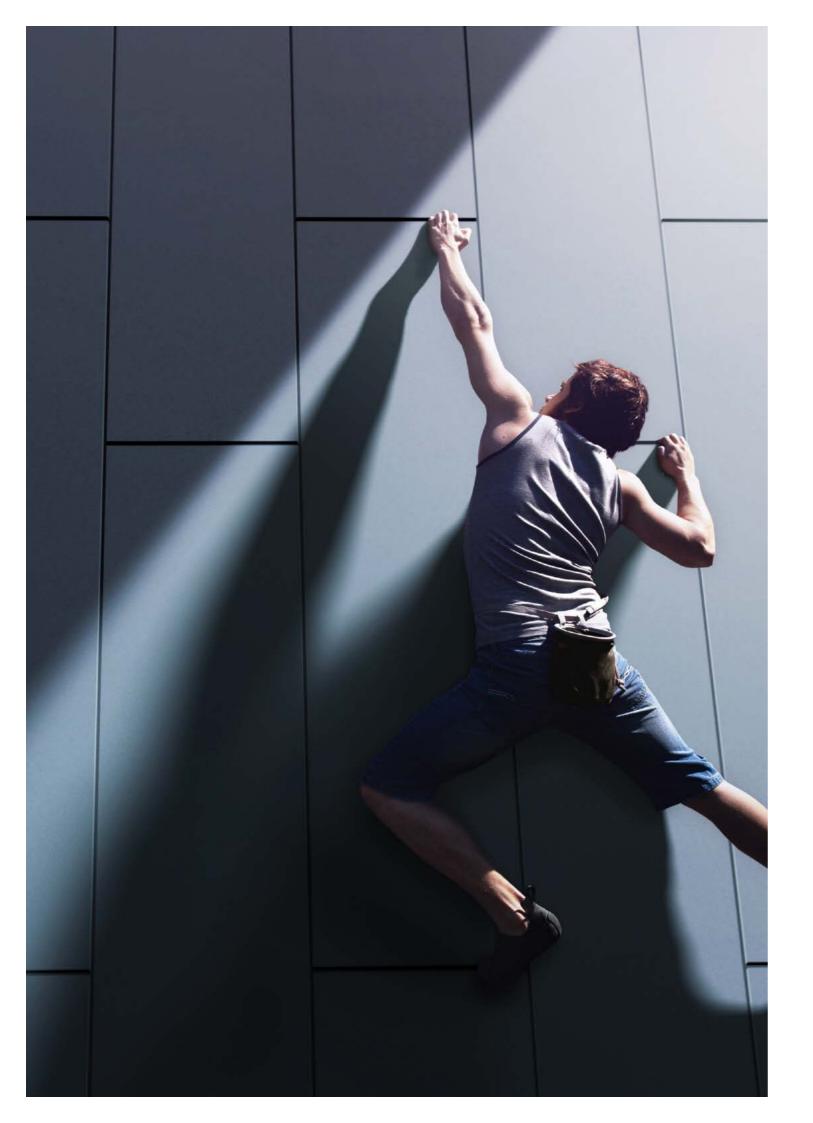


ADHESIVES FOR INDUSTRIAL MANUFACTURING INDUSTRIAL LAMINATION





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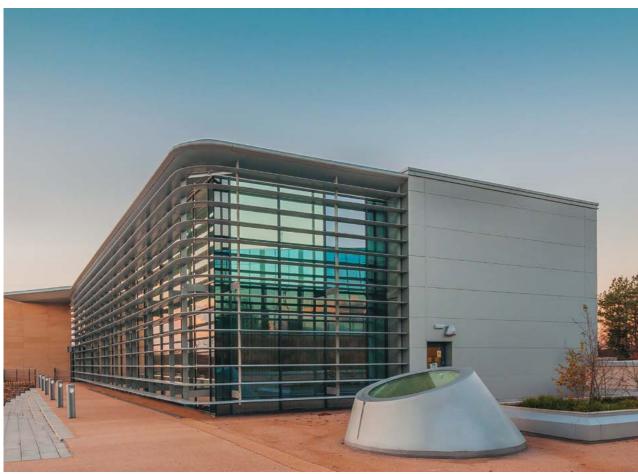
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INDUSTRIAL LAMINATION

APPLICATIONS

SIKA ADHESIVE SOLUTIONS FOR INDUSTRIAL SURFACE BONDING are available in different pressing times, initial strengths, open times, and other key properties. They are used in different markets such as in transportation and marine, building components, and textile and consumables. For more information on the various applications of our adhesive solutions, see page 5.

