

FIBER & TEXTILE AUXILIARIES

NONWOVENS AND STAPLE FIBERS

Spin finishes and specialty auxiliaries



ZSCHIMMER & SCHWARZ

PRODUCT LIST

PRODUCT NAME	PAGE	PRODUCT NAME	PAGE
ANTHYDRIN CFC	14	LERTISAN HE 1810	12
FASAVIN CP 170	15	LERTISAN NF 1613	09
FASAVIN TC 1333	14	LERTISAN NF 1708	09
LERTISAN 3167	15	LERTISAN NF 21	09
LERTISAN AC 300	14	LERTISAN NP 1220	09
LERTISAN FT 1704	14	LERTISAN NP 1471	09
LERTISAN HD 1022	13	LERTISAN NP 1715	09
LERTISAN HD 1085	13	LERTISAN NP 50	14
LERTISAN HD 1095	13	LERTISAN NSM	09
LERTISAN HD 20/3	13	LERTISAN SC 1800	15
LERTISAN HE 1800	12	LERTISAN SL 15	15
LERTISAN HE 1806	13	ZETESOFT FF 112	15

ABBREVIATIONS

ADL	Acquisition distribution layer
PP	Polypropylene
PE	Polyethylene
PET	Polyethylene terephthalate
rPET	Recycled polyethylene terephthalate
PLA	Polylactic acid
PA	Polyamide

CONTENTS

05 CHEMISTRY TAILOR-MADE

07 FIBER & TEXTILE AUXILIARIES FOR NONWOVENS AND STAPLE FIBERS

08 Staple fibers for needle punched
nonwovens (PP and PET)

11 STAPLE FIBERS AND NONWOVENS FOR HYGIENE APPLICATIONS

12 Staple fibers for hygiene applications

13 Spunlaid nonwovens for hygiene applications

14 SPECIALTY AUXILIARIES

14 Hydrophobing agents

14 Special polymer materials

15 Short cut staple fibers

15 Spunlace nonwovens

15 Fiberfill



CHEMISTRY TAILOR-MADE

Zschimmer & Schwarz is an internationally active company with headquarters in Lahnstein near Koblenz, Germany. The company has been family-owned since its foundation in Chemnitz, Germany, in 1894.

Our core business is the development, manufacture and delivery of tailor-made chemical auxiliaries for the leather, ceramic, textile and chemical fiber industries. Manufacturers of cleaning agents, personal care products, lubricants and industrial applications all over the world trust in the company's chemical specialties as well.

The corporate group Zschimmer & Schwarz combines 27 companies in 16 countries on five continents. Our customers can always rely on a uniform quality standard worldwide and equally on the high service orientation of our local experts.

The portfolio of our Fiber & Textile Auxiliaries Division is used across the value chain from spinning and processing yarn to finishing the fabric. In the fiber sector, we offer auxiliaries for the production and processing of filament yarns, fibers and nonwovens. Customized spin finishes ensure smooth processes for our customers.

