

High-Performance Acrylic Tape Solutions



Our Product Philosophy

Saint-Gobain® is your one-stop shop for adhesive tape solutions. We are dedicated to working with our customers to solve today's most extreme and demanding application issues and the challenges that lie ahead.

Since the first **Biolink*** brand products were produced in 1997, we have been a trusted global supplier of specialized self-adhesive tape solutions featuring performance characteristics unique to proprietary UV curing technology.

Our **Biolink** brand portfolio features solvent-free, high-performance acrylic tapes designed and developed for critical applications.

These products are Made in Germany using our own acrylic mass and pressure sensitive adhesive tape technology, and follow the highest standards including certification according to IATF 16949, DIN EN ISO 9001 and DIN EN ISO 14001.



Our state-of-the-art R&D facility coupled with experience, expertise, proprietary adhesive technology and deeply motivated employees, allow us to provide solutions for many industries around the world, including the automotive, aerospace, electronics, construction and solar industries.



Our philosophy is to deliver the very best solution possible, within your timeline and according to the requirements of each specific application. Whether the solution comes from the core product range or it is individually designed and customized, we aim to provide the benefits of added value and value-added customer-driven tape solutions.

Anticipating customers' needs and wants, delivering promises and commitments and providing expertise and support in close working relationships has made us the trusted partner we are today.

Technical properties of Biolink brand products

Long-term adhesive expertise allows us to develop tapes with specific properties, including:

- proven long-term ageing resistance, stability and performance in the application environment
- excellent adhesion to low- and high-energy surfaces
- high clarity (translucent adhesive film, non-yellowing, no occlusions)
- excellent environmental (UV, weathering, etc.), chemical (water, acid, alkali) and temperature (-40°C up to +200°C) resistance
- a wide range of adhesive thicknesses from 30µm to 3000µm
- multi-functionality, for example combining gap filling, sealing and anti-rattle properties into one product

Custom Co-Development

Every application is unique and challenging. The key to success is the combination of competence, flexibility, agility, communication and support. Also essential is the ability to anticipate new trends and focus shifts in various key markets, as well as having an excellent network within the industry.

Based on our unique structure, capabilities and commitment to fast and effective co-development, we are the ideal development partner for demanding tape applications. Enormous application knowledge, in-house process development and differentiated know-how of the team throughout the entire value chain are core competencies customers can rely on.

From the first contact until the delivery of the finished products, solution-oriented thinking combined with in-depth market expertise and consistent customer focus create unique added-value relationships. This results in tangible benefits for customers. For example, for some products offering new product developments with relatively low volumes in the development phase allows customers to start projects with manageable investments.

Due to the uniqueness of our UV curing technology, all stages of **Biolink** tape production take place in-house, with support provided at every level:

- · adhesive development
- · adhesive production
- coating (including multilayer, zone coat)
- converting (including zone-coat/finger lift, spooling, plotting, narrow rolls)
- · die-cutting
- fast prototyping
- custom coating (the unique **Biolink** brand technology enables us to coat a wide variety of customerspecified or customer-supplied substrates)

The **Biolink** brand modular system for custom-made tapes consists of a selection of the carrier material, adhesive class, liner material and converting. To create the right solution for our customers, it is essential to have understanding of:

- · the application
- the demands of the application
- · the needs and wants of the customer
- the goals of the project

