



An Indorama Ventures Company



AVGOL BABYCARE

We Aspire to Create Nonwoven Innovations to Enhance Quality of Life

avgol.com



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At Avgol, we believe that non-woven fabrics shouldn't just be high-performing, sustainable and superior quality, their development should be driven by a desire to innovate and truly put the end user front of mind.

From our extensive market experience, we understand that the most effective way to offer our customers the key advantages required to success in today's commercial environment is to keep a consumer-centric focus through our operations, technologies and development strategy.

For this reason, our business is driven by core principles that influence the full length of the value chain, from research and development to logistics and supply.

Combining core values and beliefs into every part of the business, Avgol aims to demonstrate its identity and vision through actions, not just words.



INTRODUCING AVGOL

Since 1988, Avgol has led the global hygiene market with the most comprehensive range of ultra-lightweight high performance non-woven spunmelt fabrics for the baby diaper, adult incontinence and feminine hygiene markets.

Avgol's progressive, solution-centric FIT™ strategy helps to fulfil its mission to contribute to the life and wellbeing of hundreds of millions of babies, mothers and senior citizens around the globe.

AVGOL FIT PHILOSOPHY - MORE FROM LESS

Avgol is passionate about developing visionary products and solutions that deliver relevant, timely, and tangible value to its customers.

Each component is designed to be modular in nature and thus each is able to be used alone, or in combination, to provide a palette of solutions for product designers.

Avgol's Forward Innovative Thinking ('FIT™') technology strategy represents the company's commitment to harnessing expertise to anticipate the needs of consumers and create high-performance technologies.

What is Avgol doing differently?

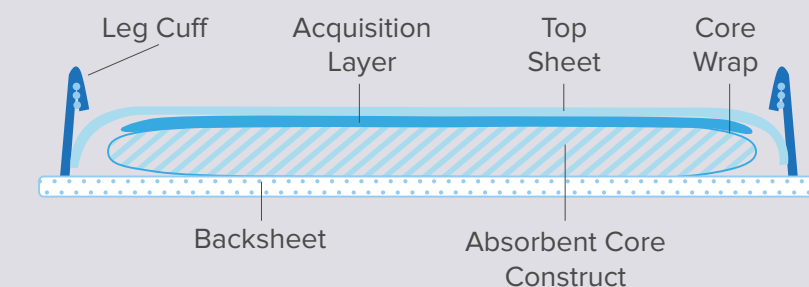
FIT™ technologies address key customer concerns through focused solution components – beneFIT™, comfortFIT™ and enhanceFIT™. Each component is designed to be modular in nature and thus is able to be used alone, or in combination, to provide a palette of solutions for product designers.

BABY DIAPER DESIGN

At Avgol we understand the importance of delivering high performing diaper fabric solutions that delight consumers. From the arrival of a newborn to a toddler's graduation from disposables, this is an important period in time where the attention provided by caregivers places great focus on diaper design and performance.

Consumers expect today's baby diaper to be soft to the touch, avoid leaks and minimize odor, but at the same time breathe so that baby's skin remains dry and healthy. All of these requirements also need to be met at a cost acceptable to the budget conscious consumer.

GENERIC DIAPER CONSTRUCTION





WE LEAD THE WAY

From hygiene and personal care to automotive, medical and beyond, Avgol's leading portfolio of non-woven fabrics pushes the limits of what the material can achieve; every innovation has purpose.



WE MAKE THE DIFFERENCE

Avgol believes that truly disrupting the market doesn't just take breakthrough innovation, it also needs passion blended with respect and integrity. Our ethos of continuous improvement and excellence in customer service runs throughout the business and is central to how we operate.



WE DELIVER RESULTS

From research and development at the top of the value chain, to the logistics and delivery solutions perfectly suited to our customers' needs, Avgol takes a 'Make It Happen' approach to business. Avgol has the agility to respond to rapid market changes, coupled with extensive design and manufacturing experience to deliver product and service excellence for its customers.



WE ARE RESPONSIBLE

Avgol takes pride in developing non-woven solutions that are environmentally, socially and economically responsible. As a leading industry name, we understand that other businesses look to us to set an example.



WE BRING REAL VALUE TO OUR CUSTOMERS

Across our operations around the world, end user needs are core to our activities. This means we are always able to offer precise, demonstrable value for our customers. We take a holistic view of the supply chain producing lightweight and cost-effective fabrics that never compromise on performance. When it's important to the end user, it's important to us too.