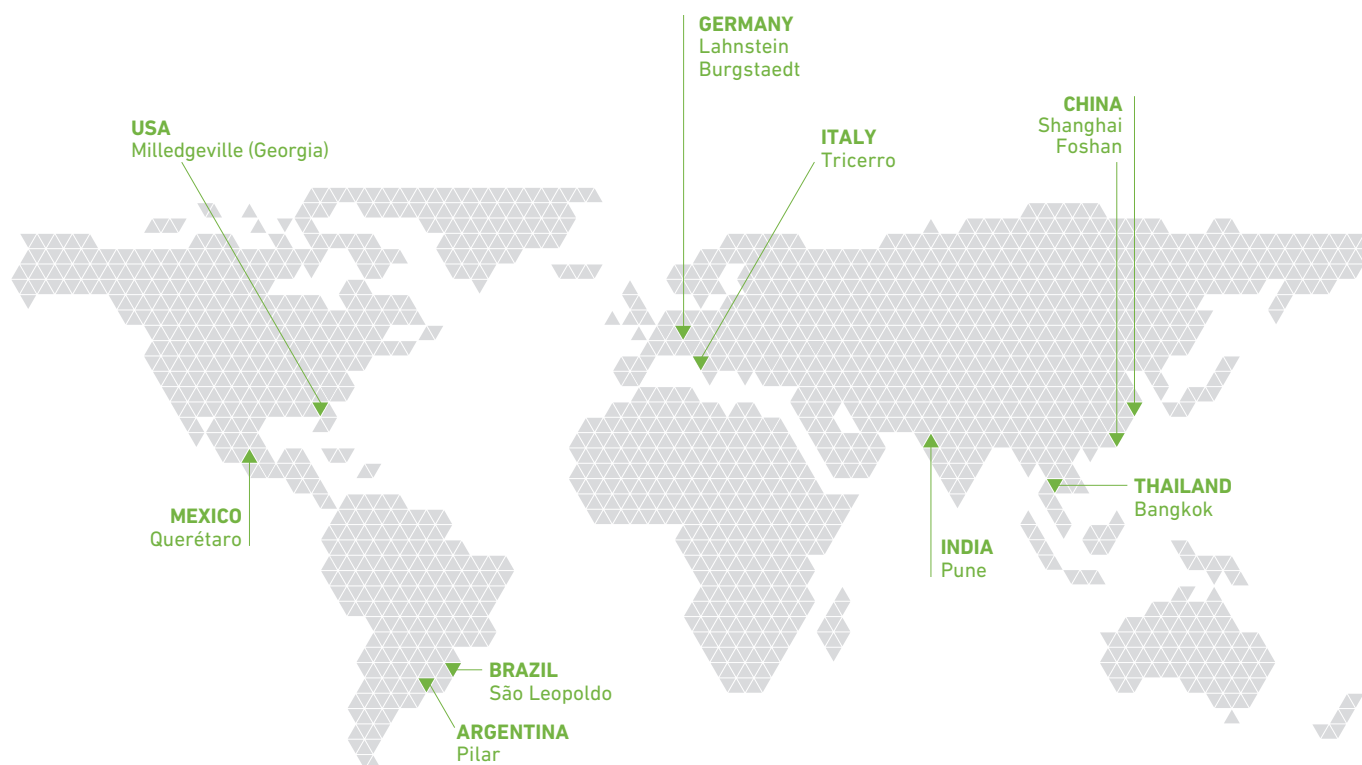
Our products provide weather resistance, durability, skin compatibility as well as environmental friendliness. Our textile auxiliaries comprise innovative and sustainable solutions for pretreatment, dyeing and printing as well as finishing and coating. From bleaching agents, detergents and dyeing auxiliaries to water repellents, flame retardants and air-improving specialties, we offer tailored solutions for the textile industry.

In the field of nonwovens and staple fibers, our goal is to provide our customers with the best possible spin finishes and specialty auxiliaries. Driven by the dynamic demands of the market, we develop innovative and tailor-made formulations. In our extensive application facilities, we design and test our products under conditions that closely reflect our customers' processes.

Our application technologists and sales service will be happy to advise you.

fiber-textile@zschimmer-schwarz.com

LOCATIONS OF OUR FIBER & TEXTILE AUXILIARIES DIVISION





FIBER & TEXTILE AUXILIARIES FOR NONWOVENS AND STAPLE FIBERS

Staple fibers and nonwovens are key materials in a wide variety of applications, including hygiene products, wipes, medical textiles, automotive, filtration media, carpets, and geotextiles. Depending on the production process, different fiber auxiliaries are required. Spin finishes, for instance, are applied after filament extrusion to control friction, improve cohesion, and enhance process reliability. In addition, they can provide specific functionalities, for example hydrophilicity/hydrophobicity or softness/harshness, tailored to the needs of the end application.

With our LERTISAN product range, we offer fiber auxiliaries for the production and processing of filament yarns, fibers and nonwovens made from synthetic polymers:

- Polypropylene (PP)
- Polyethylene (PE)
- Polyethylene terephthalate (PET)
- Polylactic acid (PLA)
- Polyamide (PA)

LERTISAN gives you full control over your processes, enabling precise adjustment of the fiber properties.





STAPLE FIBERS FOR NEEDLE PUNCHED NONWOVENS (PP AND PET)

Staple fibers produced from PP or PET can be processed into needle punched nonwovens which are mainly used for technical applications.

When used in geotextiles, the main purpose of the nonwovens is to stabilize the ground, for instance during road construction work. For automotive carpets and headliners, low fogging behavior and a minimal tendency to yellowing are essential. The use of staple fibers in carpets and mats requires high wear resistance, good antistatic properties and a "living appearance".





