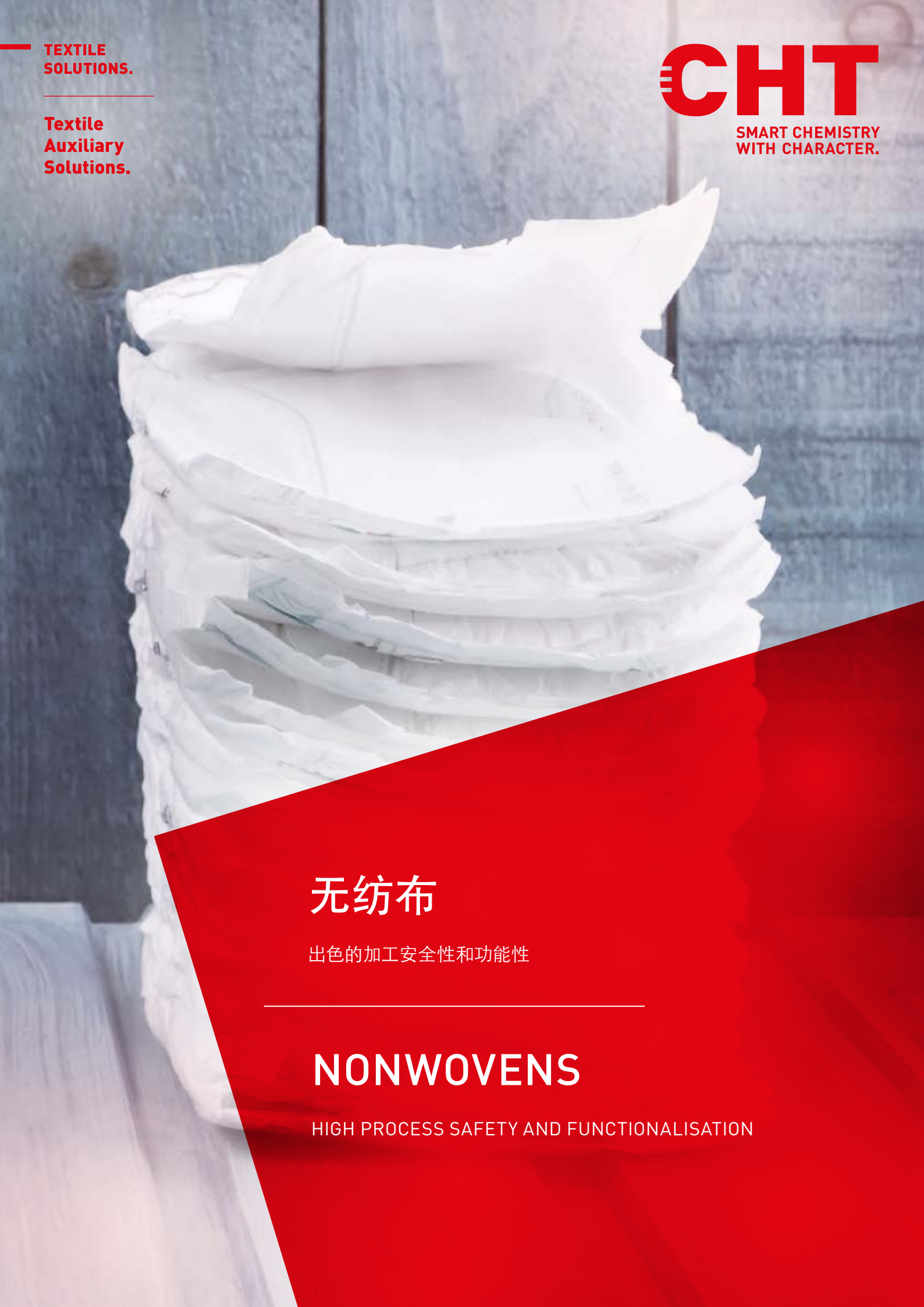
TEXTILE
SOLUTIONS.

Textile
Auxiliary
Solutions.

CHT
SMART CHEMISTRY
WITH CHARACTER.



无纺布

出色的加工安全性和功能性

NONWOVENS

HIGH PROCESS SAFETY AND FUNCTIONALISATION

内容 CONTENT

NO.
SATISFIED WITH LESS.

YES.
OUTSTANDING FUNCTIONALITY.

智能功能化

从1970年至1980年的先锋时代开始，超现代产业得到发展，如今，该产业每年提供超过一千五百万吨的无纺布，可用于多种应用领域。最重要的是卫生领域和擦拭布行业。其它重要的无纺布使用者包括建筑和农业以及过滤器，汽车和服装行业。除了外科手术用具外，医疗用品还包括老年人失禁产品。

所用纤维类型和所用生产工艺的巧妙结合使得无纺布的设计具有多种性能。但是在许多情况下需要通过智能化学系统进行额外的功能化，才能完全满足无纺布的技术要求。功能化可以通过无纺布后处理来完成，使用整理或涂覆工艺，或在生产过程中使用功能性纤维助剂来完成。凭借其化学专业产品组合，CHT集团是覆盖整个纺织加工产业链的少数供应商之一。

INTELLIGENT FUNCTIONALISATION

From the time of the pioneers in the seventies and eighties a highly modern industry has developed, and today it supplies more than 15 million tons of nonwovens for the most different application fields, e.g. in the hygienic sector, construction industry and the agricultural industry, as well as in the filter, automotive and apparel industries. The high-tech fibres are also used in medical areas, e.g. for surgical instruments.