WE ARE ONE TEAM

Operating globally gives Avgol unparalleled market insight across geographies, but the true strength of the business is in its communication and collaboration, which turns market developments into actionable and marketable advantages for our customers.

Making the best possible use of resources is key to our continued success, and that begins with outstanding synergy between business divisions and regions.

WE ARE AVGOL

SUSTAINABLE DEVELOPMENT; OUR 17-POINT MISSION FOR MEANINGFUL CHANGE

We believe that performance and profitability are unsustainable without the strong foundation of ethical and responsible business practices.

What's more, as a leading supplier to turnkey sectors such as hygiene, automotive, medical and beyond, we've seen the significant overall impact of these principles first-hand.

To ensure our upward trajectory always has an eye to ethical trade and commerce - and to ensure our customers have peace of mind at all times.

At Avgol we have a 17-point strategy for continually moving our business and industry forward in the most sustainable way possible.



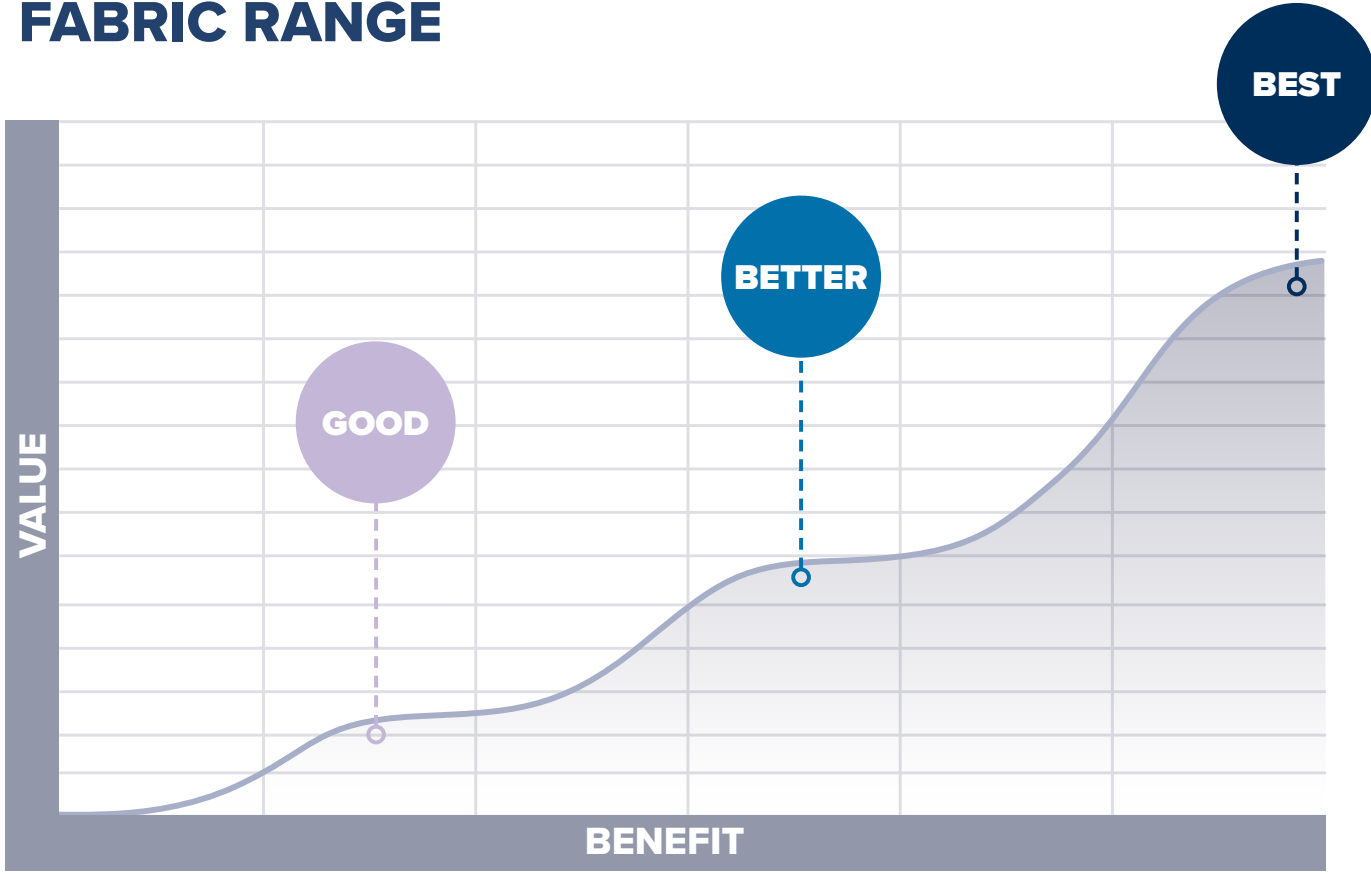
From reducing our overall energy and water consumption to supporting the development of sustainable communities through the actions of our global operations, the Avgol hallmark of consumer-led innovation matched with sustainability doesn't begin and end with the product; it runs the full length of the business.