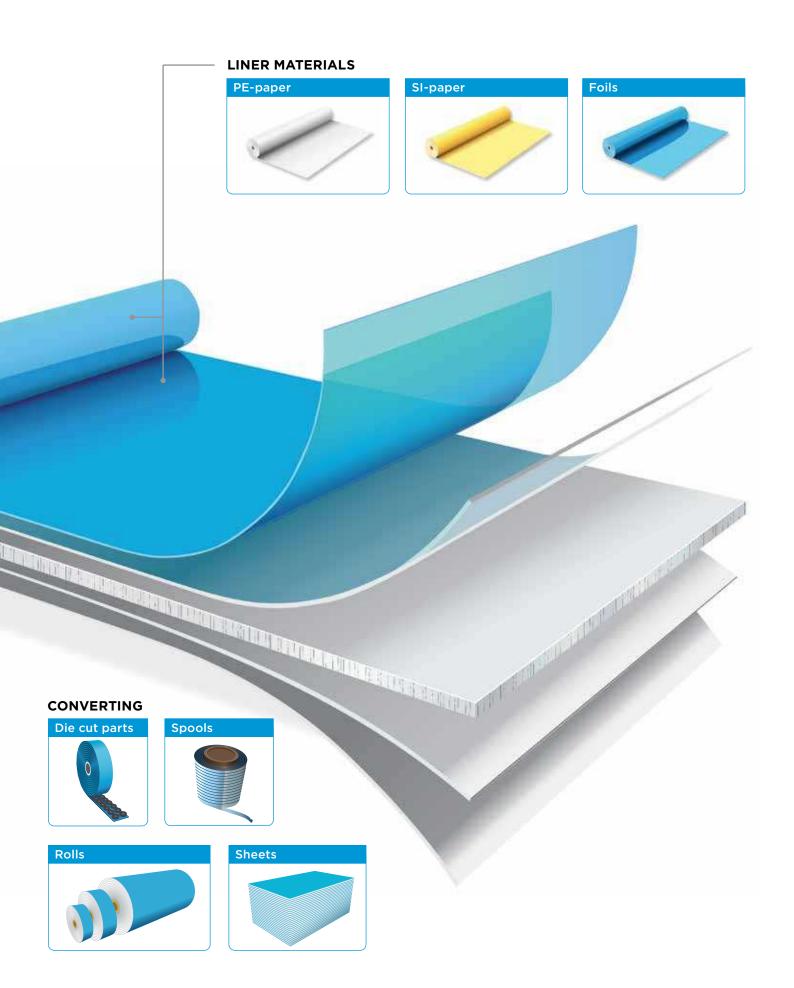




Our Flexibility — Your Advantage

Saint-Gobain is a partner that can think differently about the challenges of each application and help to provide solutions more closely focused on the customer needs and wants.





Tape Solutions for the Automotive Industry

As a trusted partner of the automotive industry, OEMs and Tiers with a long history of delivering unique tape solutions, customers can expect a wide range of solutions and the experience and expertise to meet all automotive fixing, mounting and bonding needs. From fixing exterior components more effectively, to noise reducing NVH purposes and solving problem applications on critical surfaces, Saint-**Gobain** is a trusted resource and supplier for tackling unique automotive challenges.







Our site in Waakirchen (Germany) is IATF 16949 certified.

OEM and Tier 1 Automotive Specification

Our automotive specification testing capabilities provide additional value for customers that can help to save costly time and resources. Being able to rely on experts who have the ability and knowledge necessary to test products in their own laboratories means specification can be done more quickly and you can begin using the specified products faster.

Exterior bonding solutions

Applications facing strong weather factors, such as UV and ageing resistance, require tape solutions designed to withstand the most demanding automotive exterior bonding challenges. Excellent permanent bonding to low, medium and high energy surfaces make **Biolink** brand products the ideal choice for such applications as badges, emblems, mirror heaters, decals, nameplates, aerial antennae and threshold plates. Special, exterior grade, clean peel removable products provide solutions for assembly line protection films, transport protection, export and transit car covers.

Special bonding solutions

Mounting parts during airbag assembly and shatter protection in side windows are just two examples of special applications bonding products need to serve. A tape today doesn't just have to meet an agreed specification. A pressure sensitive adhesive tape solution needs also to deliver usability, multifunctionality, performance advantages, added value and commercial sustainability.

NVH control solutions

The most important requirements for NVH control tapes are performance across a broad temperature range and ultimate noise reducing capabilities. Unique technologies bring additional possibilities to new and existing challenges and applications. Highly-specialized tapes provide the experience and reputation in the areas of flat panel anti-resonance pads, pre-formed anti-rattle and squeak parts for interiors and vibration suppression layers in both OEM and aftermarket brake shims.