Smart combination of applied fibre type and production technology allows creating nonwoven designs with multipurpose properties. But in many cases an additional functionalisation by intelligent chemical systems is necessary to fulfil specific requirements to the nonwoven. Such functionalisation can be achieved either by aftertreatment in finishing or coating processes or already during manufacturing of the nonwoven by applying functional fibre auxiliaries. With their broad portfolio of specialty chemicals, the CHT Group is one of the very few suppliers that covers the complete chain of textile processes – with decades of experience!

纤维助剂

多元化应用中的多能性

FIBRE AUXILIARIES

MULTITALENT IN VERSATILE APPLICATIONS

纤维助剂 I FIBRE AUXILIARIES

纤维助剂

纤维助剂是纤维和长丝生产和后续加工中必不可少的加工助剂。它们包括：

- 初级纺丝助剂
- 二次纺丝润滑剂
- 针刺无纺布润滑剂
- 抗静电剂

纤维助剂的首要任务是调整各个工艺步骤所需的纤维/金属和纤维/纤维之间的摩擦力以及避免静电荷。纤维助剂的职责远远超出了其所在的应用位置。通常，它们还满足下游加工过程的要求，包括无纺布的生产。
下方表格显示纤维助剂在无纺布生产中的应用位置以及对应的功能化选项。

FIBRE AUXILIARIES

Fibre auxiliaries are indispensable process aids for the production and downstream processing of fibres and filaments. Included are:

- Spin finishes for primary spinning
- Lubricants for secondary spinning
- Needlefelt lubricants
- Antistats

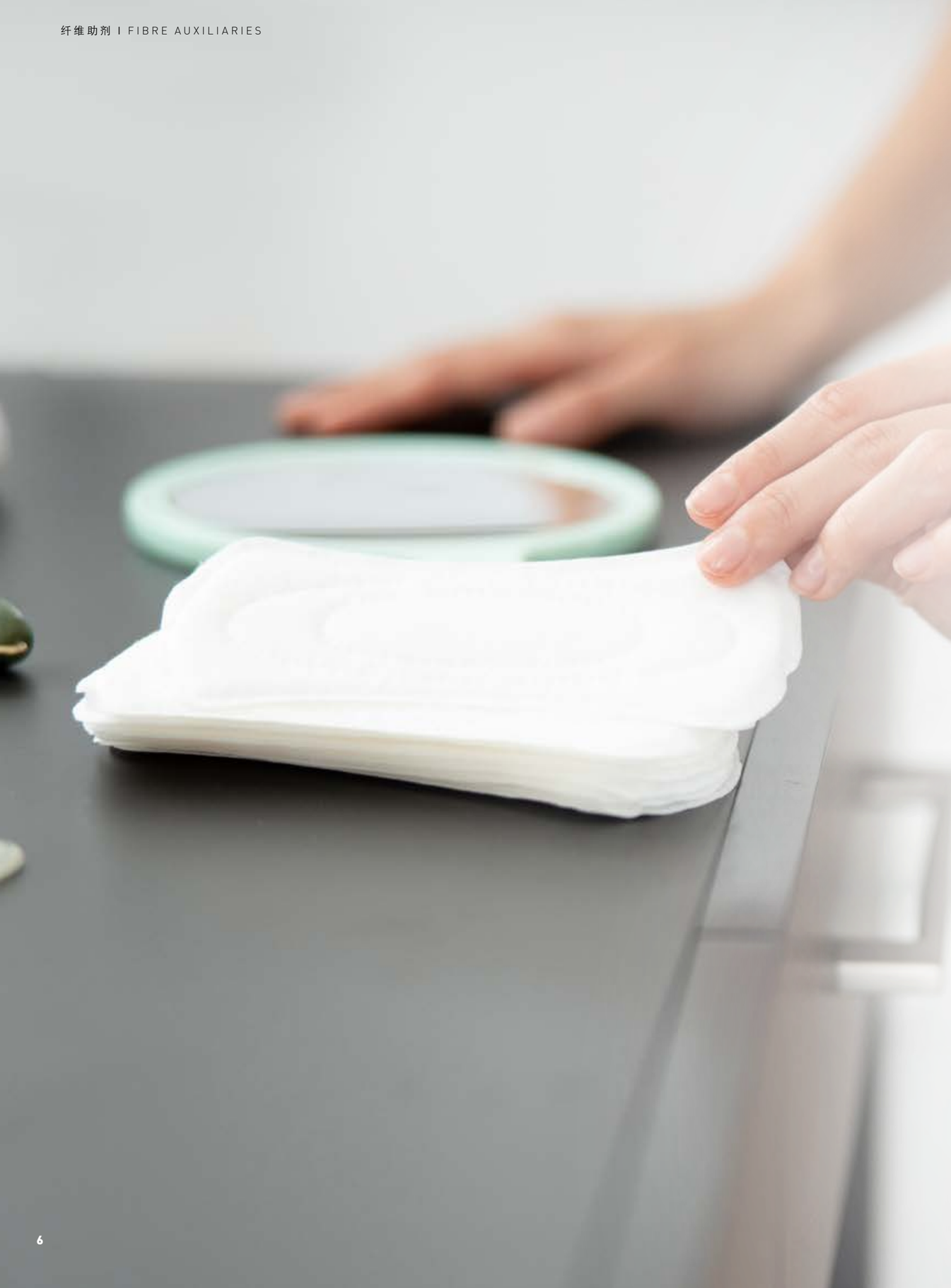
Main tasks of fibre auxiliaries are to adjust the fibre / metal and fibre / fibre friction to the needs of different process steps and to avoid static charging. But fibre auxiliaries are not only responsible for the fibre manufacturing itself. Above that they take responsibility for a trouble-free subsequent processing such as nonwoven production.

