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Polyurethanes for Textile Coating

Impranil® Imprafix® Impraperm®





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Impranil® Imprafix® Impraperm®

Building blocks for supply security, efficiency and sustainability

Outstanding quality and supply security – worldwide

Covestro, the world's leading manufacturer of aliphatic and aromatic isocyanates, offers an extensive range of raw materials and services for the textile industry. This allows the very latest technology to be used extremely effectively for a variety of applications. Thanks to its unique setup and worldwide network of state-of-the-art production sites, R&D facilities and customer technical centers, industry-leading supply chain setup, global orientation and local stocks, extremely large product portfolio, highest health, safety and environmental (HSE) standards, as well as tailored supply chain flexibility with short lead times, Covestro offers the textile industry unrivaled supply security and assured quality.

Solutions to enhance your process efficiency

Nowadays, the quality demands made on industrial processes are very high. But at the same time, there is a clear need to cut costs. Both goals can be achieved by increasing process efficiency. At Covestro we have a wide range of solutions designed to enhance your process efficiency. Why not take advantage of our know-how? These solutions will be good for your bottom line.



High coating performance – enabled by nature

Sustainability drives innovation at Covestro. We are committed to optimizing our manufacturing processes, reducing the impact of logistics, and enabling sustainability along the value chains. Renewable feedstocks offer opportunities for developing more sustainable building blocks for coating solutions – with significant potential for reducing the carbon footprint of end products while also reducing our overall dependence on fossil-based resources. But to make more sustainable solutions not just possible but also economically feasible, the performance of all our feedstocks needs to satisfy high industry standards. To this end, we are evaluating the use of renewable raw materials and will enlarge our product portfolio with new bio-based and mid- to long-term cost-competitive products, provided the raw materials become commercially available. In all these efforts, we are committed to focusing on products that perform at least as well as established products but are at the same time more sustainable.



50 years of experience in polyurethanes for textiles

Milestones

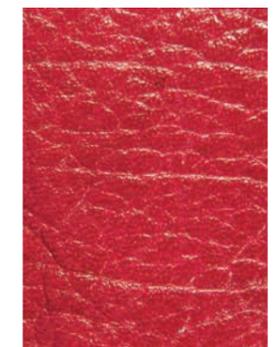
When Dr. Otto Bayer discovered a new polymer called polyurethane in 1937, Bayer – now Covestro – became the pioneer of polyurethane applications. About 50 years ago, the company succeeded in using polyurethane resins to coat textiles. To date, Bayer – now Covestro – has set many milestones in the development of innovative products and applications – always driven by market requirements. On the world market today, Covestro's Impranil®, Impraperm®, and Imprafix® are synonymous with highly innovative products combined with customer service based on years of experience. In our product development process, the focus is on enhancing the durability and appearance of coatings and combining that with cost-effectiveness and sustainability of products and processes. In order to meet our ambitious goals and maintain our global technological leadership, we are constantly investing in research and development, production lines and people – for your benefit.

"The past will always be displaced by the future, and the future will always build on the past."

Aurelius Augustinus, 398 AD

Leadership based on experience

- 1958:** Direct coating of textiles with two-component PU systems made possible with Impranil® C and CHW; at the same time, Covestro researchers develop the appropriate crosslinker systems: Imprafix®.
- 1967:** Textiles now coated by the transfer process with the one-component PU solution Impranil® ENB.
- 1968:** Textile coating made more environmentally compatible thanks to the waterborne PU dispersion Impranil® DLN from Covestro.
- 1986:** Microporous PU systems from Covestro enable water-vapor-permeable coating of textiles; Impraperm® ensures maximum wear comfort.
- 1991:** Compact coatings with enhanced water-vapor permeability thanks to optimized Impraperm® products.
- 1999:** Non-cleaving solvent-free products added to the Impranil® range.
- 2003:** DMF-/Toluene-free aliphatic Impranil® products.
- 2006:** New Impranil® 60% high solid dispersions.
- 2012:** Low deblocking temperature blocked isocyanate Imprafix® 2794 XP.
- 2014:** Launch of the new brand INSQIN®, an umbrella brand for our waterborne technology and a set of services that address industry needs for product innovation, material sustainability and supply chain transparency



More than just products

Innovation in our approach

Covestro is a renowned supplier of high-tech polymers and develops innovative solutions for a broad range of applications relevant to everyday life. Products occupying leading positions on the world market account for a large proportion of our sales.