LERTISAN NP 1220 and LERTISAN NP 1715 are dedicated spin finishes for staple fibers used in needle punched non-wovens. LERTISAN NP 1220 is a premium product specially designed for the application on PP, whilst LERTISAN NP 1715 is suitable for both PP and PET. LERTISAN NF 21 and LERTISAN NF 1708 can be used in staple fibers for needle punched nonwovens and can also serve as primary spin finishes in the production of PET fiberfill.

For maximum flexibility, LERTISAN NP 1471 is an all-round spin finish which can be used for a wide range of polymers, including PET, rPET, PP, and PLA staple fibers.

LERTISAN NF 1613 functions as both lubricant and anti-static agent applied prior to carding. It helps to improve the structure of needle punched nonwovens.

OUR SPIN FINISHES FOR NEEDLE PUNCHED NONWOVENS (PP AND PET)

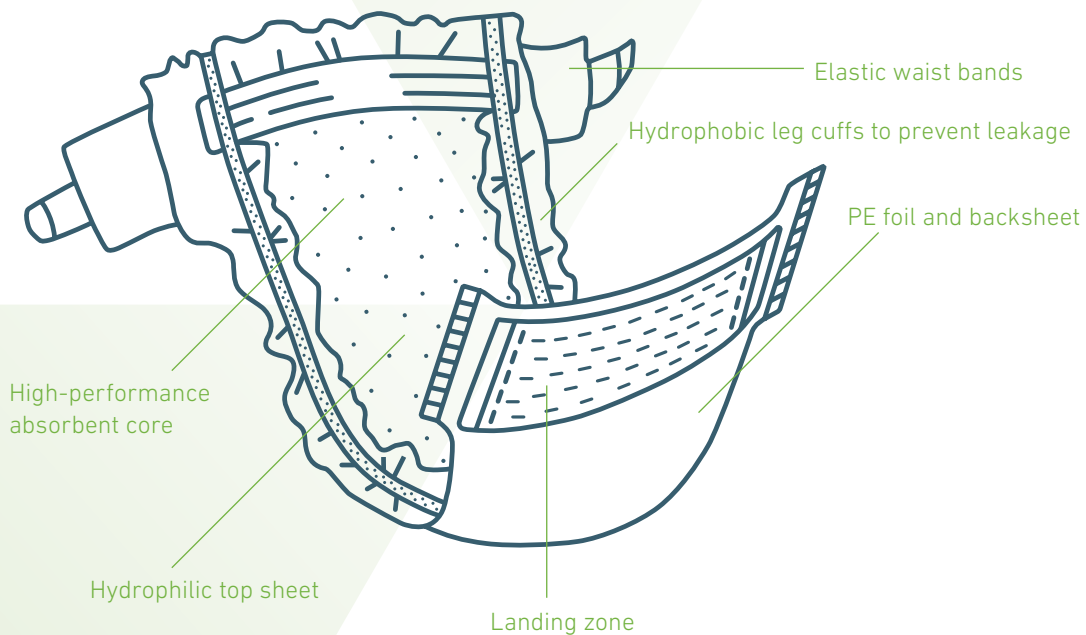
PRODUCT	POLYMER	ACTIVE MATTER	SPECIAL FEATURE
LERTISAN NP 1220	PP	80 %	Standard premium product
LERTISAN NP 1715	PP, PET	80 %	Standard product
LERTISAN NF 21	PET	88 %	Can also be used as primary spin finish for the production of PET fiberfill
LERTISAN NP 1471	PET, rPET, PP, PLA	80 %	Versatile application on various polymer materials
LERTISAN NF 1613	PET	70 %	Lubricant and antistatic agent, for PET secondary finish
LERTISAN NF 1708	PP, PET	80 %	Tolerant towards hard water
LERTISAN FPU	PP, PET	65 %	Reduction of deposits on fiber
LERTISAN NSM	PP	75 %	For both dyed and undyed materials



STAPLE FIBERS AND NONWOVENS FOR HYGIENE APPLICATIONS

Hygiene applications are the largest consumer of staple fibers and nonwovens, driven by the large markets of baby diapers and feminine hygiene products. Hygiene products tend to be multicomponent and more structurally diverse than nonwovens for most technical end uses.