The scheme below shows the applications of the fibre auxiliaries in the production of nonwovens and consequently the options for functionalisation.

无纺布生产一览表

原料	网形成	网粘结
短纤维*	干法成网* ▸ 梳理法 ▸ 气流成网 湿法成网	化学法 ▸ 粘合法 ▸ 胶乳法 热法 ▸ 轧光法 ▸ 热风法 ▸ 声纳法 机械法* ▸ 针刺法 ▸ 水刺法 ▸ 缝编法
长丝*	熔纺* ▸ 纺粘法 ▸ 熔喷法	

* =纤维助剂应用位置



短纤维

用短纤维生产的无纺布中，在数量上占主导地位的聚合物是聚酯和聚丙烯。CHT 集团拥有用于这两种纤维类型的纺丝助剂，其不仅有效地作用于复杂的纤维生产过程，而且还赋予功能性。

用 PET（新料或再生料）或PP生产的短纤维用于以下领域：

- 短纤维纱线
- 无纺布（如卫材，土工布）
- 针刺无纺布（如汽）
- 沥青或混凝土的增强
- 填充纤维

STAPLE FIBRES

Polyester and polypropylene represent the predominating part by quantity of polymers in the fabrication of nonwovens out of staple fibres. For both fibre types the CHT Group has spin finishes which do not only efficiently serve the complex fibre manufacturing process, but which also provide functionality.

Staple fibres, either made from PET (virgin or recycled) or PP, can be found in e.g.:

- Staple fibre yarn
- Nonwovens (e.g. hygiene, geotextiles)
- Needle felts (e.g. automotive)
- Reinforcement of asphalt or concrete
- Fibre fill

DURON Sortiment 分类 I Range		
卫材聚丙烯纤维 I **POLYPROPYLENE FIBRES FOR HYGIENE**		
DURON OS 3232	标准型亲水纺丝助剂，其成分符合FDA和 EU10/2011 关于非直接食品接触的规定。	Standard hydrophilic finish composed of substances which correspond to the regulations for indirect food contact according to FDA and EU10/2011.
DURON OS 1547	永久亲水纺丝助剂，以极舒适柔软的手感著称。同样适用于“热风粘合”工艺。	Permanently hydrophilic spin finish combined with a highly pleasant soft handle. Also suitable for „Air Through Bonding" process.
DURON OS 2222	疏水纺丝助剂，其成分符合 FDA 和 EU10/2011 关于非直接食品接触的规定。赋予极舒适柔软的织物手感用于生产如尿布背层。	Hydrophobic spin finish composed of substances which correspond to the regulations for indirect food contact according to FDA and EU10/2011. The main application field of these nonwovens are diaper back sheets.
卫材涤纶纤维 I **POLYESTER FIBRES FOR HYGIENE**		
HANSA PP 3	亲水纺丝助剂用于婴儿尿布或成人尿片产品中的 ADL（导流层）无纺布	Hydrophilic spin finish for ADL nonwovens (Acquisition Distribution Layer) in baby diapers or incontinence articles.
DURON ES 3165	HANSA PP 3 的替代选项，其成分符合FDA和 EU10/2011 关于非直接食品接触的规定。	Alternative to HANSA PP 3 composed of substances which correspond to the regulations for indirect food contact according to FDA and EU10/2011.
针刺毡聚丙烯纤维 I **POLYPROPYLENE FIBRES FOR NEEDLEFELT**		
DURON OS 4022	通用型纺丝拉伸和最终整理剂用于PP短纤维生产，在纤维表面赋予出色的润湿性和分散性。	Universal spin draw- and final finish for PP-staple fibre production which provides an improved wetting and spreading on the fibre surface.
DURON OS 3226	纺丝拉伸和最终整理剂用于PP短纤维生产，特别为容易气体褪色的聚合物纤维研发。	Spin draw- and final finish for PP-staple fibre production for fibres from polymers which tend to gas fading.
DURON OS 3034	低雾产品用于生产极高卷曲的短纤维，该短纤维可以加工成体积极其蓬松的无纺布。	Low fogging product for the production of staple fibres with an extremely high crimp which can be manufactured to obtain particularly voluminous nonwovens.
DURON OS 3188	极低泡纺丝助剂，其成分符合 FDA 和 EU10/2011 关于非直接食品接触的规定。尤其适用于生产水刺无纺布。	Extreme low foaming spin finish composed of substances which correspond to the regulations for indirect food contact according to FDA and EU10/2011. Especially suited for spunlace processes.
针刺毡涤纶纤维 I **POLYESTER FIBRES FOR NEEDLEFELT**		
DURON ES 3226	通用型高浓度纺丝助剂	Universal concentrated spin finish.
DURON ES 3184	高浓度纺丝助剂用于丝鸣手感	Concentrated spin finish for crunchy textile touch.
DURON 14/DURON 1105 PE	用于高质量针刺毡，也可在生产水刺无纺布时使用	For high quality needlefelt products, also suitable for the production of spunlaced nonwoven.

针刺无纺布润滑剂

在针刺无纺布生产中，针刺处理前附加使用的加工助剂也被称为针刺无纺布润滑剂。针刺无纺布润滑剂具有良好的抗静电性，在无纺布生产中确保达到高速梳理速度。它减少针穿透

NEEDLEFELT LUBRICANTS

These are process auxiliaries which are additionally applied to suite the needle-punching process for needlefelt production. Needlefelt lubricants have an antistatic effect and allow for high carding speeds during the production of nonwovens. They reduce the needle penetration force and ensure longer needle standing times as well as nonwoven solidification with low breakage.

