



安格爾橡塑科技  
**Engelhardt GmbH**  
Rubber & Plastic Technology



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安格爾橡塑科技  
**Engelhardt GmbH**  
Rubber & Plastic Technology

**RUBBER, SILICONE, PLASTIC  
& HARDWARE PRODUCTS  
MANUFACTURING**

橡胶、硅胶、塑胶 & 五金产品制造





安格爾橡塑科技  
Engelhardt GmbH  
Rubber & Plastic Technology

环保智造, 安心优品!

国际化品质, 世界级供应商,  
安格尔, 您的安心首选!

Environmental Protection Intelligent Manufacturing,  
Reassuring Quality Products!  
International Quality, World-class Supplier,  
Engelhardt, Your First Reassuring Choice!



## CONTENTS 目录

公司简介 / Company Profile	2-3
橡胶实力 / Rubber Capability	4-7
塑胶实力 / Plastic Capability	8-10
五金实力 / Hardware Capability	11
模具实力 / Mold Capability	12-13
检测实力 / Testing Capability	14-15
建材零件 / Building Material Parts	16-17
卫浴配件 / Sanitaryware Accessories	18-19
汽摩配件 / Automobile Parts	20
电力产品 / Electrical Products	21
机械零件 / Mechanical Parts	21
电子配件 / Electronic Accessories	22
家居家电 / Home Appliance & Household Products	23
塑料包装 / Plastic Packaging	24-25
品质保证 / Quality Assurance	26
技术支持 / Technical Support	27
材料指南 / Material Guide	28-29





# 关于我们 ABOUT US



广东安格爾橡膠科技有限公司,前身是成立于2009年的“中山市美图塑料工业有限公司”橡胶&硅胶产品事业部,地处粤港澳大湾区几何中心地带,毗邻香港、深圳、广州,交通便利。现已拥有业内领先的独立国际标准化厂区,占地80余亩,建筑面积达26,000余平方米。

安格爾始终致力于橡胶、硅胶、液态硅胶、塑胶产品和精密五金零件的开发、生产以及成品组装,积极探寻市场需求,不断拓展产品种类,针对不同行业不同客户的需求进行定制、设计、生产,为建筑、卫浴、机械、汽车、电子和家电家居等行业提供配套解决方案和服务,已成功与众多知名品牌建立了稳定且紧密的合作伙伴关系。

依托雄厚资金优势及专业管理研发团队,安格爾配备了国内领先的全自动炼胶上辅机系统,小料电脑自动配料系统,引入两条先进的混炼胶生产线,与国内高校产学研结合,实现了从配方自主开发到胶料的完全自主稳定生产,同时配备各类大型生产设备100余台,规格齐全,技术领先,生产效率成倍增加,年生产能力达到4,000吨以上。

质量是企业生命,安格爾坚持“建造精品,智善民生”为己任,拥有全套先进检测设施的原材料化学分析与物性实验室,以及严谨的检测规程,有效地确保各类产品的品质管理能力。安格爾先后取得ISO9001和IATF16949体系认证,公司产品也接连获得IAPMO、ASTM、UL、WARS、KTW、NSF、LFGB和FDA等机构认可,为进军国际市场提供了坚实的保障。

安格爾始终坚持以人为本的经营管理理念,公司现拥有在职员工300余名,成功获得各类技术专利十余项。多年来,公司凭借快速响应的专业服务、不断创新的技术实力、扁平化的高效运作机制,赢得了国内外客户的一致好评。

继往开来,安格爾将更加关注人的因素,打造一支协同度更高的专业化创新服务团队,以“为客户创造价值”为服务宗旨,以“企业与员工共发展”为核心思想,实现企业、客户、员工的多赢局面,创造更高的企业与社会价值。



Guangdong Engelhardt Rubber & Plastic Technology Co., Ltd. was formerly known as Rubber & Silicone Product Business Department of Zhongshan Meitu Plastic Ind., Co., Ltd. established in 2009, located in the geometric center of Guangdong-Hong Kong-Macao Greater Bay Area, is adjacent to Hongkong, ShenZhen, Guangzhou, the transportation is very convenient. Engelhardt now has an independent international standard factory, covering an area of 53,000 sq m and a building area of 26,000 sq m.