In addition, Sika adhesives enable an economical and sustainable production by helping you reduce your cost per unit, enabling you to increase your production output and guaranteeing a high product quality.



Sandwich panel bonding
Building for the future

30 million m²

Building panels are produced anually with SikaForce® and SikaMelt®

25 million m²

Textile and roll laminates are bonded per year with SikaMelt® hot melt adhesives

30 000

Panels for truck trailers are produced every year with Sika products

TRANSPORTATION AND MARINE







- Sandwich panel lamination for commercial vehicles
- Sandwich panel lamination for non-commercial vehicles
- Sandwich panel lamination for marine
- Sandwich panel assembly adhesive for transportation and marine

BUILDING COMPONENTS









- Steel building panels
- Roofing panels
- Building and composite panels
- Flooring

TEXTILE AND CONSUMABLES









- Functional textiles and protective wear
- Technical textiles
- High performance tapes
- Consumables

INCREASE YOUR ADDED VALUE

SIKA OFFERS A WIDE RANGE OF ADHESIVE SYSTEMS AND SERVICES. These include adhesives of the highest quality and performance, process engineering support in validating suitable dispensing and application techniques for efficient and safe production processes, technical support, training and consulting initiatives and a permanent exchange with our partners. Through these value-added services, we aim to permanently increase your productivity and profitability. Moreover, thanks to our decades of experience as one of the global market leaders in industrial bonding technology, we identify potential for improvement to increase your added value.

- Broad product portfolio
- Customized adhesive systems for individual requirements
- Wide range of solutions are available in various packaging sizes for manual applications and automated productions



- World wide technology centers for customer demonstrations and examinations
- Process simulation for 1- Component to 3-Component PUR and hot melt systems
- Support with the implementation of efficient bonding processes
- Selection of suitable application systems

- Continuous development of innovative products
- technologies into other markets and applications
- Support for technology



- Adaptation of pioneering



INDUSTRIAL LAMINATION

BRANDS

TECHNOLOGIES AND

Industrial surface bonding of various composites can achieve unique product features. Sika adhesive bonded or laminated multilayer products are today used in transportation, buildings, textiles and many other outstanding markets. Sika uses its various adhesive technologies to serve the comprehensive lamination market.



SikaForce®

SikaForce® products are 1-, 2- and 3-Component polyurethane adhesives for bonding a wide variety of combinations of plastics, metals, foams and fiber composites. They are used in assembly processes, such as sandwich panel

With the help of 3-Component adhesives, the process speed can be adapted to the individual requirements. Several layers can be bonded within a very short time, enabling an increase in production speed.



SikaMelt®

SikaMelt® products include reactive, thermoplastic and pressure sensitive hot melt adhesives, which comprise reactive polyurethanes (PUR), reactive polyolefins (POR), thermoplastic polyolefins (TPO) and pressure sensitive adhesives (PSA).

They are developed for the bonding and lamination of a wide range of substrates and carriers such as plastics, metals, organic and synthetic textiles, fabrics, foams, nonwovens and composites.

YOUR BENEFIT - YOUR ADVANTAGES



HIGH SAFETY - Products with high hydrolysis and temperature resistance, as well as systems for the production of building and marine panels that meet the requirements for fire safety classes.



TIME SAVING - SikaMelt® and SikaForce® adhesives meet any bonding process requirement, and are suitable for either short or very long cycle times.



COST SAVINGS - Application weight (g/m^2) is optimized, allowing adhesive systems to be used cost-efficiently.

TRANSPORTATION AND MARINE

Sandwich panel lamination for commercial vehicles

Commercial vehicle manufacturers use various substrates in the production of side and rear walls, floors and roof structures. Increasing efficiency in production, good thermal insulation and lightweight construction are required for this competitive market to increase performance and reduce fuel consumption.

The use of traditional fixing methods can result in buckling, deformation and denting of side and roof panels, requiring significant cost and labour to repair and rework. The use of adhesive bonding to fabricate the panels eliminates such risks and improves efficiency, quality and cost.

SikaForce® polyurethane adhesives support the efficient production of durable, high-quality sandwich panels, meeting a wide range of requirements for lightweight and stable vehicle construction panels.

In addition, our SikaMelt® Primer can be used for improved adhesion of foams to coated and bare metals.