Multiple ways to meet your future softness needs.

-  Softness
-  Fluid Management
-  Barrier
-  Wellness
-  Conformability
-  Cost Effectiveness
-  Natural Content
-  Resins, Composites & Spinning Technologies

THE AVGOL BABY DIAPER FABRIC RANGE



Basic Performance Attributes with Standard Production/ Customer Value

Increased Performance Attributes with Higher Production/ Customer Value

Maximum Performance Attributes with Unprecedented Combined Production/ Customer Values

Delivering new technologies to create your unique solutions



NATURAL CONTENT

Designed to mirror nature without compromising on performance, Avgol has developed a new consumer-led solution that blends naturally derived and inspired materials with the technology of tomorrow. natureFIT™ technology replaces conventional synthetic resins with sustainable alternatives and replaces chemical performance and aesthetic additives with naturally derived substitutes.

natureFIT platforms focus on reducing environmental impact for product designers to enable value-driven new product development across the Hygiene sector. Combining a number of additional qualities that can be integrated into the substrate, natureFIT incorporates polymer reduction, new resin alternatives and recycle/environmentally adaptive additive technologies.

NATURAL CONTENT DESIGNER GUIDE

Category	Attribute	Low Tier ('Good')	Medium Tier ('Better')	High Tier ('Best')
Nonwoven formulation (base/additive)	Naturally derived alternative components	Reduction of Resin/Additives Used Using lightweight fabrics	Displacement of conventional resins with more environmentally friendly materials	Replacement of conventional resins/additives with 100% natural/ recyclable/circular materials

Offering product designers a significant reduction in polymer consumption, natureFIT™ Gentle harnesses naturally occurring minerals, at the same time enhancing softness and conformability.



RESINS, COMPOSITES & SPINNING TECHNOLOGIES

Nonwoven fabric can be one of the most versatile materials available to modern product manufacturing. The formFIT™ suite of technologies demonstrates this by establishing the fundamental qualities of the non-woven substrate, allowing it to suit a number of new roles and applications alongside its established uses.

The platform includes innovations such as the exciting Waveform 3D™ technology, which uses apertured, solid or combination patterned surfaces to imbue non-woven fabrics with three-dimensional qualities and properties that offer product designers heightened flexibility in how applications look, feel and perform.

Alongside pioneering lightweight, high performance nonwoven fabrics for the last 20 years, formFIT from Avgol affords brands and manufacturers the flexibility to stay agile in this fast paced market going forward.

RESIN AND CONSTRUCTION DESIGNER GUIDE

Category	Attribute	Low Tier ('Good')	Medium Tier ('Better')	High Tier ('Best')
Nonwoven Formation	Fabric modification	Standard Polyolefins - basic unmodified spunlaid fabrics	Advanced Polyolefins in complex laminates/ composites OR chemically / mechanically modified fabrics	Advanced Polyolefins in complex laminates/ composites AND modified fabrics

Combining effortlessly with the wider FIT™ suite of technologies, formFIT drives customer-led value and benefits from the very start of the new product design process.



SOFTNESS

A key goal of a caregiver is to ensure the most comfortable fabrics come in to contact with a child’s delicate skin, whether selecting a diaper for their newborn or toddler.

‘Softness’ itself can be difficult to define or quantify - pleasantness, comfort and gentleness can often describe such a requirement. However, at Avgol we know that softness is about the synergy of touch, feel, fabric flexibility, stretch and surface aesthetics; often delivered in combination to achieve the desired effect. We therefore offer multiple ways and means to achieve your softness requirements.

Avgol provides market leading new fabrics designed to meet regional consumer needs.

SOFTNESS DESIGNER GUIDE

Category	Attribute	Low Tier ('Good')	Medium Tier ('Better')	High Tier ('Best')
Softness	Visual Appeal	Bond Pattern	Avsoft®/Avspun™ Fabrics	Waveform 3D™ Technology AND/OR comfortFIT™ Look
	Comfort	Avsilk™ Fabrics	comfortFIT™ Feel, Flex OR Touch	comfortFIT™ Feel, Flex AND/OR Touch Waveform 3D™ Technology



FLUID MANAGEMENT

Modern diaper design is expected to have consistent leak prevention and absorption, saving time and creating convenience for today’s busy caregiver.