But our innovation runs much deeper than our mastery of polymer chemistry. Innovation to us also means the way we see and approach the world our products fit into. We strive to deeply understand our markets and then not only to deliver the right products, but also to know the right way to bring them into the market for maximum impact and how we can complement them with value-adding services.

Our INSQIN® offering is a perfect example of this. INSQIN® shows how we employ all of our innovative spirit to address the challenges faced by industries using textiles. We utilize our leading waterborne technology to address the many challenges these industries are facing, e.g. product innovation, manufacturing innovation, and sustainability. But our approach is also new. By bringing our technology directly to both brand owners and manufacturers, we empower and expedite disruptive innovation. Not only that, we offer the INSQIN® Partner Manufacturer Program that addresses the need for greater transparency in the value chain by helping to pair brand owners looking for more sustainable materials with manufacturers of such materials.

We also collaborate with the multi-stakeholder coalitions Zero Discharge of Hazardous Chemicals (ZDHC) in order to contribute to industry efforts to increase sustainability.



Applications

Highlights



... Footwear



... Safety glove



... Bag



... Garment



... Denim



... Furniture



... Automotive



... Outdoorwear



... Sport

All about look and feel

Fashion

Fashion is a very transient business. The success of your products is dependent on the right timing. If you don't make it to market on time, a particular trend will already have passed. We tackle the challenge of fully supporting you in the development of your products through competent advice and fast responses. Our goal is to help you keep your promises.

Keeping pace with fashion

PU-coated textiles are key materials in fashion – and this looks set to remain so. Our experience means that the options for creating fashionable finishes are virtually unlimited. Your products can be manufactured quickly, economically and yet in an environmentally friendly and sustainable way using resins from the Impranil® product range.

Fashion statements

Fashion is a matter of individual expression. "How does it look?" and "How does it feel?" are questions customers frequently ask themselves when buying new clothes. Impranil® and Impraperm® products allow you to optimize the appearance, feel and functional properties of your products.

The invisible face of fashion

Customers who buy fashionable shoes, jackets and bags are interested in their appearance, comfort and durability. They don't think about the raw materials used to give these products the properties they require.

But you do. Invisible to your customers, the substrates and the polyurethane products you use are the key to the quality and appearance of your fashion products. And you can always rely on Impranil® and Impraperm® products from Covestro.





Where performance matters most

Sport

Achievement in sport demands full commitment. The clothing and footwear worn by athletes, like the equipment they use, must withstand a great deal. Coatings based on Impranil® and Impraperm® provide properties that exceed the requirements of even top-class athletes.

Outdoor clothing: Facing up to wind and weather

Outdoor pursuits require clothing that protects people from wind and rain. At the same time, perspiration must be dissipated away from the skin. To ensure a long service life, these products have to be resistant to washing and dry-cleaning. All these properties can be achieved using PU systems based on Impraperm® – and victory is guaranteed for your products.

Breathability: Comfort leads to success

Fabrics coated with conventional products reduce an athlete's performance as they hinder the body's natural temperature control mechanisms. Quite the opposite is the case with water-vapor-permeable coatings based on Covestro products. They ensure high performance even in extreme conditions.

Non-slip and durable accessories

Gloves for goalkeepers are of critical importance. Their non-slip properties and durability may be the decisive factor in winning or losing. Our Impranil® products can be used successfully in this type of article.