OUR PRODUCT BENEFITS

- High final strength and durability
- Improved structural stiffness with low panel weight
- Excellent heat and water resistance
- 2-Component or 3-Component PUR variants for adaptable throughput times and controlled bonding processes



KEY PRODUCTS

Product	Features
SikaForce®-710	Versatile 2-Component PUR Sandwich Panel lamination adhesive in a range of speeds to suit most processes from manual to automated.
SikaForce®-712	Easy to apply low viscosity 3-Component PUR Sandwich Panel lamination adhesive. Density optimized for low wear and weight saving. Reduced cycle time with suitable equipment.
SikaForce®-717	2-Component PUR Sandwich Panel lamination adhesive, long open time with short cycle time when pressing at elevated temperatures.
SikaMelt®-285 Primer	Thermoplastic hot applied adhesion promoter for foam injected panels to eliminate blisters.

TRANSPORTATION AND MARINE

Sandwich panel lamination for non-commercial vehicles

Good thermal insulation, light-weight construction and high acoustic dampening are main requirements for modern non-commercial vehicle manufacturing. The use of adhesives to fabricate the panels enables improved process efficiency, quality and cost.

Their high strength and long-term resistance make SikaForce® and SikaMelt® reactive polyurethane adhesives ideal for manufacturing sandwich panels for caravans and RVs.

OUR PRODUCT BENEFITS

- High final strength and surface evenness
- Improved structural rigidity
- Excellent heat resistance to direct sunlight
- Design freedom due to a broad adhesion spectrum on a variety of substrates



Product	Features
SikaForce®-100	Low viscosity 1-Component PUR Sandwich Panel lamination adhesive, highly foaming for superior anchoring to porous material even at low coat weights.
SikaForce®-710	Versatile 2-Component PUR Sandwich Panel lamination adhesive in a range of speeds to suit most processes from manual to automated.
SikaForce®-712	Easy to apply low viscosity 3-Component PUR Sandwich Panel lamination adhesive. Density optimized for low wear and weight saving. Reduced cycle time with suitable equipment.
SikaForce®-717	2-Component PUR Sandwich Panel lamination adhesive, long open time with short cycle time when pressing at elevated temperatures.
SikaMelt®-677	Multipurpose PUR hot melt, with a comfortable open time, broad adhesion range and high initial strength, suitable for manual and automated processes.

TRANSPORTATION AND MARINE

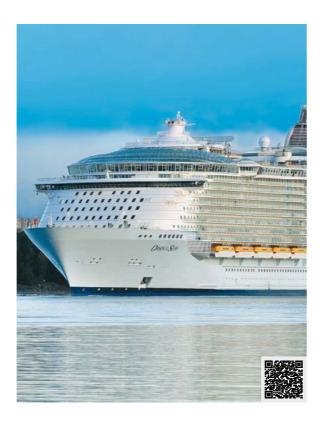
Sandwich panel lamination for marine

Design, function and durability are the essential requirements for high-quality panels in ship and boat building. Among other solutions, honeycomb panels meet these requirements and demonstrate an outstanding strength-to-weight ratio.

SikaForce® and SikaMelt® surface adhesives meet the needs of modern manufacturing with their excellent processing properties.

OUR PRODUCT BENEFITS

- Wide range of surface adhesives, Wheelmark-certified, meeting IMO requirements
- Different speeds and container sizes are available
- For manual and machine application
- Excellent hydrolysis and temperature resistance



KEY PRODUCTS WITH WHEELMARK CERTIFICATE

Product	Features
SikaForce®-110	Limited foaming 1-Component PUR Sandwich Panel lamination adhesive with high density for better resistance to fire.
SikaForce®-611	2-Component PUR adhesive for aluminum honeycomb sandwich panels. Short cycle time when pressed at elevated temperatures.
SikaForce®-710	Versatile 2-Component PUR Sandwich Panel lamination adhesive in a range of speeds to suit most processes from manual to automated.
SikaMelt®-670 HS	PUR hot melt with exceptional high initial strength and improved hydrolysis resistance, for fast lamination and bonding processes.
SikaMelt®-675 IS	Low viscous PUR hot melt for foil lamination (high gloss, matt surface) and bonding, with faster and higher strength development for reduced cycle time.
SikaMelt®-677	Multipurpose PUR hot melt, with a comfortable open time, broad adhesion range and high initial strength, suitable for manual and automated processes.