Engelhardt devotes to the development and production and finished product assembly of rubber, silicone, liquid silicone, plastic products and precision hardware parts, actively explore the market demand, continue to expand product categories, customizes, designs and produces according to the needs of different industries and customers, provides supporting matched solution and service for architecture, sanitaryware, machinery, automobile, electronics, home appliance and household industries, and has established steady and closed cooperative relationship with many famous brands.

With strong financial advantages and professional management R & D team, Engelhardt equipped with the domestic leading full-automatic up-stream equipment system for rubber mixer and automatic weighing system for small chemicals, introduced two advanced mixing rubber production lines, research with domestic universities, achieved completely stable production from self-developed formula to rubber. At the same time, equipped with more than 100 large-scale production equipment, completed specifications and advanced technology, productivity efficiency has been multiplied increased and annual production capacity over 4,000 tons.

Quality is the life of an enterprise, Engelhardt insists on "Construct high-quality products and improve people's life intelligently" as its mission. Chemical analysis and physical properties lab for raw materials are with full sets of advanced testing facilities and rigorous inspecting procedures to ensure the quality management of diverse products effectively. Engerhardt passed ISO9001 and IATF16949 system certification successively, our products have also been approved by IAPMO, ASTM, UL, WARS, KTW, NSF, LFGB and FDA in succession, which provides a firm guarantee for entering the international market.

Engelhardt always sticks to the "people oriented" operation and management philosophy. It has more than 300 employees, and has obtained more than 10 technical patents successfully. Rely on our fast-responding professional service, constantly technical innovation strength and flattening efficient operation mechanism for years, we has won unanimous praise from domestic and foreign customers.

In the future, Engelhardt will pay more attention to human and establish a higher coordinated professional innovation service team. With the service tenet of "creating value for customers" and the core idea of "mutual development between enterprise and employees", Engelhardt will achieve multi-win situation of enterprise, customers and employees, and will create higher corporate and social values.





安格尔实力—橡胶  
**ENGELHARDT CAPABILITY**  
**-RUBBER**

## 小料电脑自动配料系统

Small Material Computer Automatic Batching System



## 全自动炼胶上辅机系统

Full-automatic Up-stream Equipment System For Rubber Mixer

### ◆自动加注油炭 Automatic Filling Oil & Charcoal

500KG太空包直接解包倒入储料斗内,对比手工作业25KG/包,大大提高了配料效率。

The 500KG space bag is directly unpacked and poured into the storage hopper, compared with 25KG/bag by manual operation, the batching efficiency is greatly improved.

### ◆自动称量 Automatic Weighing

称量精度可控制在0.3%以内

The weighing accuracy can be controlled within 0.3%.



### ◆中央电脑控制 Central Computer Control

配料完成根据预设指令自动下料至密炼机进行密炼,有效改善了因手工配料易出现料漏配、少配、多配、错配出现的品质异常

By automatically feeding the material to the mixer according to the preset instructions after batching, it can effectively improve the quality abnormalities caused by manual ingredient, such as material mismatch, less matching, more matching, and mismatching.

手工作业一小时约3手料,一天约70手料,而上辅机自动生产一小时约6-8手料,每天120~200手料,最大化满足客户需求,确保交期。

Compared with 3 batches materials per hour and 70 batches materials per day by manual ingredient, Full-automatic Up-stream Equipment System For Rubber Mixer automatically batches about 6-8 batches materials per hour and 120-200 batches materials per day, which can meet customer's needs at greatest extent and ensure the delivery date.