Diaper fluid management is provided by the interaction of fabric layers leading into the absorbent core. However, guaranteeing a leak proof design means designing with appropriate nonwoven fabrics that reliably, and repeatedly, direct fluids away from delicate baby skin.

FLUID MANAGEMENT DESIGNER GUIDE

Category	Attribute	Low Tier ('Good')	Medium Tier ('Better')	High Tier ('Best')
Fluid Management	Acquisition Rate	Hydrophilic Treatment	comfortFIT™ Wick OR Flow	comfortFIT™ Wick AND Flow
	User Dryness	Hydrophilic Treatment	comfortFIT™ Wick and Flow OR Waveform 3D™ Technology	comfortFIT™ Wick AND Flow AND Waveform 3D™ Technology

At Avgol, we work with product designers to optimize the most expensive component of the diaper – the absorbent core. Utilizing smart non-woven fabric design from Avgol, brands can deliver more for less in their current diaper performance or improve diaper performance with the same core material and cost.



BARRIER

Modern diaper design poses an issue in obtaining dryness performance and preventing leakage; the diaper needs to lock away moisture and yet allow air to freely circulate.

Whether it is a durable backsheet or conforming leg cuff, the breathable barrier needs to work reliably under varying conditions.

BARRIER DESIGNER GUIDE

Category	Attribute	Low Tier ('Good')	Medium Tier ('Better')	High Tier ('Best')
Barrier	Barrier	SMS	enhanceFIT™ Breathe	enhanceFIT™ Block

Avgol understands this challenge providing a range of unique nonwoven spun melt fabric solutions to aid breathability and ensure customer satisfaction.



WELLNESS

Avgol’s latest nonwoven fabric technology, beneFIT™ Control, is a tailored ‘next-generation’ development to aid management of contamination, discomfort and odor issues by specifically controlling the microbial activity within baby diaper applications.

Nonwoven fabrics have a growing role to play by limiting the impact of microbial pathogens. beneFIT™ Control is an adaptable technology, with a unique ability to minimize the impact on natural and normal skin flora while maximizing effect on troublesome organisms.

Most antimicrobial technologies are not selective in their function, resulting in all microbes being killed off, all of the time. Avgol seeks to avoid a lingering broad-spectrum performance as this can often causes new, and sometimes worse, problems for both baby skin wellness and environmental impact.

WELLNESS DESIGNER GUIDE

Category	Attribute	Low Tier ('Good')	Medium Tier ('Better')	High Tier ('Best')
Wellness	Skin health/ Odor	n/a	beneFIT™ Control (odor control)	beneFIT™ Control (skin contact) OPTIONALLY with Waveform 3D™ Technology

Avgol’s beneFIT™ Control delivers an adjustable antimicrobial performance for ultimate baby care and confidence.



WAVEFORM 3D™ TECHNOLOGY FOR SUPERIOR FABRIC PERFORMANCE

Waveform 3D™ Technology is a novel process from Avgol that enables the modification of nonwoven fabrics.

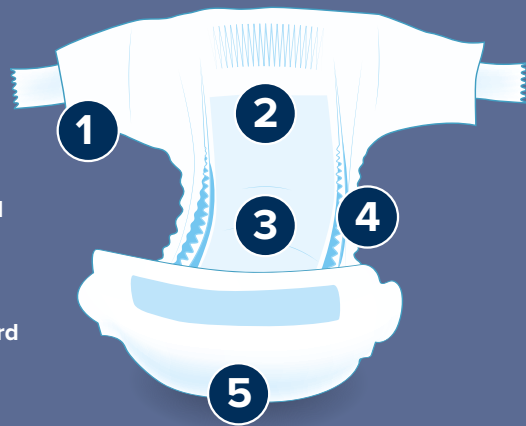
Through using this technology, beneficial fiber structures with distinctive surface patterns can be imparted. This generates a three-dimensional composition within flat fabrics, providing a number of additional benefits including advanced skin wellness, increased cushioning and enhanced cotton-feel.

Avgol's expertise in fabric design allows us to combine fabric composition and design to achieve enhanced performance.

Avgol offers high-performance value added nonwoven fabrics without compromising on comfort or cost.



The ability to choose whether to use solid, apertured or combination patterns allows the product designer to truly tailor a solution for their application including how the fabric feels, functions and looks.