TRANSPORTATION AND MARINE

Sandwich panel assembly adhesive for transportation and marine

Recent years have seen changes in the styling and manufacturing of commercial and non-commercial vehicles as well as in marine. The mix of materials used to fabricate such vehicles has also radically changed. The use of composites and sandwich panel structures is now commonplace, as manufacturers seek to reduce vehicle weight, improve fuel economy and enhance thermal insulation and user comfort.

Structural, stable SikaForce® 2-Component PUR adhesives are used for assembly bonding and the attachment of equipment components. They demonstrate high strength, good flexibility and are capable of curing at room or elevated temperatures.

OUR PRODUCT BENEFITS

- Enhanced ability to withstand shock, impact and torsion
- Higher rigidity of the structure without damage to thermal insulation
- Improved aesthetics due to no visible fixings
- Wide range of cure speeds



Product	Features
SikaForce®-422	Non sagging, high strength and gap filling 2-Component PUR Sandwich Panel assembly adhesive in a range of speeds to suit most processes.
SikaForce®-424	In situ thixotropy, non sagging and gap filling 2-Component PUR Sandwich Panel assembly adhesive. Pumping is possible without a follower plate.

BUILDING COMPONENTS

Steel building panels

Sandwich panels for the building envelope and our solutions for bonding composite panels for façade construction are characterized by high strength, excellent acoustic properties and outstanding fire behavior. The panels are used in the construction of energy-efficient buildings, temperature-controlled environments, cold storage, public buildings and many other applications. Besides sandwich panels, honeycomb panels offer an excellent strength-to-weight ratio for building components.

SikaForce® and SikaMelt® are efficient polyurethane adhesive solutions for producing sandwich panels for the building envelope. They can be used in continuous production lines and ensure the high quality of the end products.

OUR PRODUCT BENEFITS

- Fulfillment of fire behavior A2:S1:d0 according to DIN FN 13501-1
- 1-, 2- and 3-Component polyurethane adhesive systems for a more versatile production including adaptable process times
- Hot melt solutions with high hydrolysis resistance
- Broad product range for easy process integration of a wide variety of production equipment



FIRE BEHAVIOR

Fire performance is an important and increasing requirement for sandwich panels used for building envelopes. We support you in achieving your desired fire classification: Our product portfolio includes adhesives to achieve A2:S1:d0 classification, depending on the application weight (g/m²).

Please contact us for more information.



KEY PRODUCTS

Product	Features
SikaForce®-100	Low viscosity 1-Component PUR Sandwich Panel lamination adhesive, highly foaming for superior anchoring to porous material even at low coat weights.
SikaForce®-611	2-Component PUR adhesive for aluminum honeycomb sandwich panels. Short cycle time when pressed at elevated temperatures.
SikaForce®-642	Foaming 3-Component PUR adhesive with low caloric value and in situ adjustable speed for bonding steel faced sandwich panels.
SikaForce®-646	Low viscosity, more foaming 2-Component PUR adhesive for bonding steel faced sandwich panels.
SikaForce®-648	Limited foaming 2-Component PUR adhesive with very low caloric value for bonding steel faced sandwich panels.
SikaMelt®-677	Multipurpose PUR hot melt, with a comfortable open time, broad adhesion range and high initial strength, suitable for manual and automated processes.
SikaMelt®-670 HS	PUR hot melt with exceptional high initial strength and improved hydrolysis resistance, for fast lamination and bonding processes.
SikaMelt®-285 Primer	Thermoplastic hot applied adhesion promoter for foam injected panels to eliminate blisters.

BUILDING COMPONENTS

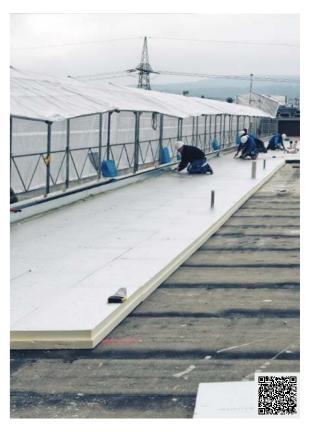
Roofing panels

Modern roof structures require a high level of insulation, integrity and durability. SikaForce® and SikaMelt® adhesive systems are versatile enough to meet a wide range of requirements for all types of roof panels and membranes.