DURON Sortiment 分类 I Range		
润滑剂 I **LUBRICANT**		
DURON NV 7	根据 VDA278，它具有低雾化值，因此特别适用于汽车最终应用。	Particularly suitable for the final application in automotive, as it provides low fogging values according to the standard VDA 278.
DURON NV 12	极高的抗静电效果和出色的滑动性能，与未处理的材料相比，可将针刺力降低约 50%。	High antistatic performance and excellent lubricating properties, thus, lowering the needle forces by approximately 50 % compared to untreated material.
抗静电剂 I **ANTISTATS**		
DURON 3 P	普遍适用的高效阴离子抗静电剂。	Highly efficient antistatic agent for universal application.
DURON 1105 PE	很好的阴离子抗静电剂，其成分符合 EU10/2011 关于非直接食品接触的规定。	Very good antistatic agent composed of substances which correspond to the regulations for indirect food contact according to EU10 / 2011.
DURON K 3168	具有很好分散性和低泡性的阴离子抗静电剂，其成分符合FDA关于非直接食品接触的规定。	Low foaming antistatic agent with very good spreading properties and composed of substances which correspond to the regulations for indirect food contact according to FDA.
DURON K 4054	良好的阴离子抗静电剂，具有很高的热稳定性，且易生物降解。	Biodegradable, good anionic antistatic agent with high thermostability and excellent biodegradability.

纤维助剂 I FIBRE AUXILIARIES

纺粘无纺布纺丝助剂

与梳理无纺布相比，纺粘无纺布仅用一步法即可生产，因此在许多应用领域中已取代梳理无纺布。在纺粘无纺布生产中纺丝助剂主要具有功能作用。 最重要的作用是将疏水的聚丙烯纺粘无纺布亲水化。在相对简单的情况下，提高用作宠物垫的材料吸水性，或将土工布亲水化用于适当铺设在潮湿地下。

在卫生领域中永久亲水纺丝助剂要满足明显更高的要求。在这里，它们不单单作为简单的亲水助剂，而且还通过其特性来控制尿布结构中的水分管理。因此它们为最终产品的性能做出了决定性的贡献。

SPIN FINISHES FOR SPUNLAID

In contrast to carded nonwovens spunlaids are manufactured in one step. Therefore, they have replaced carded nonwovens in many application fields. In spunlaid production the spin finish has primarily a functionalising purpose. The most important application is to render the hydrophobic surface of polypropylene spunbond to hydrophilic. In comparably simple cases it is about the increase of the liquid absorption capacity of materials used as underblankets for pets or geotextiles, which need to be hydrophilic for a proper laying on humid undergrounds.

Permanently hydrophilic spin finishes as applied in the hygienic field have to fulfil much higher requests. In this field they do not function only as simple hydrophilic agents, but with their properties they control the moisture management within the diaper structure. By that they decisively contribute to the performance of the final article.

DURON Sortiment 分类 | Range

卫材亲水 | HYGIENE HYDROPHILIC		
DURON OF 4012	永久亲水纺丝助剂	Permanently hydrophilic spin finish.
DURON SL 4069	永久亲水纺丝助剂，具有极低的反渗性能。其成分符合 FDA 和 EU10/2011 关于非直接食品接触的规定。	Permanently hydrophilic spin finish with a very low wet back. Composed of substances which correspond to the regulations for indirect food contact according to FDA and EU10/2011.
DURON SL 2316	永久亲水纺丝助剂，具有出色的亲水耐久性。其成分符合 FDA 关于非直接食品接触的规定。	Permanently hydrophilic spin finish with an excellent durability of hydrophilic properties. Composed of substances which correspond to the regulations for indirect food contact according to FDA.
DURON OF 1547	永久亲水纺丝助剂，赋予极其舒适的柔软手感。	Permanently hydrophilic spin finish combined with a highly pleasant soft handle.
卫材疏水 | HYGIENE HYDROPHOBIC		
DURON SL 2222	不含硅疏水纺丝助剂，其成分符合 FDA 和 EU10/2011 关于非直接食品接触的规定。赋予极舒适柔软的织物手感用于生产如尿布背层。	Silicone free hydrophobic softener composed of substances which correspond to the regulations for indirect food contact according to FDA and EU10/2011.
卫材植物组 | HYGIENE BOTANICAL PACKAGE		
DURON K 4076 BOT	护理添加剂（乳酸，芦荟，棉籽油和洋甘菊油）和选定的纺丝助剂相结合，应用在纺粘无纺布上。	Contains a variety of botanicals such as lactic acid, aloe vera, cotton seed oil and chamomile oil which can be applied in combination with selected spin finishes onto the spunbond.
DURON K 4091 BOT	护理添加剂（橄榄油，维他命E-醋酸酯，芦荟和洋甘菊油）和选定的纺丝助剂相结合，应用在纺粘无纺布上。	Contains a variety of botanicals such as olive oil, vitamin-E-acetate, aloe vera and chamomile oil which can be applied in combination with selected spin finishes onto the spunbond.
非卫材亲水 | NON HYGIENE HYDROPHILIC		
DURON SL 4084	快速润湿的亲水助剂，其成分符合 FDA 和 EU10/2011 关于非直接食品接触的规定。	Hydrophilic product with improved rapid wetting properties composed of substances which correspond to the regulations for indirect food contact according to FDA and EU10/2011.
非卫材疏水 | NON HYGIENE HYDROPHOBIC		
DURON SL 2206	不含硅疏水助剂，赋予舒适柔软的织物手感。	Hydrophobic softener, silicone free.
DURON SL 3204	硅基疏水助剂，赋予显著的柔软织物手感。	Silicone based hydrophobic softener.
DURON SL 3214	硅基疏水助剂，赋予显著的柔软织物手感和吸尘性能。	Silicone based hydrophobic softener with dust catching properties (e.g. wipes).
非卫材抗静电剂 | NON HYGIENE ANTISTATS		
DURON 3 P	普遍适用的高效阴离子抗静电剂。	Highly efficient antistatic agent for universal application.