**有效防错:**在取完规定材料正确量后方可进入下一材料的称量,有效防止因人为因素错配、漏配材料及称量误差导致后工序不良的浪费;

**Effective Error Prevention:**The weighing of the next material just can be carried out after the correct weighing of the prescribed material has been taken out, which can effectively prevent the waste of the later process caused by mismatching, missing material and weighing error caused by manual operation.

**记录追踪:**对配料所有记录能存录于电脑以备查验,能自动生成日、周、月度报表;

**Records Tracking:** All records of batching can be recorded on the computer for inspection, daily, weekly and monthly reports can be automatically generated.

**产能提高:**每天可配160-240手小料的产能满足客户交期要求。

**Production Capacity Improved:** 160-240 batches small materials per day can be finished to meet customer delivery requirements.







安格尔实力—橡胶  
**ENGELHARDT CAPABILITY  
 -RUBBER**



▲  
**橡胶成型车间**  
 Rubber Molding Workshop

配备各类硫化机共40余台,主要为250T真空硫化机、300T橡胶注射机,年产各类橡胶杂件2000吨左右

Equipped with more than 40 sets of various vulcanizing machines, mainly including 250T vacuum vulcanizing machine and 300T rubber injection machine, with annual output of about 2,000 tons of various rubber parts.

**硅胶成型车间**  
 Silicone Molding Workshop

拥有各类硫化机20余台,主要为150T液态硅胶注射机、250T真空硫化机、300T固态硅胶注射机,年产各类硅胶制品1000吨左右;

Equipped with more than 20 sets of various vulcanizing machines, mainly including 150T liquid silicone injection machine, 250T vacuum vulcanizing machine, 1,000 tons of various silicone products.

▲  
**55L密炼机生产及冷却线**  
 55L Mixer Production and Cooling Line

两条生产线由55L密炼机、提升机、过滤机、16"开炼机、三辊压延机、冷却线、金属探测仪、切片机等一台组成,通过快速冷却使混炼胶各物性能得到很好的保障,有效避免因高温带来的物性损失,更好的确保产品稳定性。

The two production line is composed of 55L mixer, hoist, filter, 16" open mill, three roll calender, cooling line, metal detector and slicer, which well protect the physical properties of the compound through cooling rapidly and avoid the loss of physical properties caused by high temperature effectively, as to ensure the product stability better.





## 安格尔实力—塑胶 ENGELHARDT CAPABILITY -PLASTIC



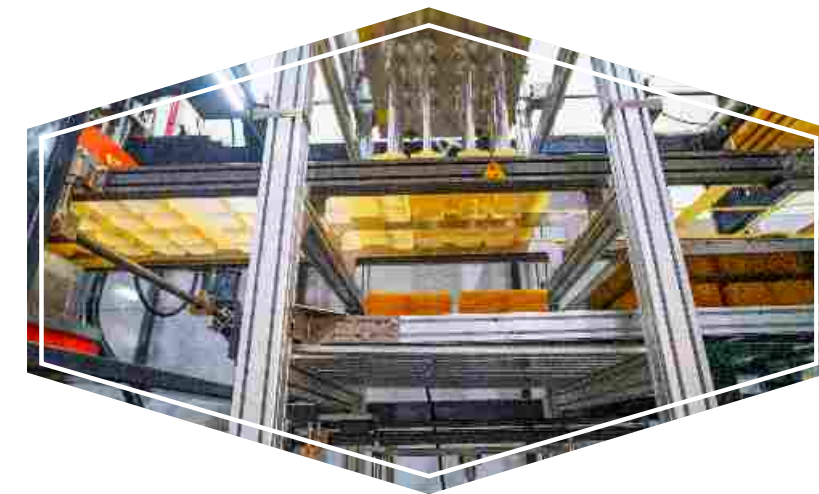
### 塑胶成型车间

#### Plastic Molding Workshop

拥有400台注塑机，最大的是2000吨注塑压力，70台模压成型机，每天各种塑料原料使用量超过100吨  
400 sets injection machines, the largest one with 2000 tons of injection power,  
70 sets compression machines, daily consumption of various plastic material is over 100 tons.