Bonded insulation elements provide insulation, heat loss control and, at the same time, moisture control, respectively sealing off the building envelope against moisture. The extensive product range of SikaForce® and SikaMelt® adhesives ensures that the right solution is available for every application.

OUR PRODUCT BENEFITS

- Adhesive solutions for continuous and discontinuous production processes
- Adhesive systems for open or closed cell substrates
- Fire retardant and label-free products
- Adhesive solutions for overlap with good cold bondability and good heat resistance



Product	Features
SikaForce®-100	Low viscosity 1-Component PUR Sandwich Panel lamination adhesive, highly foaming for superior anchoring to porous material even at low coat weights.
SikaMelt®-174	High cohesive, non reactive, thermoplastic PO adhesive with medium open time, suitable for bonding and coating processes.
SikaMelt®-209	Versatile pressure sensitive hot melt adhesive with high surface tackiness and good cohesion properties.
SikaMelt®-285	High cohesive pressure sensitive adhesive with excellent temperature resistance suitable for wide substrates variety.
SikaMelt®-675 IS	Low viscous PUR hot melt for foil lamination (high gloss, matt surface) and bonding, with faster and higher strength development for reduced cycle time.
SikaMelt®-677	Multipurpose PUR hot melt, with a comfortable open time, broad adhesion range and high initial strength, suitable for manual and automated processes.
SikaMelt®-877	Classification free, multipurpose reactive hot melt adhesive with comfortable open time and high initial strength suitable for various substrates used in manual and automated industrial processes.

BUILDING COMPONENTS

Building and composite panels

SikaForce® and SikaMelt® PUR adhesives are ideal solutions for the lamination of interior and exterior building panels, flat panels as well as interior and exterior doors by combining performance with aesthetics. Honeycomb panels can also be incorporated into those products and offer unique advantages.

Examples for interior and exterior building panels are ceilings and partitions which can be laminated into a low cost, highly efficient product using Sika adhesives. In addition, furniture panels encompasses interior fittings, fixtures and furniture, decorative panels with foil cladding, veneers and high pressure laminate. Here, a high throughput can be obtained by using Sika solutions as they have a high initial strength. Lastly, doors with superior properties such as insulation or fire-resistance can be achieved by composite doors made of different materials bonded together using Sika adhesives.

OUR PRODUCT BENEFITS

- Adhesives for numerous substrates
- Adhesive solutions with optimum ratio of open-to-press time
- Fire-retardant and classification-free SikaMelt® and SikaForce® adhesive formulations for long-term durability
- Instant handling and versatility in the production process



KEY PRODUCTS

Product	Features
SikaForce®-100	Low viscosity 1-Component PUR Sandwich Panel lamination adhesive, highly foaming for superior anchoring to porous material even at low coat weights.
SikaForce®-712	Easy to apply low viscosity 3-Component PUR Sandwich Panel lamination adhesive. Density optimized for low wear and weight saving. Reduced cycle time with suitable equipment.
SikaMelt®-176	Multipurpose, low viscous, non reactive thermoplastic PO hot melt for assembly and lamination applications requesting medium open time.
SikaMelt®-209	Versatile pressure sensitive hot melt adhesive with high surface tackiness and good cohesion properties.
SikaMelt®-674 LV	Low viscous reactive PUR hot melt designed for foil lamination and bonding, with long open time and high initial cohesion.
SikaMelt®-675 OT	Low viscous PUR hot melt for lamination and bonding processes, requesting long open time, and suitable for wide substrates variety.
SikaMelt®-675 IS	Low viscous PUR hot melt for foil lamination (high gloss, matt surface) and bonding, with faster and higher strength development for reduced cycle time.
SikaMelt®-677	Multipurpose PUR hot melt, with a comfortable open time, broad adhesion range and high initial strength, suitable for manual and automated processes.
SikaMelt®-877	Classification free, multipurpose reactive hot melt adhesive with comfortable open time and high initial strength suitable for various substrates used in manual and automated industrial processes.

BUILDING COMPONENTS

Flooring

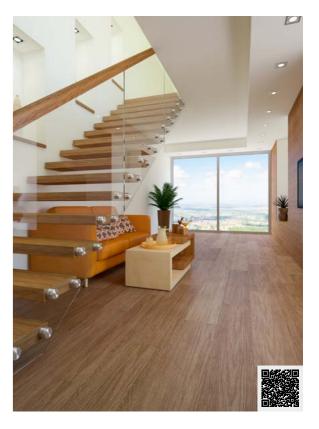
SikaMelt® reactive hot melts are ideal for laminating flooring elements such as parquet flooring, resilient flooring, sports flooring and flooring underlays to add functionality including impact sound insulation.