整理和涂层

FINISHING AND COATING

整理和涂层
通过整理和涂层实现功能化

CHT 纺织解决方案提供全面的方法赋予非织造布特殊、可持续和增值的附加功能。通过特定的功能性整理或涂层，为非织造布带来量身定制的创新解决方案。应用范围广泛多样，从卫生用品到过滤器，再到技术领域使用的非织造布。

FINISHING AND COATING
FUNCTIONALISATION BY FINISHING AND COATING

CHT Textile Solutions offers comprehensive approaches to give nonwovens specialised, sustainable and value-adding functions. Tailor-made, innovative solutions for nonwovens can be produced with targeted functional finishes or coatings. The diverse range of applications extends from hygiene articles and filters to nonwovens used in technical areas.

整理助剂 I FINISHING

整理助剂

FINISHING

整理助剂

对于化学粘合的非织造布，通过粘合剂并不总是可以实现所有所需的性能。当要实现附加功能时，对机械粘合的无纺布进行后处理是必不可少的。通过功能性整理如湿度管理、清新整理、防水或阻燃等，可实现多样化、定制化的效果。此外，还可以满足各种标准和要求，例如拒水性或抗静电性。可以在单独的加工中使用以下工艺技术整理非织造布：

- 浸轧法（泡沫浸轧）
- 浸渍法
- 喷涂法（非接触式）

CHT 集团为所有不同的工艺方法提供产品，确保满足工艺安全性的最高要求。

AUXILIARIES FOR FINISHING

Impossible realizing all the desired properties in chemically bonded nonwovens via the binder liquor. Post-treatment of mechanically bonded nonwovens becomes unavoidable whenever additional functions are to be achieved.

Functional finishes such as moisture management, fresh finish, hydrophobic treatment or flame retardance can be used to achieve a wide range of customised effects. In addition, various standards, and requirements for e.g., water repellence or antistatic behaviour can be met.

For the finishing of nonwovens, the following process technologies are used in a separate process:

- Padding application (foam padders)
- Kiss roll process
- Spray process (contactless)

The CHT Group offers products for all different processes, which ensure the highest requirements for process reliability.

整理分类 I Products for finishing		
APYROL	阻燃剂	Flame retardant auxiliaries
ARRISTAN	聚合物整理产品用于改善手感，亲水化产品	Polymeric finishing agents for handle modifiying, hydrophilising agents
AVISTAT	抗静电剂用于减少电荷	Antistatic agents to reduce the electrical charge
ECOPERL	不含氟碳的防水剂	FC-free hydrophobic finishing agents
iSys	清新整理产品	Products for fresh finish
NouWell	具有健康舒适效果的产品	Products with wellness effect
REAKNITT	高性能树脂用于防皱整理	Reactants resins to reduce crease tendency
REAKNITT CAT	高性能树脂催化剂	Catalysts for reactant resins
TUBIGUARD®	氟碳整理剂，具有出色的防水和防油性	Fluorocarbons for high water and oil repellence
TUBINGAL	手感柔软剂，手感改良剂	Products for softening, handle modifying

涂层助剂

COATING

涂层助剂

涂层是一种非织造布的整理技术，可提升基布在光学、触觉或技术方面的价值。

使用不同的方法施加涂层：

- 刮刀涂层
- 筛网涂层
- 浸渍
- 间接涂层
- 发泡涂层

有针对性的、通常是量身定制的涂层赋予非织造布所需的特性，以满足行业所要求的通用标准和规范。

水基粘合剂作为糊状或泡沫粘合剂用于层压。各个领域的复合材料就此产生。用作加工助剂的添加剂可确保生产过程的顺利进行，例如在涂层时确保所需的粘度、良好的润湿性或稳定的泡沫质量。

氟碳化合物或阻燃剂等功能性添加剂赋予无纺布特殊的附加功能。

AUXILIARIES FOR COATING

Coating is a finishing technology for nonwovens to achieve an optical, haptic, or technical upgrade of the substrate.

Coatings are applied by different methods:

- Knife coating
- Screen coating
- Lick roll application
- Reverse coating
- Foam applications

Focused, and often customized, coatings give the nonwoven the desired properties to achieve industrial standards and specifications.

Paste or foam coatings can also be applied as water-based adhesives for lamination. This results in composites that are used in a variety of applications.

Additives used as processing agents ensure a trouble-free production process, for example by maintaining the desired viscosity, good wetting or stable foam quality during coating.

Functional additives such as fluorocarbons or flame retardants provide the nonwoven with special additional benefits.