全自动超高速吸塑生产线  
Automatic High Speed Blister Production Line



### 吸塑车间

#### Blister Workshop

2000平方米宽敞国际化车间，拥有先进高速节能设备：五层共挤片材机、翻转模热成型机、四工位高速热成型机及杯盖成型机，年产能达到11000吨料，专业的技术生产团队确保产品品质。

With 2000 square meters spacious international workshop and advanced high-speed energy-saving equipment, such as: five-layer co-extruder, flip mold thermoforming machines, four-station high-speed thermoforming machine and cup cap forming machine, annual production capacity is over 11,000 tons, professional technical production team to ensure product quality.

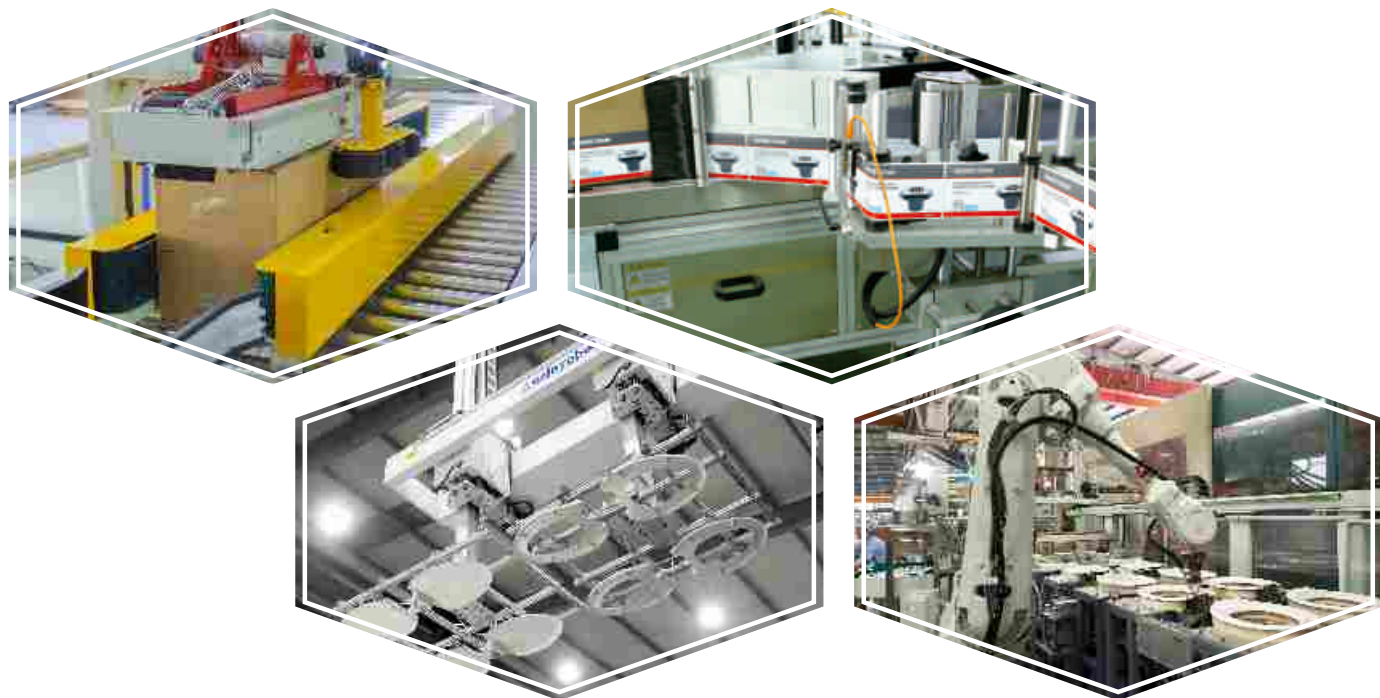




## 自动装配车间 Automatic Assembly Workshop

推行自动化装配生产线,自动封箱贴标包装线,并运用机械手大大提高了装配效率,可承接各类成品组装。

The implementation of automatic assembly line, automatic sealing and labeling packaging line, and the use of manipulators greatly improve the assembly efficiency and can undertake all kinds of finished product assembly.