Tape Solutions for the Aircraft Industry

Aircraft tapes have to be exactly tailored to the special requirements of this industry. Close cooperation with international OEMs, first tier suppliers, airlines and MROs are essential and building these relationships has helped us in creating a diverse portfolio of tape solutions for the aircraft industry to address the challenges on cabin flooring.







Special demands

The functional and performance requirements for a tape used inside an aircraft are immense, and for good reason. Most especially, the

high safety standards in terms of fire resistance, flame spread and smoke toxicity are crucial to ensure the safety and well-being of passengers and cabin crew.

Cabin flooring

Customers require aircraft flooring tapes that are developed according to the demands of airlines, OEMs, MRO companies and carpet and NTF (non-textile flooring) manufacturers. **Biolink** brand tapes are a leader in cabin flooring tape solutions.

Carpet tape solutions

Biolink OEM qualified aircraft carpet tapes provide the benefits of quick installation, easy repositioning, and secure lift-free fixation across all carpet backing types while also delivering rapid residue and damage free removal — all in one piece. With these unique features, these tapes are setting the benchmark in one of the most ambitious industries by reducing valuable time and costs by improving efficiency.

NTF tape solutions

Regardless of various styles of Non-Textile Floorings (NTF), our versatile OEM qualified tapes secure fixing

across all NTF styles, with or without reinforcement layer. The known challenges of tramlines, telegraphing, wrinkling, and bubbles are solved with our special tapes, whilst also providing quick installation, secure fixation, residue and damage-free removal.

Liquid barrier films (LBF)

Biolink brand liquid barrier films are OEM qualified, easy and quick to apply, and thin yet conformable. They bond very firmly to composite floor panels in galley, toilet and entrance areas, ensuring a highly reliable liquid barrier. NTF can be removed without damaging the LBF layer and without adhesive residue. LBF can also be removed from composite floor panels easily, in one piece and without damage or adhesive residue.

Edge Protection Film (EPT)

Special Edge Protection Films provide additional OEM qualified protection of the floor panel edges and joints. These products are multi-functional, giving additional protection against liquid ingress and possible airframe corrosion while also protecting composite floor panel edges from delamination and damage during LBF, NTF and carpet removal and replacement.

Tape Solutions for the Construction Industry

In civil and structural engineering, adhesive tapes play an important role in buildings for a variety of indoor and outdoor applications. Materials such as concrete, glass, metal, wood, plastics or textiles can thus be permanently sealed, protected or connected.



Multiple demands

In building and construction, longterm protection from weathering, moisture and especially freeze-thaw cycles is critical. Flame retardant, non-halogen tapes are also available to protect against fire.





Our broad spectrum of tapes is specially designed for various applications meeting the specific requirements of the building and construction industry. **Biolink** brand acrylic tape systems are known for their environmental resistance against UV, water, ageing as well as for gas tightness and many other factors.

Multi Comfort

For residential and commercial buildings, their functioning is really important for health and general comfort — especially since so much time is being spent indoors. Tapes play significant roles as reliable system components of innovative construction solutions.

Roofing solutions

Specially designed tapes ensure roof sheeting is securely affixed to the roof structure. Due to the chemical composition of the flat roofing membrane, permanent fixation is extremely challenging to ensure sustained tightness of the entire system.

In flat roof sealing, **Saint-Gobain** is a pioneer in providing pure acrylic solutions; for example, self-adhesive flat roof membrane.

In addition, there is a wide portfolio when it comes to the installation of breathable and barrier membranes, connections of roof and wall, glazing tapes for dome and roof lights as well as skylight seal and glazing tape solutions or fixation of solar panel mountings and many others.

Exterior tape solutions

Biolink brand products for exterior construction sealing applications are non-yellowing and ideal for filling gaps. This makes them perfect for window sealing, fixing of decorative lead strips to glass as well as for moisture vapor barrier and damp proof membranes.

Interior tape solutions

A full portfolio of versatile and reliable products exist for a wide range of interior sealing applications, for roof and cellar, including front doors, heating boiler insulation, skirting boards, various moisture-critical applications in bathroom (shower, toilet, mirrors) or in the kitchen, (extractors, hobs and many more) or smoke detectors.