整理分类 I Products for coating		
ADHERO	压敏粘合剂	Pressure sensitive adhesives (PSA)
APYROL	阻燃剂	Flame retardant auxiliaries
LAMETHAN	粘合剂用于层压或粘合	Adhesives for lamination or bonding
TUBICOAT	加工助剂例如发泡剂，增稠剂，润湿剂等	Processing agents e.g. foamer, thickeners, wetting agents...
TUBICOAT	功能性涂层化合物	Coating compounds for functionalisation
TUBICOAT FIX	交联剂，效果持久	Cross-linking agents for a long-lasting effect
TUBIGUARD®	氟碳整理剂，具有出色的防水和防油性	Fluorocarbons for high water and oil repellence

测试方法概述 | OVERVIEW OF METHODS

CHT 集团在其应用技术实验室中拥有大量测试方法来测定纤维和无纺布的特性。下方概述了一些最重要的测试方法。

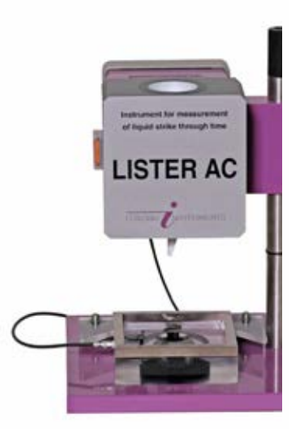
测定抗静电性能的方法
- 表面电阻和体积电阻 (DIN 54345)
- 防护服的静电特性 (DIN EN 1149)
- 梳理时电场强度的测定

评估纤维和非织造材料湿度管理的方法
- 下沉时间 [NWSP 10.1]
- 吸收容量 [NWSP 10.1]
- 毛细作用 [NWSP 10.1]
- 单次液体穿透 [NWSP 70.3]
- 多次液体穿透 [NWSP 70.3]
- 蒸发测试
- 滑漏 [NWSP 80.9]
- 反渗 [NWSP 80.10]
- 孔板测试
- 表面张力和动态接触角测定 [Fibro Dat 1100]
- 洗手盆测试

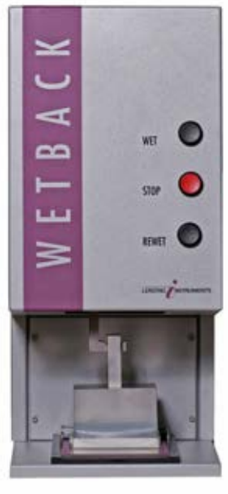
The CHT Group offers a wide range of measuring methods for determining fibre and nonwoven properties in its application technology laboratories. The following chapter provides an overview of the most important methods.

Methods to determine the antistatic behavior
- Electric surface and forwarded resistivity (DIN 54345)
- Electrostatic properties of protective clothing (DIN EN 1149)
- Measurement of electric field strength during Carding

Methods for determining the moisture management of fibre and nonwoven materials
- Liquid Absorbency (Sinking Time) [NWSP 10.1]
- Liquid Absorptive Capacity (LAC) [NWSP 10.1]
- Liquid Wicking Rate (Capillarity) [NWSP 10.1]
- Single Liquid Strike-Through [NWSP 70.3]
- Multiple Liquid Strike-Through [NWSP 70.7]
- Evaporation test (drying speed)
- Run-Off [NWSP 80.9]
- Wetback [NWSP 80.10]
- Ten Hole Test
- Surface tension and dynamic contact angle measurement [Fibro Dat 1100]
- Wash basin test



用于自动
自动测量无纺布覆盖物的液体穿透时间
的非织造布覆盖物的液体穿透时间。
根据EDANA / INDA-标准NWSP 70.3和
NWSP 70.7
和NWSP 70.7标准。
LISTER AC)



测定
非织造布的再湿性能
覆盖物的再湿性，根据
EDANA / INDA标准NWSP
80.10. (Lenzing Instruments
WETBACK)

根据 DIN54278-1 测定上油率 (索氏萃取法)

用快速油剂萃取装置测定上油率 (EDANA NWSP 353.0)

用NMR测定上油率 (牛津MQC+台式分析仪)

汽车用非金属材料的热解吸分析表征 (VDA 278)

测定纤维和长丝摩擦性的方法
- 丝/丝摩擦 (ASTM D3412-01) - 霍尼希曼仪器
- 丝/固体摩擦 (ASTM D3108-0)- 霍尼希曼仪器
- 短纤维的动态摩擦测定 - 转环装置

测定起泡性的方法
- 根据“欧洲药典 1997, 1714”进行起泡测试
- 乳液的起泡性 - 仪器 SMS 350

色牢度测试
- 耐氮氧化物色牢度 (DIN EN ISO 105-G01)
- 测定白度

测定拉伸强度的方法
- 使用条样法测定最大受力和最大受力时的伸长率 (DIN EN ISO 13934-1)
- 用抓样强力试验法测定织物的最大拉伸力 (DIN EN ISO 13934-2)

测定撕裂强度的方法
- 冲击摆锤法测定撕破力 (DIN EN ISO 13937-1)
- 裤型试样撕破力的测定（简单撕裂强度测试） (DIN EN ISO 13937-2)

Determination of oil-pick-up according to DIN 54278-1 (Soxhlet extraction)

Determination of oil-pick-up with a Rapid Oil Extraction Apparatus (EDANA NWSP 353.0)

Determination of oil-pick-up by NMR (Oxford MQC+ bench-top analyzer)

Thermal desorption analysis for characterisation of non-metallic automotive materials (VDA 278)

Methods to determine the friction behaviour of fibres and filaments
- Yarn to yarn friction (ASTM D3412-01) – Honigmann apparatus
- Yarn to solid friction (ASTM D3108-0) – Honigmann apparatus
- Dynamic friction measurement of staple fibres – Rotorring apparatus

Methods to determine the foaming behaviour
- Foam test according to European Pharmacopeia 1997, pp 1714
- Foaming behaviour of emulsions – instrument SMS 350

Colour fastness tests
- Colour fastness to nitrogen oxides (DIN EN ISO 105-G01)
- Determination of degree of whiteness