Sports shoes and balls: Extreme durability

Comfort, durability and reliability are the key requirements for sports shoes and also balls. PU synthetics made with Impranil® give your products outstanding mechanical properties such as abrasion resistance, flex resistance and handling. A further example of the functional properties of coatings based on Covestro products is that their water absorption rate is much lower than that of natural leather so products retain a constant weight, even when used in heavy rain. We ensure your product is a winner – because we keep our eye on the ball.



Lasting luxury

Automotive



Automotive interiors must fulfil a set of very demanding requirements. Not only must they provide an attractive look and a high level of comfort; they must also maintain these over time, while resisting constant abrasion and chemical staining and often under harsh conditions of temperature.

Our product range includes both high solids types and waterborne PUD that are proven in both polyurethane materials and in PVC-based materials.





Protection and industry

Specialty applications

In many situations, the performance of the safety clothing people wear plays an essential role in ensuring the safety of the wearer. One example is the clothing worn by firefighters. And of course, there are many other technical environments where reliability is essential and strict conformity with requirements is necessary. Our technicians can support you in this process with expert advice and provide products of consistent quality that meet all your specifications.

Keeping dry

Tents for leisure and military purposes not only have to keep people dry but are also exposed to a great deal of wear and tear. They are sometimes packed away wet so must be resistant to hydrolysis and capable of withstanding a few weeks of moisture. Coating systems from Covestro ensure your products meet all these requirements.

Reliable in the extreme

Fire hoses are lifesavers in extreme conditions. Resistance to water and hydrolysis are as important as abrasion resistance. Coating the outer textile sheath of fire hoses with Impranil® safeguards their functional properties and increases their service life.

Yet more uses

We have identified many other applications for coatings based on Impranil®, Impraperm® and Imprafix®. In addition to the conventional use of PU coatings in fashion clothing, sportswear and automotive components, coatings based on Covestro products are now proving their quality in coatings for:

- Conveyor belts
- Heat-resistant clothing
- Supported gloves
- Surgical wear and gloves
- Abrasive rollers
- Environmental textiles
- Hygiene textiles

The variety of applications for PU coatings shows the flexibility of our products for customization to different requirements. Our creative team will work with you in the customization process to ensure the market success of your products.



Products for textile coating

Impranil®			
Solutions/Granules		High Solids	Dispersions
1-comp.	2-comp.	2-comp.	1-comp.
AROMATIC	AROMATIC	AROMATIC	AROMATIC
EWN-13 SOLUTION A	C SOLUTION C GRANULE	HS-62 HS-80 HS-130	DAH DAA
ALIPHATIC			ALIPHATIC
2610 43031 SOLUTION ELH-A/1 SOLUTION			DLP DLP-R DLN-SD DLN W50 DLS DLV/1 DLU DLH DL1380 DL1554 DL1537 LP 3040 XP 2772 DLE DLC-T DL 519 LP 1069 DL 2077 DLI DL 1016 DL 1116 DLC-F DL 2611 eco DLS eco DL 519

Impraperm®		Imprafix®	
Dispersions	Solutions	Crosslinkers	
1-comp.	2-comp.	For solvent-borne solutions	
ALIPHATIC	ALIPHATIC	ISOCYANATES	AMINE CROSSL.
DL 5249 DL 5310	43153 SOLUTION	TH SOLUTION TRL SOLUTION VPLS 2346 Desmoderm® Additive Z	HS-C VPLS 2330
		CATALYST	
		XP 2582	

For waterborne dispersions	
DISPERSIBLE POLYISOCYANATES	BLOCKED POLYISOCYANATES
Desmodur® N 3900 Desmodur® DN Bayhydur® 3100 Imprafix® IO 3025	Imprafix® 2794 XP Imprafix® IO 3388