A modern baby diaper, for example, is composed of several different nonwoven materials, each tailored to a specific function. Typical diapers consist of a lightweight top sheet, an acquisition distribution layer (ADL), a highly absorbent core made of airlaid wood pulp and superabsorbent polymer, a core wrap, leg gathers, a waistband, spunbond polypropylene closures, and a cloth-like backsheet. All these components have different requirements for the nonwovens.





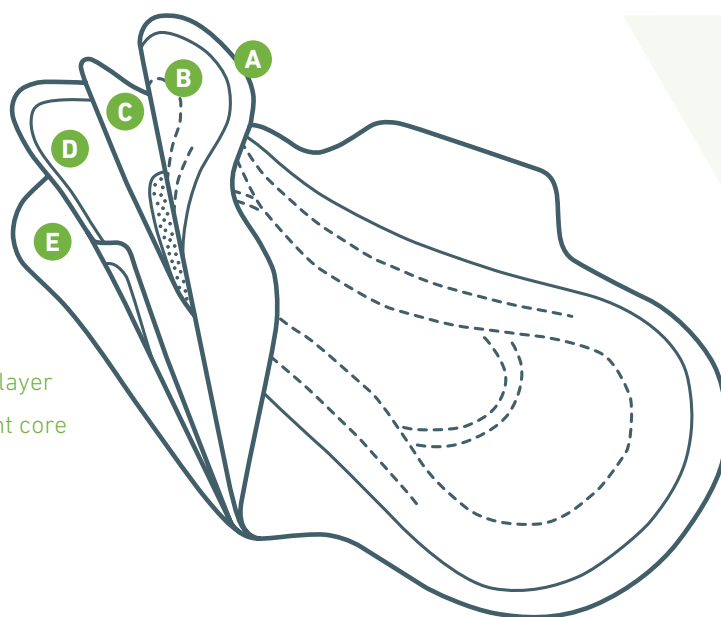
STAPLE FIBERS FOR HYGIENE APPLICATIONS

Staple fiber nonwovens are frequently used in diapers, predominantly as top sheet or as the PP- or PET-based ADL. Due to their voluminous structure, they have a special softness and, thanks to capillary forces, a pronounced absorption capacity. With LERTISAN spin finishes, standard hydrophilic or durable hydrophilic properties can be applied in the staple fiber production process.

LERTISAN HE 1800 is a hydrophilic spin finish for the application on PP and PET staple fibers in the hygiene industry (e.g. ADL layer). For applications requiring higher thermal stability, LERTISAN HE 1810 offers the same performance benefits while providing increased tolerance to elevated temperatures in the stretching bath. In addition, it is fully compatible with common diaper adhesives.

OUR SPIN FINISHES FOR HYGIENE STAPLE FIBERS (PP AND PET)

PRODUCT	POLYMER	ACTIVE MATTER	FDA	EU	FEATURES
LERTISAN HE 1800	PP, PET	98 %	✓	✓	For ADL, water filters, teabags, used for PP and PET; can be used as primary and secondary finish
LERTISAN HE 1810	PP, PET	98 %	✓	✓	Improved compatibility with adhesives used in diaper manufacturing, able to withstand higher temperatures in stretching bath, for PP and PET



- A** Hydrophilic top sheet
- B** Acquisition and distribution layer
- C** High-performance absorbent core
- D** Leak-proof backsheet
- E** Adhesive layer

SPUNLAID NONWOVENS FOR HYGIENE APPLICATIONS

In many modern baby diapers, feminine hygiene and incontinence products, PP thermobonded spunlaid nonwovens are used as top sheet. The applied product and the top sheet shall fulfil the following functions:

- Uniform wetting properties for kiss roll application at a high production speed
- Good hydrophilic properties for fast liquid transport during use
- Low rewetting levels (wetback) during use

LERTISAN HE 1806 is a semi-durable finish to achieve fast wetting nonwovens. It can be applied via kiss role in the manufacturing of spunbonded nonwovens or as a secondary spin finish for carded nonwoven. In addition to the hydrophilic effect, the product provides softness and its raw materials are compliant with FDA regulations. If a more sophisticated hydrophilic performance is required with a

need for a pleasant soft textile touch, durable hydrophilic spin finish LERTISAN H 20/3 and LERTISAN HD 1022 are available. Both can be used as primary spin finish for staple fibers and via kiss role for spunbonded nonwovens and providing softness, quick absorption of urine and a very good wetback performance.