Methods for determining of tensile strength
- Determination of maximum tensile force and elongation at maxiumum force using the strip tensile test (DIN EN ISO 13934-1)
- Determination of maximum force using the grab test (DIN EIN ISO 13934-2)

Methods for determining the tear properties
- Determination of tear force using the ballistic pendulum method (DIN EN ISO 13937-1)
- Determination of tear force of trouser-shaped test specimen (single tear method) (DIN EN ISO 13937-2)

测试方法概述 | OVERVIEW OF METHODS

测定阻燃性能
- 测定汽车内饰材料燃烧性能 (ISO 3795 / FMVSS 302)
- 航空航天；对非金属材料进行燃烧性分级的试验方法 (FAR 25853)
- 建筑材料和组件的防火性能 (DIN 4102-1)
- 进一步的特殊阻燃测试

测定耐磨性（马丁代尔法）
- 试样损坏的测定(DIN EN ISO 12947-2)
- 质量损耗的测定(DIN EN ISO 12947-3)
- 外观变化的测定 (DIN EN ISO 12947-4)

机械测试
- 抗复合弯曲剪切和磨损的测定 (DIN EN ISO 5981)
- 涂层织物的抗皱性 (Bally 测试) (DIN EN ISO 32100)
- 耐磨性测定，泰伯磨损检测仪 (DIN EN ISO 5470-1)

测定防水防油性能
- 喷雾测试 (DIN EN ISO 4920 / AATCC 22)
- 防水性测试 (ISO 23232 / AATCC 193)
- 防油性测试 (DIN EN ISO 14419 / AATCC 118)

透气性
- 测定织物的透气性 (DIN EN ISO 9237)

耐水压
- 耐水渗透性的测定 - 静水压力测试 (ISO 811 / DIN EN 20811)

透气性
- 使用烧杯法 (醋酸钾法, ISO 15496) 测定水蒸气通过阻力

Determination of flame retardant properties
- Determination of the burning behaviour of materials used in automotive interiors (ISO 3795/FMVSS 302)
- Aerospace; test method for the classification of the fire behaviour of non-metallic materials (FAR 25853)
- Fire behaviour of building materials and components (DIN 4102-1)
- other special flame retardancy tests

Determination of abrasion resistance (Martindale method)
- Determination of specimen breakdown (DIN EN ISO 12947-2)
- Determination of mass loss (DIN EN ISO 12947-3)
- Determination of appearance change (DIN EN ISO 12947-4)

Mechanical tests
- Determination of resistance to combined crumpling and rubbing (DIN EN ISO 5981)
- Folding and buckling resistance of coated fabrics (Bally test) (DIN EN ISO 32100)
- Determination of abrasion resistance, Taber abrasion tester (DIN EN ISO 5470-1)

Determination of water and oil repellent properties
- Spray method (DIN EN ISO 4920/AATCC 22)
- Water repellency test (ISO 23232/AATCC 193)
- Oil repellency test (DIN EN ISO 14419/AATCC 118)

Air permeability
- Determination of air permeability of textile fabrics (DIN EN ISO 9237)

Resistance to water pressure
- Determination of resistance to water penetration – Hydrostatic pressure test (ISO 811/DIN EN 20811)

Breathability
- Determination of water vapor transmission resistance by cup method (potassium acetate method, ISO 15496)