Impranil® for textile coating – Waterborne PU dispersions

Waterborne dispersions	Resin type		Application								Article range						Physical properties				
	CHEMICAL BASE	SOLIDS [%]	ALIPHATIC		DIRECT COATING		SKIN-COAT		TIE COAT		GARMENT		BAGS, LUGGAGE	TECHNICAL APPLICATIONS		LIGHT-FASTNESS	ELECTROLYTE STABILITY		TENSILE STRENGTH [MPa] DIN 53504		MELTING RANGE [°C]
			CHARGE	AROMATIC	FINISH	INTER-MEDIATE COAT	FOAM	ARTIFICIAL LEATHER	LININGS	PVC FINISH OR BONDING	HYDROLYSIS RESISTANCE* DIN EN 12280-3	100% MODULUS [MPa] DIN 53504		ELONGATION AT BREAK [%] DIN 53504							
Impranil® DLN-SD	PES	40	a	●	●	●	●	●	●	●	●	●	●	●	7	0	+	2	35	1,500	175–200
Impranil® DLN-W 50	PES	50	a	●	●	●	●	●	●	●	●	●	●	●	7	0	+	2	35	1,500	175–200
Impranil® DLV/1	PC/PET	40	a	●	●	●	●	●	●	●	●	●	●	●	7	++	+	2	25	1,200	200–220
Impranil® DLS	PES	50	a	●	●	●	●	●	●	●	●	●	●	●	7	0	++	2.5	30	1,000	170–180
Impranil® DLP/DLP-R	PES	50	a	●	●	●	●	●	●	●	●	●	●	●	7	+	+	1.3	10	1,600	200–220
Impranil® DLH	PES	40	a	●	●	●	●	●	●	●	●	●	●	●	7	0/+	0	5	50	1,100	165–175
Impranil® DLU	PET/PC	60	a	●	●	●	●	●	●	●	●	●	●	●	7	++	++	2	30	900	200–230
Impranil® DLC-F/1	PC	40	a	●	●	●	●	●	●	●	●	●	●	●	7	++	+	5	50	600	215–225
Impranil® DLC-T	PES/PC	35	a	●	●	●	●	●	●	●	●	●	●	●	7	++	+	5	6	400	150–160
Impranil® DL 2611/1	PES	40	a	●	●	●	●	●	●	●	●	●	●	●	7	+	+	13	40	400	200–220
Impranil® DL 1380	PES	60	a	●	●	●	●	●	●	●	●	●	●	●	7	0	+	1.4	25	1,400	210–220
Impranil® DL 1537	PES	60	a	●	●	●	●	●	●	●	●	●	●	●	7	+	+	1.3	15	1,200	200–210
Impranil® DL 1554	PES	60	a	●	●	●	●	●	●	●	●	●	●	●	7	0	++	2.5	26	1,000	200–220
Impranil® LP DSB 1069	PET	50	a	●	●	●	●	●	●	●	●	●	●	●	7	+	–	2	20	1,200	220–240
Impranil® DL 519	PES	40	a	●	●	●	●	●	●	●	●	●	●	●	7	0	+	9	40	500	180–200
Impranil® LP RSC 3040	PES	40	a	●	●	●	●	●	●	●	●	●	●	●	7	0	+	2	40	1,200	175–200
Impranil® DL 2077	PC	35	a	●	●	●	●	●	●	●	●	●	●	●	7	++	+	20–25	25–30	150–200	220–230
Impranil® DLE	PET	50	a	●	●	●	●	●	●	●	●	●	●	●	7	+	–	1.5	25	1,600	215–225
Impranil® XP 2772	PES	40	a	●	●	●	●	●	●	●	●	●	●	●	7	0/+	+	2	40	1,600	175–200
Impranil® DAH	PET	35	a	●	●	●	●	●	●	●	●	●	●	●	4	+	+	2	10	700	150–170
Impranil® DAA	PET	40	a	●	●	●	●	●	●	●	●	●	●	●	3	+	+	0.5	1	> 3000	140–160
Impranil® DLI	PES	50	n	●	●	●	●	●	●	●	●	●	●	●	7	0	–	2	37	1,300	190–200
Impranil® 1016	PES	50	a	●	●	●	●	●	●	●	●	●	●	●	7	+	++	2.5	30	1,600	170–180
Impranil® 1116	PES	60	a	●	●	●	●	●	●	●	●	●	●	●	7	+	+	1.4	25	1,500	210–220
Impranil® eco DLS	PES	50	a	●	●	●	●	●	●	●	●	●	●	●	7	0	++	2.5	30	1,000	170–180
Impranil® eco DL 519	PES	40	a	●	●	●	●	●	●	●	●	●	●	●	7	0	+	9	40	450	180–200