Tape Solutions for Other Applications

Saint-Gobain works with many international OEMs and converters to offer proven solutions for the electronics and appliance industry, some of which are UL approved.

To achieve increased production output, simplification of sub-assembly and cost reductions, specific **Biolink** die-cut and roll-form solutions can be provided.

Application examples for the electric, electronic and home appliance industry

- · front panel mounting
- technical adhesive tapes for membrane switches
- · sound and vibration management
- · low-surface energy bonding
- · gasketing and sealing
- identification labels
- thermal insulation/heat shields
- emblems, badges and nameplate fixing
- membrane switches and keyboards
- · general mounting and assembly
- mounting evaporator plates
- panel assembly for domestic appliances
- · mobile phone assembly

Application examples for the graphics industry | Visual Communication

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- · post and panel signage
- acrylic lettering
- digital and LED assembly and mounting

Graphics

- custom coated graphic materials for high requirement internal and external use
- nameplates, badges and decals
- POS and poster hanging
- clean-peel removable pads for window graphics
- adhesive backings for floor graphics, fascia and control panels

Labels

- adhesive backing for RFID labels and tags
- safety label, ID and type plates
- high-deposition laminating adhesives for rough surfaces
- adhesive backings for long-term, external use (wall, floor and stairs)
- · clean-peel removable adhesive backings
- special label stock substrates and laminates also for durable external purposes

Application examples for the transport industry

Truck and trailer

- · cab insulation and lining fixing
- curtain patch tape
- bonding GRP roof panels to rib stiffeners
- bonding aluminum and composite side panels to rib stiffeners

Railway, ship and boat

- · anti-skid tape for stairs and steps
- removable and permanent flooring tapes
- flat panel vibration suppression materials
- fixing of interior trim, fascia and panels

Application examples for the manufacturing industry

- splicing tapes
- adhesive die-cuts for the production of hard shell and soft luggage
- die-cuts for bonding components in automotive and electronics
- adhesive tapes in spool form for an uninterrupted application and processing

Material Selection Guide

The **Biolink** brand core product range includes many in-stock products with consistent quality and proven performance. The proposition of quick sampling, short delivery times, standard packaging and easy access provide real, tangible benefits for customers.

It consists of various tape designs to meet the needs of our customers and their specific applications:



translink: high quality transfer adhesive for adhesive backing and laminating



foamlink: foam carrier tapes



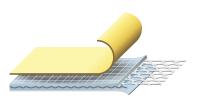
prolink: pure acrylic bonding films



relink: removable single and double coated (perm/peel) adhesive tapes



flexlink: acrylic foam bonding films



netlink: scrim-reinforced transfer adhesives



unilink: double coated tapes, with a variety of carriers and adhesive classes

customlink: customer-defined, application-engineered solutions

Tape				Liner on liner side		Carrier 1			Adhesive open side	Performance Data	
Reference No.	Reference Name	Туре	Thickness w/o Liner ca. (µm)	Raw Material Category	Colour	Raw Material Category	Carrier Thickness	Colour	Raw Material Category	Adhesion (N/25mm) RT 180° Steel (in accordance to AFERA 5001)	Static shear strength (N/625mm²) 20°C (in accordance to AFERA 5012)
2901	translink 50 R	Transfer	50	PE Paper	White				Acrylic	22	75
2907	translink 100 HT Si-gelb	Transfer	100	SIL Paper	Yellow				Modified Acrylic	24	45
2908	translink 130 R	Transfer	130	PE Paper	White				Acrylic	26	75
2914	unilink 220 H+	Double Sided	240	SIL Paper	Yellow	PVC Film	40	White	Modified Acrylic	32	45
2971	unilink 4411 HT gelb	Double Sided	220	SIL Paper	Yellow	PET Film	23	Transparent	Modified Acrylic	30	45
3044	translink 130 RX-1310	Transfer	130	SIL Paper	White				Acrylic	28	60
3092	unilink 4412 HT	Double Sided	220	PP Film	Red	PET Film	23	Transparent	Modified Acrylic	30	45
3106	prolink 1000 R	Transfer	1000	HTP Film	Blue				Acrylic	37	30
3116	prolink 1500 R	Transfer	1500	HTP Film	Blue				Acrylic	40	30
3118	prolink 2000 R	Transfer	2000	HTP Film	Blue				Acrylic	40	30
3224	translink 130 RX-TC1646	Transfer	130	PE Paper	White				Acrylic	28	60
3248	prolink 350 LE TC 1634	Transfer	350	HTP Film	Blue				Modified Acrylic	32	45
3354	translink 65RX10	Transfer	65	PE Paper	White				Modified Acrylic	22	60
3358	unilink 4411 HT PEV	Double Sided	220	PE Paper	White	PET Film	23	Transparent	Modified Acrylic	30	45
3366	netlink 90 HX Si-gelb	Reinforced	110	SIL Paper	Yellow	NET PET	0	White	Modified Acrylic	33**	5
3396	foamlink 1103 H+; weiss	Double Sided	1100	SIL Paper	Yellow	PE Foam	1000	White	Modified Acrylic	13*	45
3415	translink 80 HX; PEV	Transfer	80	PE Paper	White				Modified Acrylic	34**	5
3444	unilink 4416 H+	Double Sided	140	SIL Paper	White	PET Film	50	White	Modified Acrylic	25	45
3446	unilink 4431 H+, Folie	Double Sided	320	HTP Film	Blue	PET Film	23	Transparent	Modified Acrylic	35	45
3613	translink 130H+;PEV	Transfer	130	PE Paper	White				Modified Acrylic	27	45
3703	translink 100H+;PEV	Transfer	100	PE Paper	White				Modified Acrylic	26	45
3773	prolink 800 LE; PET	Transfer	800	PET Film	Transparent				Modified Acrylic	39	30
3796	unilink 5150 HS	Double Sided	130	PP Film	White	Non woven	12	White	Modified Acrylic	35**	20
3802	foamlink 657RX;ws	Double Sided	600	PP Film	Blue	PE Foam	500	White	Acrylic	24	60
4177	foamlink 11032 H+; weiss	Double Sided	1100	SIL Paper	Yellow	PE Foam	1000	White	Modified Acrylic	27*	45
4614	netlink 150 HS; PEV	Reinforced	160	PE Paper	White	NET PET	0	White	Modified Acrylic	36	10
6094	netlink 150HX; PET-Liner	Reinforced	160	PET Film	Transparent	NET PET	0	White	Modified Acrylic	38**	5

^{*} Foam split ** Cohesive failure

Important: The data and statements are intended as a source of information, are given without guarantee, do not constitute a warranty and are therefore not intended for technical specifications. They can vary according to the application conditions.

This chart only features the **Biolink** brand core product range and therefore, reflects just a small part of the whole portfolio. There are many more products available for an extremely broad spectrum of applications and we are more than happy to discuss your needs and find the perfect solution together with you.

Your Partner in Custom Tape Solutions

A custom tape solution can pay for itself many times over thanks to the process and product improvements it can provide. Tape development engineers will work with partners to design an economical but highly effective tape product.

Even with endless permutations of industrial tapes available there is only one company that can deliver a custom-made tape with optimal adhesive, the perfect backing materials, seamless process integration and superb performance.

To learn more about how **Saint-Gobain** can help solve tape and materials engineering challenges, call us or visit us online.

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IMPORTANT: It is the user's responsibility to ensure the suitability and safety of Saint-Gobain products for all intended uses and that the materials to be used comply with all applicable regulatory requirements. Saint-Gobain assumes no responsibility for any product failures that occur due to misuse of the materials it provides arising out of the design, fabrication or application of the products into which the materials are incorporated.

WARRANTY: For a period of 6 months, Saint-Gobain warrants this product(s) to be free from defects in manufacturing. The only obligation under any applicable product warranty will be to replace any portion proving defective, or at our option, to refund the purchase price thereof. SAINT-GOBAIN DISCLAIMS ALL IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

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