测试方法概述 | OVERVIEW OF METHODS

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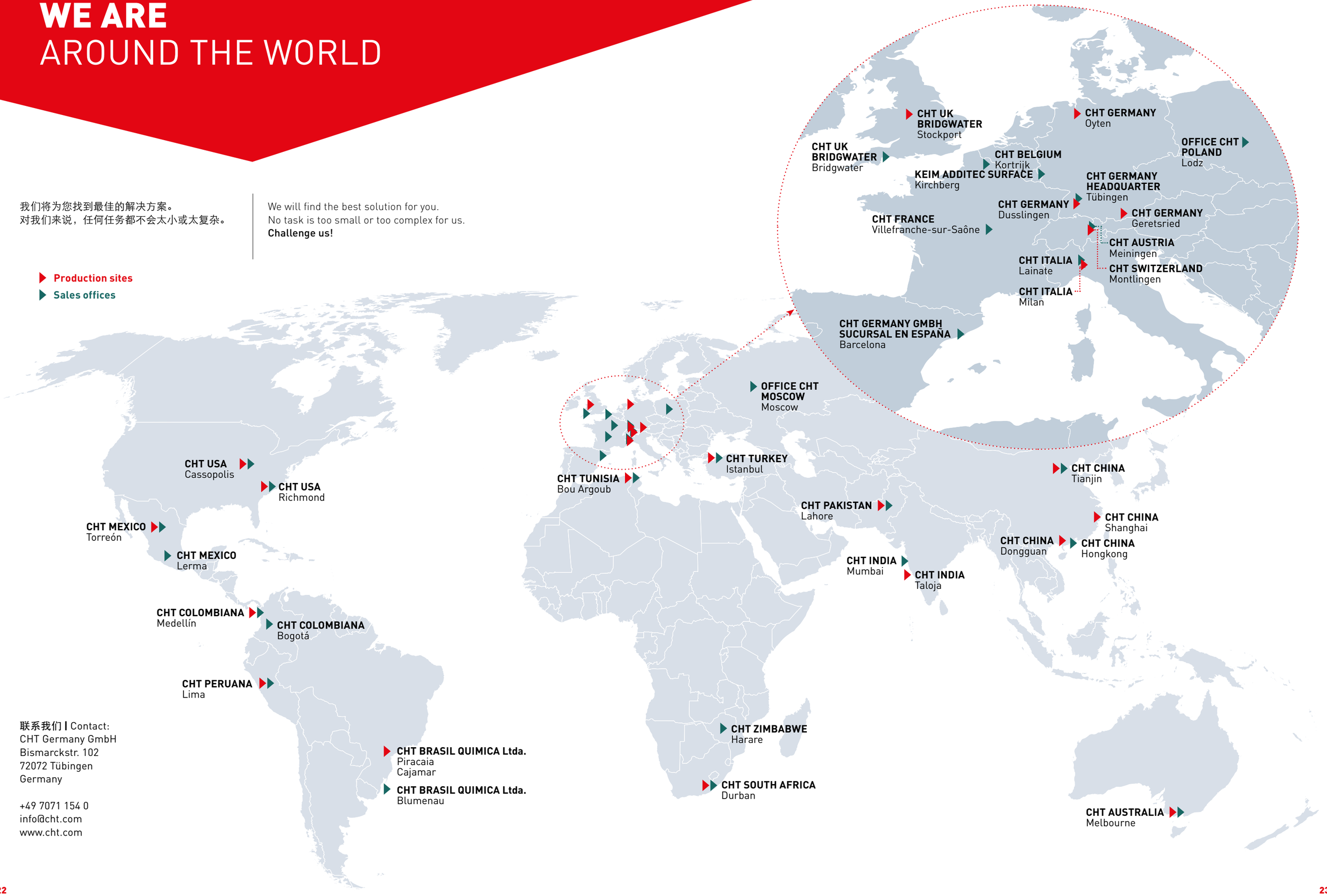
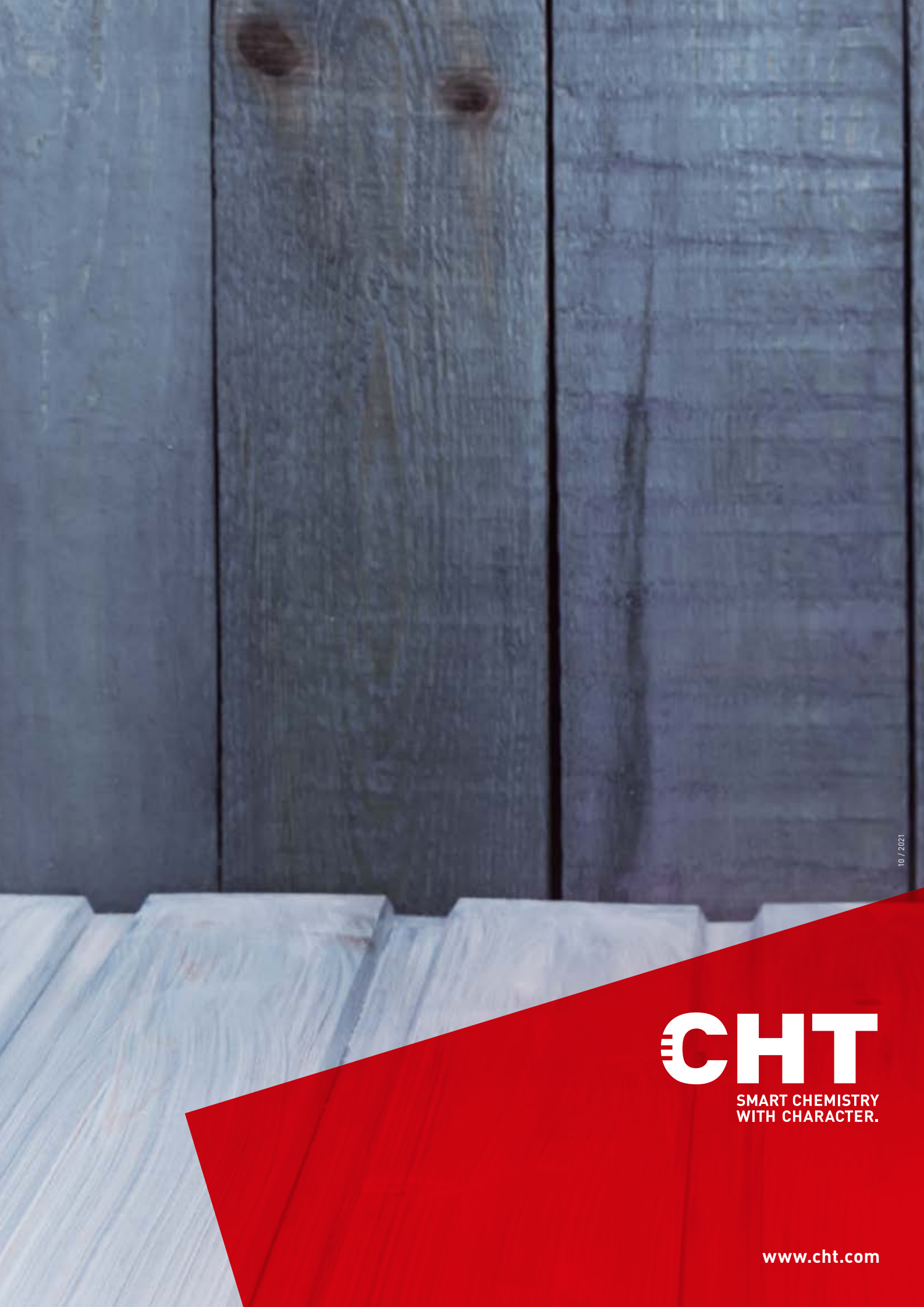


联系我们 | Contact:
CHT Germany GmbH
Bismarckstr. 102
72072 Tübingen
Germany

+49 7071 154 0
info@cht.com
www.cht.com



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