The film values given provide general information and are not part of the product specifications.

* Rating of resistance to hydrolysis:

- ++: excellent
- +/: very good
- +: good
- 0/+ : satisfactory
- 0: moderate

** Trial product

Impranil® for textile coating – High solids

High solids	Resin type		Application technology				Application range					Physical properties			
	SOLIDS [%]	SOLVENT	POT LIFE (DAYS) 25°C	AROMATIC	TOP COAT	INTER-MEDIATE COAT	OUTER-WEAR	BAGS, LUGGAGE	INDUSTRIAL GOODS	RESISTANCE TO HYDROLYSIS* DIN EN 12280-3	TENSILE STRENGTH [MPa] DIN 53504	MELTING RANGE [°C]			
		CROSSLINKER/ CATALYST	ALIPHATIC	DIRECT COAT	TIE COAT	FOAM	SHOE UPPER MATERIALS	SHOE LININGS	LIGHT-FASTNESS	100% MODULUS [MPa] DIN 53504	ELONGATION AT BREAK [%] DIN 53504				
Impranil® HS-62	98	1-methoxypropylacetate-2	6.9% Imprafix® HS-C or 5.5% Imprafix® VP LS 2330**	3	●	●	●	●	●	2	++	2	8	660	200–210
Impranil® HS-80	90	1-methoxypropylacetate-2	8% Imprafix® HS-C or 7% Imprafix® VP LS 2330**	14	●	●	●	●	●	3	+ / ++	3	21	740	200–220
Impranil® HS-130	100	–	13% Imprafix® HS-C	7	●	●	●	●	●	2–3	++	7.5	38	760	> 150

The film values given provide general information and are not part of the product specifications.

* Rating of resistance to hydrolysis:
 ++: excellent
 + / ++: very good
 +: good
 0 / +: satisfactory
 0: moderate

** Trial product

Impranil® for textile coating – Solutions and granules

Solutions	Resin type							Application							Physical properties				
SOLUTIONS	SOLIDS [%]	SOLVENTS	CROSSLINKER/ CATALYST	ALIPHATIC		POTLIFE [H]	FINISH	DIRECT COAT	TIE COAT	ARTIFICIAL LEATHER	LININGS	LIGHT-FASTNESS	HYDROLYSIS RESISTANCE* DIN EN 12280-3	100% MODULUS [MPa] DIN 53504	ELONGATION AT BREAK [%] DIN 53504	MELTING RANGE [°C]			
				1-COM-PONENT	2-COM-PONENT												AROMATIC	GARMENT	BAGS, LUGGAGE
Impranil® EWN-13 sol. A	35	Dimethylformamide/toluene/methylethylketone		●	●	–	●	●	●	●	●	●	3	+	2	19	1,400	150 – 160	
Impranil® C sol.	30	Ethylacetate	5% Imprafix® TH sol. 2.5% Imprafix® XP 2582**	●	●	8	●	●	●	●	●	●	4	+	2.2	33	800	–	
Impranil® ELH-A/1 sol.	30	Toluene/isopropanol/1-methoxypropanol-2		●	●	–	●	●	●	●	●	●	7	++	7.0	54	620	190 – 200	
Impranil® 43031 sol.	25	Toluene/isopropanol/1-methoxypropanol-2		●	●	–	●	●	●	●	●	●	7	+	31	47	230	195 – 205	
Impranil® XP 2610**	30	1-methoxypropylacetate/isopropanol γ-butyrolacton/1-methoxypropanol-2		●	●	–	●	●	●	●	●	●	7	++	7	50	300	190 – 200	

The film values given provide general information and are not part of the product specifications.