The reactive adhesives provide high initial strength and crosslinking to form a permanent and durable bond which reduces or even eliminates waiting times for drying or adjusting. Thus enabling high-speed production.

The bonding of impact sound insulation can be carried out using thermoplastic PSA hot melts.

OUR PRODUCT BENEFITS

- High initial strength for fast production
- Excellent heat resistance and durability
- Tested according to IHD-standard and JAS-II test methods
- Low emission values



Product	Features
SikaMelt®-211	Versatile pressure sensitive hot melt adhesive with very low viscosity and application temperature. Qualified adhesive for high line speed and fast processing.
SikaMelt®-675 IS	Low viscous PUR hot melt for foil lamination (high gloss, matt surface) and bonding, with faster and higher strength development for reduced cycle time.
SikaMelt®-676	High performance reactive PUR adhesive for assembly, lamination and wrapping applications requesting very high initial strength and outstanding cohesion and ageing performance.
SikaMelt®-677	Multipurpose PUR hot melt, with a comfortable open time, broad adhesion range and high initial strength, suitable for manual and automated processes.
SikaMelt®-680 LV	Soft touch reactive PUR hot melt adhesive for lamination TPU/PUR/PES membranes and films to organic or synthetic textiles via screen and roller application.

TEXTILE AND CONSUMABLES

Functional textiles and protective wear

SikaMelt® reactive and thermoplastic hot melts enable a high technical performance, process safety and efficiency. For this reason, our adhesive solutions are suitable for the production of functional textiles and protective wear.

Sika has been serving the multifunctional textile market for decades with market proven adhesive solutions and services. In addition to product-related functions, we also address and support environmental and safety aspects through OEKO-TEX® and bluesign® certified adhesives.

OUR PRODUCT BENEFITS

- High hydrolysis and chemical resistance
- Approved for industrial washing
- Soft and comfortable touch
- Produced under highest human and environmental safety standards and regulations, like ECO PASSPORT by OEKO-TEX®



KEY PRODUCTS

Product	Features
SikaMelt®-601	Fast curing reactive PUR hot melt adhesive with high initial strength for textile and foam bonding, and other substrates combinations.
SikaMelt®-602 FR	Flame retardant halogen-free functionalized reactive PUR hot melt adhesive, with exceptional durability for protection textiles.
SikaMelt®-603 IS	Reactive PUR hot melt adhesive with low application temperature for lamination TPU/PUR/PET/PE/PVC membranes and films to organic or synthetic textiles. Designed for fast processing systems by using roller and spray application method.
SikaMelt®-604	Soft touch reactive PUR hot melt adhesive for PTFE membrane lamination to organic or synthetic textiles for extreme protection textiles.
SikaMelt®-680 LV	Soft touch reactive PUR hot melt adhesive for lamination TPU/PUR/PES membranes and films to organic or synthetic textiles via screen and roller application.

TEXTILE AND CONSUMABLES

Technical textiles

Technical textiles are today the preferred solutions for engineered and integrated protection, safety and comfort systems as they offer cost-efficient solutions. Laminated, bonded and coated textiles are designed to be used in a wide range of technical applications.

Our SikaMelt® adhesive and coating solutions account for product and handling requirements as well as the application profile and method. They enable the improvement of product and process safety, durability and sustainability. This makes them the preferred solutions of leading manufacturers around the globe.

OUR PRODUCT BENEFITS

- High final strength on a wide range of substrates and materials
- Outstanding physical and chemical resistance
- Improved ageing characteristic
- Increased product and process safety



Product	Features
SikaMelt®-176	Multipurpose, low viscous, non reactive thermoplastic PO hot melt for assembly and lamination applications requesting medium open time.
SikaMelt®-209	Versatile pressure sensitive hot melt adhesive with high surface tackiness and good cohesion properties.
SikaMelt®-674 LV	Low viscous reactive PUR hot melt designed for foil lamination and bonding, with long open time and high initial cohesion.
SikaMelt®-675 IS	Low viscous PUR hot melt for foil lamination (high gloss, matt surface) and bonding, with faster and higher strength development for reduced cycle time.
SikaMelt®-677	Multipurpose PUR hot melt, with a comfortable open time, broad adhesion range and high initial strength, suitable for manual and automated processes.