## 安格尔实力—五金 ENGELHARDT CAPABILITY -HARDWARE

拥有高速滚轮送料机双曲轴自动五金冲压生产线,高精度冲压确保五金质量稳定。

With high-speed roller automatic feeding double crankshaft automatic hardware stamping production line, high-precision stamping ensures the stability of hardware quality.







安格尔实力—模具  
ENGELHARDT CAPABILITY  
-MOLD



45台高精度模具加工机器,所有模具自主设计并制造  
45 sets high-precision mold processing machines,  
all molds are independently designed and manufactured independently.







## 安格尔实力—检测 ENGELHARDT CAPABILITY -TESTING

检测中心拥有国际化的实验室管理体系, 规格齐全的各类高端检测设备以及专业的技术人员, 可进行符合行业标准的各类物理及化学性能项目的检测, 为客户提供强有力的品质保障

The testing Center implements international laboratory management system, equip with a full range of high-end testing equipment and professional technicians, which can carry out all kinds of physical and chemical performance testing in line with industry standards to ensure the quality.



门尼粘度仪 Mooney Viscometer



模拟汽车运输振动台  
Transportation Simulation Tester



多功能材料试验机  
Multifunctional Material Testing Machine



二次元测量仪  
Projector Measurement



无转子硫化仪  
Moving Die Rheometer



热老化试验箱  
Heat Aging Test Chamber



电热鼓风干燥箱  
Electric Blast Drying Oven



高温烤箱  
High Temperature Oven



石油产品运动粘度测定器  
Kinematic Viscosity Meter



恒温恒湿试验箱  
Humidity Chamber



盐雾腐蚀试验箱  
Salt-Spray Corrosion Tester



碳黑分析仪  
Carbon Black Analyzer



# BUILDING MATERIAL PARTS

建材零件



## 建材零件 BUILDING MATERIAL PARTS

提供满足极其苛刻的各种使用环境下的建筑工业橡胶塑胶配件

Provide rubber and plastic parts which can be used in the extremely harsh usage environments for the construction industry

代表产品：地漏、法兰、排水管、管道连接件、管道检修工具

Representative Products: Drain, Flange, Drain-pipe, Pipe Connection, Pipeline Maintenance Tool





# SANITARYWARE ACCESSORIES

卫浴配件



## 卫浴配件 SANITARYWARE ACCESSORIES

作为世界级卫浴合作伙伴,我们致力于提供全面、高质量的卫浴橡胶塑胶五金配件

As a world-class sanitaryware partner, we are committed to providing comprehensive and high-quality sanitaryware rubber, plastic and hardware accessories.

代表产品:封水片、发泡橡胶、气囊、各类弯头,三通及装饰盖

Representative Products: Sealing Gasket, Foam Rubber, Pneumatic Air Bag, Kinds Of Elbows, Tees And Decorative Covers





# AUTOMOBILE PARTS

## 汽摩配件



### 汽摩配件 AUTOMOBILE PARTS

按照ISO9001/IATF16949质量管理体系严格把控产品品质

Control the quality strictly according to ISO9001/IATF16949

代表产品: 减震器、缓冲器、阻燃零件、摩托车配件

Representative Products: Shock Absorber, Buffer, Flame Retardance Parts, Motorcycle Accessories