* Rating of resistance to hydrolysis:
 ++: excellent
 +/++: very good
 +: good
 0/+ : satisfactory
 0: moderate

** Trial product

Granules	Resin type				Application technology				Application range				Physical properties				
SOLUTIONS	SOLIDS [%]	CROSSLINKER/ CATALYST	ALIPHATIC		POT LIFE [H]	DIRECT COAT	TIE COAT	FINISH	SHOE UPPER MATERIALS	SHOE LININGS	LIGHT-FASTNESS	RESISTANCE TO HYDROLYSIS* DIN EN 12280-3	100% MODULUS [MPa] DIN 53504	ELONGATION AT BREAK [%] DIN 53504	MELTING RANGE [°C]		
			1-COM-PONENT	2-COM-PONENT												AROMATIC	TOP COAT
Impranil® C	100	5.0% Imprafix® TH sol. 2.5% Imprafix® XP 2582**	●	●	8 – 10	●	●	●	●	●	●	4	+	2.4	33	900	–

Impraperm® for MVP textile coating

Solutions	SOLVENT		Resin type		Technology				Application range				Physical properties				
	SOLIDS [%]		CROSSLINKER/CATALYST ADDITIVES	ALIPHATIC	1-COMPONENT	POT LIFE [H]	MICRO-POROUS	TOP COAT	FINISH	SHOE UPPER MATERIALS	INDUSTRIAL GOODS	RESISTANCE TO HYDROLYSIS* DIN EN 12280-3	TENSILE STRENGTH [MPa] DIN 53504	MELTING RANGE [°C]			
				AROMATIC	2-COMPONENT	COMPACT		DIRECT COAT	TIE COAT	OUTER-WEAR	SHOE LININGS	LIGHT-FASTNESS DIN 75202	100% MODULUS [MPa] DIN 53504	ELONGATION AT BREAK [%] DIN 53504			
Impraperm® 43153 sol.	25	Toluene/isobutanol	Melamine Impranil® VP LS 2346	●	●	-	●	●	●	●	●	7	0/+	5	20	400	< 200

The film values given provide general information and are not part of the product specifications.

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 +/++: very good
 +: good
 0/+ : satisfactory
 0: moderate
 ** Trial product

Waterborne dispersions	SOLIDS [%]		Resin type		Application				Article range				Physical properties			
	CHEMICAL BASE	CHARGE	ALIPHATIC	DIRECT COATING	SKIN-COAT	TIE COAT	GARMENT	BAGS, LUGGAGE	TECHNICAL APPLICATIONS	LIGHT-FASTNESS	ELECTROLYTE STABILITY	TENSILE STRENGTH [MPa] DIN 53504	MELTING RANGE [°C]			
			AROMATIC	FINISH	INTER-MEDIATE COAT	FOAM	ARTIFICIAL LEATHER	LININGS	PVC FINISH OR BONDING	HYDROLYSIS RESISTANCE* DIN EN 12280-3	100% MODULUS [MPa] DIN 53504	ELONGATION AT BREAK [%] DIN 53504				
Impraperm®DL 5249	PES	32	a	●	●	●	●	●	●	7	+	0	3.2	22	620	240
Impraperm® DL 5310	PC/PET	30	n	●	●	●	●	●	●	7	++	+	2.1	5	460	172