LERTISAN HD 1085 and LERTISAN HD 1095 represent our next-generation spin finishes, featuring an optimized emulsion viscosity profile. This makes them particularly well-suited for high-concentration emulsions (up to 8–12 %) when applied via kiss roll technology. Spunbonded nonwovens show quick absorption of urine, very good wetback performance and a pleasant textile touch.

OUR SPIN FINISHES FOR HYGIENE SPUNLAID NONWOVENS

PRODUCT	ACTIVE MATTER	BIO-BASED RATIO	FDA	FEATURES
LERTISAN HE 1806	88 %	30 %	✓	Super fast wetting, for PP spunbond, for inline kiss roll application, also usable as secondary finish for staple fibers
LERTISAN HD 20/3	93 %	75 %		Standard premium product, for top sheets, e.g. PP spunbonded and carded nonwoven or core wrap, can be used as a primary spin finish
LERTISAN HD 1022	95 %	72 %	✓	Very small SVHC footprint, successor of HD 20/3 with raw materials in conformity to FDA, botanical additive
LERTISAN HD 1085	99 %	63 %		Very good emulsion quality and stability, opportunity for higher concentrations, adjusted wetting performance, new-generation product
LERTISAN HD 1095	100 %	60 %		Very good emulsion quality and stability, opportunity for higher concentrations, very low wetback, new-generation product

SPECIALTY AUXILIARIES

Certain applications require special auxiliaries, completing our portfolio dedicated to nonwovens and staple fibers.

HYDROPHOBING AGENTS

In some cases, enhancing the hydrophobicity of synthetic fibers is required. For example, the backsheet of a diaper should not absorb liquids, and reliable water repellency is essential in certain automotive and medical applications. FASAVIN TC 1333 is a softening product for hydrophobic treatment which can be used as a primary and secondary spin finish. It can be applied on both staple fibers and non-wovens. ANTHYDRIN CFC is a hydrophobic agent used for top coating.

SPECIAL POLYMER MATERIALS

Some of our spin finishes are particularly designed for special synthetic materials. While LERTISAN NP 50 is suitable for polyimide fibers resistant to high temperatures, LERTISAN AC 300 is a special spin finish for acrylic fibers produced by dry spinning. LERTISAN FT 1704 is ideal for acetate fibers used in cigarette filters. Additionally, raw materials used are in conformity with FDA.

OUR HYDROPHOBING AGENTS

PRODUCT	ACTIVE MATTER	FEATURES
FASAVIN TC 1333	10 %	Fluorine-free, hydrophobic primary and secondary spin finish
ANTHYDRIN CFC	30 %	Fluorine-free water repellent for top coating

OUR AUXILIARIES FOR SPECIAL POLYMER MATERIALS

PRODUCT	POLYMER	ACTIVE MATTER	FDA	FEATURES
LERTISAN NP 50	Polyimide	85 %		For hollow fiber membrane for water filtration
LERTISAN AC 300	Acrylic	95 %		For acrylic fibers produced by dry spinning
LERTISAN FT 1704	Acetate	93 %	✓	For filter tows

SHORT CUT STAPLE FIBERS

For street and tunnel construction as well as paper and concrete reinforcement, PP and PET short cut staple fibers are used. During the process, spin finishes are applied to optimize the spinning and drawing behavior and prevent deposition on the godets as well as filament breaks. Furthermore, the end application for short cut fibers requires good fiber distribution and low foaming behavior.

LERTISAN 3167 is our established spin finish for short cut fibers for concrete reinforcement. FASAVIN CP 170 and the FDA-conform LERTISAN SC 1800 provide an excellent dispersion of PP short cut fibers. All three products provide very good dispersion of PET short cut fibers.

SPUNLACE NONWOVENS

Spunlace nonwovens are made by mechanically bonding synthetic fibers using high-pressure water jets. LERTISAN SL 15 is a spin finish for spunlace PET nonwovens with exceptionally low foaming tendency.

FIBERFILL

Polyester fiberfill is used as voluminous filling material, providing comfort, durability as well as good insulation properties. Fiberfill is widely applied in pillows, mattresses, upholstered furniture, outerwear, sleeping bags, as well as in industrial applications. ZETESOFT FF 112 is a special auxiliary for PET fiberfill. It provides a harsh and crunchy structure resulting in very good resilience properties. The product is free of silicone.

