire retardancy, stiffness and many more.
 - Extrusion
The coating of a molten web of synthetic resin to a substrate.
- Review our current product mix for similar applications/processes.
- Provide client with samples that best match their needs. If our current product mix doesn't include a viable sample, we determine the unique tensile and process requirements of the client and develop sample rolls for testing.
- We also provide alternate suggestions for construction, yarns and binders, if they exist.
- We then form a partnership to make what you make stronger.



Capability

Scrim characteristics	
Width	38 mm to 5,300 mm
Roll length	Up to 120,000 lm (depending on pattern and equipment needs)
Yarns	Glass, polyester, aramid, Twaron® etc.
Construction	Square, tri-directional, quad-directional
Patterns	From 0.4 yarn/cm to 4 yarns/cm (1 yarn/in to 18 yarns/in)
Tensile strength range	From 35.5 to 568 N/5 cm in each direction
Bonding	PVOH, SBR, EVA, PVC, acrylic, etc.
Complexes for combination materials	A scrim bonded to: glass non-woven, polyester non-woven, specialty non-woven, film, etc.

End product examples

- Industrial wipers
- Medical gowns
- Surgical hand towels
- Roll towels
- Filter media/Filtration
- Envelope reinforcement
- Carpet tiles
- Insulation facing
- Roof insulation/Bitumen roofing
- Flex duct/Flex ducting
- Foil/Scrim/Kraft laminates
- Furnace filters
- Packaging
- Roofing reinforcements
- Automotive fabrics
- Sailcloth
- Agricultural fabrics
- Flooring reinforcements
- Moisture barrier reinforcements
- Industrial safety nets
- Cement board
- Plaster wall boards
- Bedding
- Core materials
- Prefabricated concrete structures
- Road, bridge and runway installation
- Soil and mine embankment stabilization
- Building site restoration projects
- Custom solutions

State-of-the-art manufacturing

- Key facilities in Albion, NY, USA and Miranda, Spain
- Quality assurance

Dedicated R&D

- Custom engineered fabrics and products
- Innovative solutions

Responsive technical support

- Focused on customer needs
- Experienced sales and technical staff

Environmental policy

ADFORS is engaged in a comprehensive approach to protecting the environment, improving hygiene and safety and reducing the environmental impact of its products and factories. For this purpose, ADFORS engaged in a process of certification ISO 9001 and ISO 14001 for all of its industrial sites.

The ADFORS culture is based on:

- Satisfying our customers' product and service needs
- A continuous improvement in terms of quality, safety, the environment, energy saving and the sustainable development of our products
- Compliance with strict environmental standards and legislation, sometimes even beyond the requirements of applicable laws

To further improve its performance, ADFORS is now involved in a management system for excellence – World Class Manufacturing (WCM) – and focusing its resources on improving quality, customer satisfaction and reducing losses. Our goal is to decrease our environmental impact by reducing our consumption of energy and water, as well as waste and carbon emissions.



ADFORS

A company with world-class capabilities and worldwide reach

ADFORS is an industry leader in the manufacture and distribution of a wide range of reinforcement fabrics. As a subsidiary of Saint-Gobain, our parent company, ADFORS has access to manufacturing plants located around the world. Our global network of research facilities connects with strategically located sales offices to give you comprehensive service. As the world's leading manufacturer of reinforced fabrics, we take pride in providing creative solutions that help our customers meet unique challenges.

ADFORS is always available to perform a dedicated study to identify a particular scrim solution to meet your needs. Visit www.sg-adfors.com to learn more.

Saint-Gobain

Working with leading companies in several business sectors, Saint-Gobain has emerged as the world's largest building materials firm.

- Founded in 1665
- Expanded its expertise to more than 64 countries
- Invests over \$590 (€400) million annually in research and development
- Files more than 400 new patent applications each year

www.sg-adfors.com

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Dyneema is a registered trademark of Royal DSM
Spectra is a registered trademark of Honeywell International Inc.
PBO Zylon is a registered trademark of Toyobo Co., Ltd
Vectran is a registered trademark of Kuraray Co., Ltd.

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