Additives for product formulation – crosslinking agents/catalysts

Crosslinking agents / catalysts / additives

	SOLIDS [%]	SOLVENT	FUNCTION
Imprafix® TH sol.	75	Ethylacetate	Isocyanate crosslinking agent, aromatic
Imprafix® TRL sol.	60	Butylacetate	Isocyanate crosslinking agent, aromatic/aliphatic
Imprafix® XP 2582	4	Ethylacetate	Accelerator for Imprafix® TH and TRL
Imprafix® VP LS 2330	100	–	Crosslinking agent for Impranil® HS-series
Imprafix® HS-C	100	–	Crosslinking agent for Impranil® HS-series
Desmoderm® Additive Z	75	1-methoxypropylacetat-2/ Xylol 1:1	Isocyanate crosslinking agent, aliphatic
Desmodur® DN	100	–	Isocyanate crosslinking agent, aliphatic, for waterborne dispersions
Desmodur® N 3900	100	–	Isocyanate crosslinking agent, aliphatic, for waterborne dispersions and solvent-borne PU
Bayhydur® 3100	100	–	Isocyanate crosslinking agent, aliphatic, for waterborne dispersions
Impranil® VP LS 2346	40	Ethylacetate	Acrylate additive for Impraperm® 43153
Imprafix® 2794 XP	40	Water	Blocked isocyanate agent with low deblocking temperature
Imprafix® IO 3025	100	–	Hydrophilic aliphatic polyisocyanate crosslinking agent which is easy to disperse
Imprafix® IO 3388	45	Water	Blocked isocyanate agent with deblocking temperature of 150°C



Our research and development centers

We are where you are

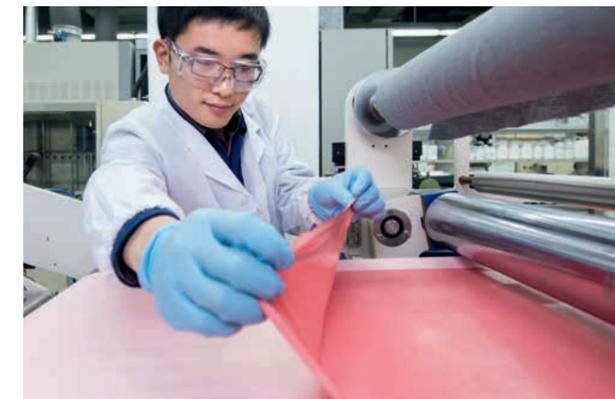
The ability to react fast to changes in the markets is a key to success. To help you in this, our Technical Service Centers in Leverkusen, Germany, and Shanghai, China, provide outstanding customer support.

Our products have to fulfill a certain function, maybe even a crucial function, in your products – be it fashion items, functional garments, automotive components or hygiene articles. Our Technical Service Centers are equipped with coating facilities similar to those used in the industry. This enables us to develop customized solutions for you and in cooperation with you. Our laboratories have test facilities that allow us to test coating properties and manufacturing processes under industrial conditions.

Our pledge – reliability

Applications are developed under conditions close to industrial production to enable a fast transfer and upscale of technology from lab to line. Properties and specified parameters can be tested quickly and processing conditions modified immediately. Hence, there is no need for expensive and time-consuming trials in your factory – or at least they can be reduced to an absolute minimum.

Our Technical Service Centers offer you the benefits of just-in-time reliability and cost effectiveness. After all, time is money.



Fast-lane access to polyurethane innovations

At Covestro, innovation is in our DNA. Ever since Otto Bayer discovered polyurethanes in 1937, we have been driving polyurethane innovations in coatings and adhesives as well as in other application areas. As our partner you enjoy fast-lane access to polyurethane innovations and can help us in developing the next generation of polyurethanes to meet the industry's upcoming challenges and needs. What can we offer you?

- Powerful know-how on both established and new polyisocyanates, as well as on new polyurethane hybrid technologies
- The prospect of new application technologies to enable efficient processes
- More sustainable, biomass- or CO₂-based materials that do not sacrifice high performance

Join us to shape the future!