TEXTILE AND CONSUMABLES

High performance tapes

Sika is an experienced development partner of SikaMelt® hot melt adhesives for high performance tapes.

When it comes to special adhesive tapes, such as heat-resistant tapes for construction or industry, Sika offers the right coating solution for every application with its hot melt adhesives. Whether high cohesion, good adhesion or high peel strength combined with flame retardancy is required, Sika is the right partner for you with its solvent-free hot melts.

OUR PRODUCT BENEFITS

- High heat resistance
- High mechanical aging performance
- Improved SAFT value
- Functionalised formulations e.g. flame retardant



KEY PRODUCTS

Product	Features
SikaMelt®-209	Versatile pressure sensitive hot melt adhesive with high surface tackiness and good cohesion properties.
SikaMelt®-230	Multipurpose pressure sensitive rubber based hot melt adhesive.
SikaMelt®-255	Peelable and repositionable thermoplastic rubber based pressure sensitive hot melt adhesive with high cohesion.
SikaMelt®-285 FR	Flame retardant, high cohesive pressure sensitive adhesive with excellent temperature resistance and suitable for wide range of substrates.
SikaMelt®-285 HT	Extremely high tacky pressure sensitive adhesive with strong initial adhesion performance directly after application.
SikaMelt®-287 UV	UV detectible high cohesive pressure sensitive adhesive with excellent high temperature resistance.
SikaMelt®-289	Versatile rubber based pressure sensitive hot melt adhesive with very high and durable surface tack and good ageing properties.

TEXTILE AND CONSUMABLES

Consumables

SikaMelt® hot melt adhesives are your preferred products of choice for bonding textiles, foams, paper and nonwovens. Sika solutions ensure excellent results and highest durability in combination with a user-friendly production process.

Whether synthetic or organic substrates, flexible or semirigid materials, Sika offers the right technical and commercial solution.

OUR PRODUCT BENEFITS

- High initial strength
- Excellent durability and hydrolysis resistance
- Broad adhesion spectrum to a range of materials and surfaces
- Improved process efficiency



Product	Features
SikaMelt®-675 IS	Low viscous PUR hot melt for foil lamination (high gloss, matt surface) and bonding, with faster and higher strength development for reduced cycle time.
SikaMelt®-675 OT	Low viscous PUR hot melt for lamination and bonding processes, requesting long open time, and suitable for wide substrates variety.
SikaMelt®-677	Multipurpose PUR hot melt, with a comfortable open time, broad adhesion range and high initial strength, suitable for manual and automated processes.

SERVICES

ABBREVIATIONS

TECHNICAL SERVICE

Sika's Technical Service provides support in the selection, testing and application of high-performance Sika products. Due to the proximity to the customer and the intensive professional exchange, the technical service supports you with fast and reliable tests based on national and international standards. Experienced professionals guarantee the best possible advice.

- Fast and reliable performance of material compatibility, aging and adhesion tests based on local and international standards
- Comprehensive range of product training courses at the customer's site

SYSTEM ENGINEERING

Sika's System Engineering advises the customer from the beginning on the selection and implementation of the appropriate application technology.

- Support in the selection of suitable application techniques
- Optimization and automation of existing production processes
- Many years of practical experience with automated bonding processes in the automotive, appliance and glass industries



1C	1-Component
2C	2-Component
3C	3-Component
HMPUR	Reactive Hot melt Polyurethane
IMO	International Maritime Organization
PE	Polyethylene
PES	Polyethersulfone
PET	Polyethylene Terephthalate
PO	Polyolefin
POR	Reactive Polyolefin
PSA	Pressure Sensitive Adhesive
PTFE	Polytetrafluorethylen
PUR	Reactive Polyurethane
PVC	Polyvinyl Chloride
RV	Recreational Vehicle
SAFT	Shear Adhesion Failure Temperature
TP0	Thermoplastic Polyolefin
TPU	Thermoplastic Polyurethane

GLOBAL BUT LOCAL PARTNERSHIP



CONTACT US FOR MORE INFORMATION:



www.sika.com

Sika is a specialty chemicals company with a leading position in the development and production of systems and products for bonding, sealing, damping, reinforcing and protecting in the building sector and the motor vehicle industry. Sika's product lines feature concrete admixtures, mortars, sealants and adhesives, structural strengthening systems, industrial flooring as well as roofing and waterproofing systems.