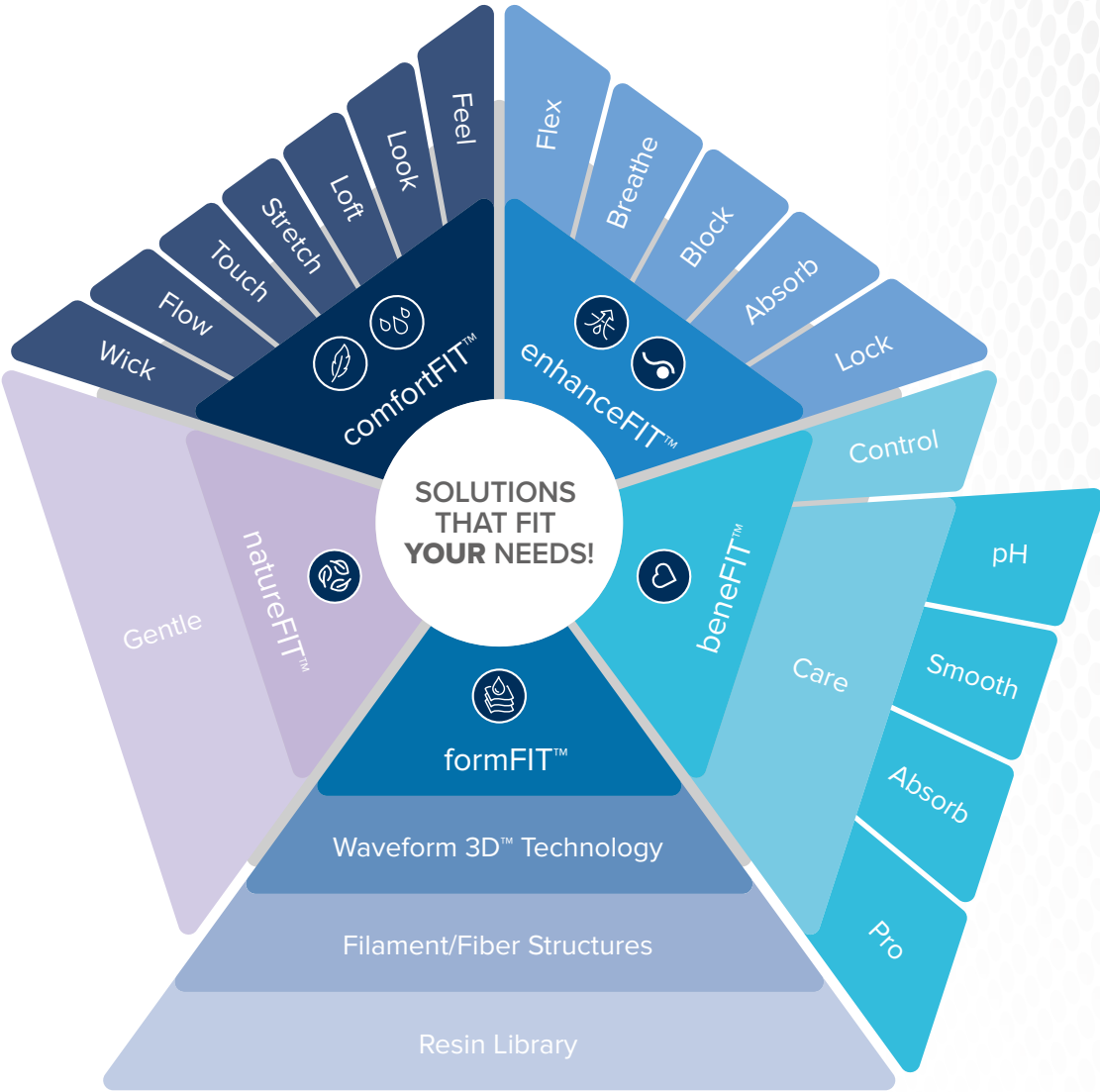


- 1. Front Ear, Side Panel
- 2. Top Sheet
- 3. Core Materials
- 4. Leg Cuffs/Leak Guard
- 5. Back Sheet

- Softness
- Fluid Management
- Barrier
- Wellness
- Conformability
- Cost Effectiveness
- Natural Content
- Resins, Composites & Spinning Technologies



AVGOL TECHNOLOGY PLATFORMS SELECTION MATRIX





SAY HELLO!

Avgol is proud to support our clients with outstanding technical service and support

To find out more about how Avgol can support your baby care diaper range developments, please visit avgol.com or contact us at: avgolinfo@avgol.com

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