# ELECTRICAL PRODUCTS

## 电力产品



### 电力产品 ELECTRICAL PRODUCTS

代表产品: 电池防护套, 电力插拔头

Representative Products: Battery Protective Jacket, Power Plug

# MECHANICAL PARTS

## 机械零件



### 机械零件 MECHANICAL PARTS

代表产品: 防尘套、O型圈、密封件

Representative Products: Dirt-proof Cover, O-ring, Seals



# ELECTRONIC ACCESSORIES

电子配件



# HOME APPLIANCE & HOUSEHOLD PRODUCTS

家居家电



## 电子配件 ELECTRONIC ACCESSORIES

代表产品: 手柄、胶套、脚垫、按键

Representative Products: Handles, Rubber Sleeves, Rubber Mats, Buttons



## 家居用品 HOME APPLIANCE & HOUSEHOLD PRODUCTS

硅胶材质符合食品级FDA标准 Silicone material meets food grade FDA standards

代表产品: 洗衣机配件、咖啡机配件、硅胶冰托、厨房系列、婴儿用品、运动水壶

Representative Products: Washing Machine Accessories, Coffee Machine Accessories, Silicone Ice Tray, Kitchenware, Baby Care Products, Sports Bottle.





## PLASTIC PACKAGING

塑料包装



### 塑料包装 PLASTIC PACKAGING

符合FDA标准 Meets FDA standards

代表产品: 食品及工业品吸塑包装盒

Representative Products: Food And Industrial Products Blister Packaging Boxes



# QUALITY ASSURANCE

## 品质保证

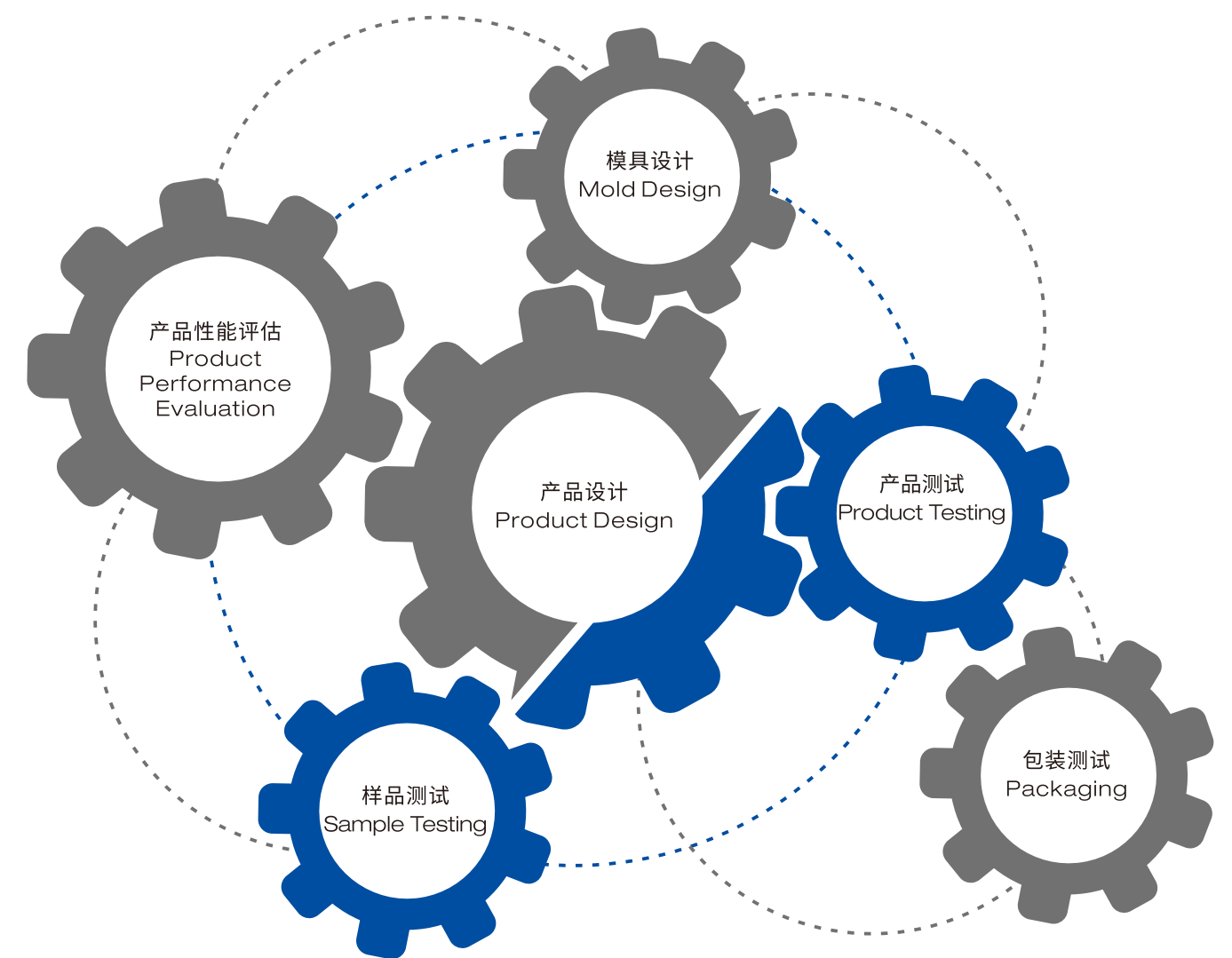
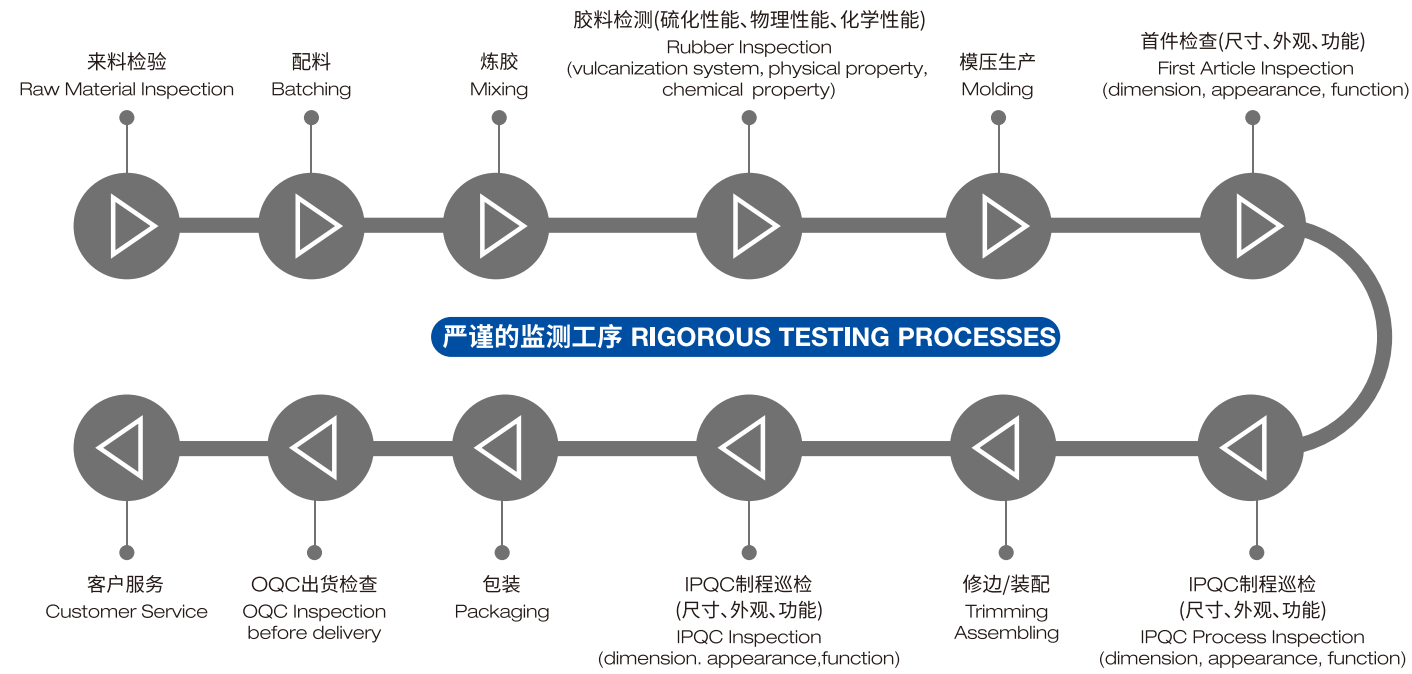