OUR AUXILIARIES FOR SHORT CUT STAPLE FIBERS

PRODUCT	POLYMER	ACTIVE MATTER	FDA	FEATURES
LERTISAN SC 1800	PP, PET	98 %	✓	Excellent dispersion of PP fibers
LERTISAN 3167	PP, PET	75 %		Standard product
FASAVIN CP 170	PP, PET	100 %		Excellent dispersion of PP fibers

OUR AUXILIARIES FOR SPUNLACE NONWOVENS

PRODUCT	POLYMER	ACTIVE MATTER	FDA	FEATURES
LERTISAN SL 15	PET	94 %	✓	Exceptionally low foaming

OUR AUXILIARIES FOR FIBERFILL

PRODUCT	POLYMER	ACTIVE MATTER	FEATURES
ZETESOFT FF 112	PET	100 %	Silicone-free, providing high resilience



Chemistry tailor-made

► ASIA

Zschimmer & Schwarz

India Private Limited
S No. 32/33, Plot No 53
Alankar Society
Karve Nagar, Kothrud
Pune 411052 | IN
T +91 20 2546 9004 | M +91 98 6028 0709
n.kothari@zschimmer-schwarz.com
zschimmer-schwarz.com

Zschimmer & Schwarz

Chemical (China) Co., Ltd.
No. 16, Kaiyuan Road
Datang Industrial Park
Sanshui, 528143 Foshan, Guangdong | CN
T +86 757 87 27 06 01
F +86 757 87 27 06 09
zsc@zschimmer-schwarz.cn
zschimmer-schwarz.com

Zschimmer & Schwarz

Chemicals HK Ltd.
Shanghai Representative Office
Rm. 1002, Oriental Cable Building
No 699 Nanjing (West) Road
Shanghai 200041 | CN
T +86 21 52 11 01 80
F +86 21 52 11 01 89
zsash@zschimmer-schwarz.cn
zschimmer-schwarz.com

Zschimmer & Schwarz

(Thailand) Co., Ltd.
130/130 Wangchula Real Estate
Moo 3, Phahol-yothin Road Km. 68
Tambol Wangchula, Amphur Wangnoi
13170 Ayutthaya | TH
T +66 3572 1035-38
m.andreoni@zschimmer-schwarz.com
zschimmer-schwarz.com

► EUROPE

Zschimmer & Schwarz

Mohsdorf GmbH & Co. KG
Chemnitztalstrasse 1
09217 Burgstaedt | DE
T +49 3724 67-0 | F +49 3724 67-209
info.zsm@zschimmer-schwarz.com
zschimmer-schwarz.com

Zschimmer & Schwarz

GmbH & Co KG Chemische Fabriken
Max-Schwarz-Strasse 3-5
56112 Lahnstein | DE
T +49 2621 12-0 | F +49 2621 12-407
info@zschimmer-schwarz.com
zschimmer-schwarz.com

Zeta Esse Ti S.r.l.

Via Angelo Ariotto, 1/B
13038 Tricerro (VC) | IT
T +39 0161 80 86 01 | F +39 0161 80 73 63
info.zst@zschimmer-schwarz.com
zetaeseti.it

► AMERICA

Zschimmer & Schwarz, Inc.

70 GA Highway 22 W
Milledgeville, GA 31061 | US
T +1 478 454 1942 | F +1 478 453 8854
info.zsus@zschimmer-schwarz.com
zschimmer-schwarz.com

Zschimmer & Schwarz

do Brasil Ltda.
Estrada Geral Morro do Paula 546
Distrito Industrial - Bairro São Borja
93032-530 São Leopoldo RS | BR
T +55 51 3566 1666 | F +55 51 3566 2003
zsb@zschimmer-schwarz.com.br
zschimmer-schwarz.com

Zschimmer & Schwarz

Argentina S.A.
Calle 7 N° 279
B1629MXA Parque Industrial Pilar/
Buenos Aires | AR
T +54 230 4529 050 | F +54 230 4529 060
zsa@zschimmer-schwarz.com.ar
zschimmer-schwarz.com

Zschimmer & Schwarz

México S.A. de C.V.
Carretera Estatal 431 Km. 2 + 200,
Calle 2 Lote 6
Parque Tecnológico Innovación Querétaro
CP 76246 El Marqués, Querétaro | MX
T +52 442 256 75 00 - 10
info@zschimmer-schwarz.com.mx
zschimmer-schwarz.com



DISCOVER MORE 