# TECHNICAL SUPPORT

## 技术支持

安格尔严格按照ISO9001和IATF16949质量管理体系把控品质, 公司产品也接连获得IAPMO、ASTM、UL、WARS、KTW、NSF、LFGB和FDA等机构认可, 每一生产流程都经过严格检测后方可流入下一工序, 为客户提供强有力的品质保障。

Engerhardt strictly controls the quality according to ISO9001 and IATF16949 quality management system. The products have been approved by IAPMO, ASTM, UL, WARS, KTW, NSF, LFGB and FDA. Each production process is strictly tested before flowing into the next process, providing customers with strong quality assurance.





# RAW MATERIAL SELECTION GUIDELINE

## 材料选择指南



◎优 Excellent    ○良 Good    □适 Suitable    △差 Poor    ✕劣 Unacceptable

原料名称 原料特性											
	天然橡胶-NR Natural Rubber	丁苯橡胶-SBR Styrene Butadiene Rubber	顺丁橡胶-BR Butadiene Rubber	丁腈橡胶-NBR Nitrile Rubber	乙丙橡胶-EPDM Ethylene Propylene Rubber	丁基橡胶-IIR Butyl Rubber	氯丁橡胶-CR Chloroprene Rubber	硅橡胶-Q Silicone Rubber	丙烯酸酯橡胶-ACM Polyacrylate Rubber	氟素橡胶-FKM Fluororubber Rubber	氟素硅橡胶-FVMQ Fluorosilicone Rubber
ASTM代码/ASTMD2000/SAE J200 TYPE CLASS	AA	AA	AA、BA	BF、BG、BK、CH	AA、BA、CA、DA	AA	BC、BE	FC、FE、GE	DF、DH	HK	FK
硬度范围/Hardness Range(Shore A)	25-90	30-90	30-90	25-95	25-95	25-75	20-95	18-80	40-90	60-90	60-80
耐候性/Weather Resistance	△	△	△	✕	◎	◎	○	◎	◎	◎	◎
耐臭氧/Ozone Resistance	✕	✕	✕	✕	◎	○	○	◎	○	◎	◎
耐热/Heat Resistance	✕	△	△	△	◎	○	○	◎	○	◎	◎
耐寒/Low Temperature Resistance	○	△	○	△	◎	○	○	◎	✕	○	◎
耐酸/Acid Resistance	□	□	□	○	◎	◎	○	◎	△	○	◎
耐碱/Alkali Resistance	□	△	□	○	◎	◎	○	○	✕	□	◎
耐矿物油/Resistance to mineral Oil	✕	✕	✕	○	✕	✕	○	✕	○	◎	◎
耐植物油/Resistance to Vegetable Oil	△	△	△	◎	◎	○	○	◎	◎	◎	◎
耐磨/Abrasion Resistance	◎	◎	◎	◎	○	△	○	✕	△	□	△
耐撕裂/Tear Resistance	◎	△	△	○	△	○	○	△	✕	△	△
机械强度/Strength Properties	◎	□	○	○	○	□	○	✕	△	□	✕
永久压缩变形/Compression set	◎	○	○	○	○	△	○	○	□	○	○
冲击/Impact Resilience	◎	◎	○	○	○	○	○	△	✕	△	△
气密性/Gas Barrier Properties	△	△	△	△	△	◎	○	✕	△	○	✕
耐燃性/Flame Resistance	✕	✕	✕	△	✕	△	○	△	✕	◎	◎
电绝缘性/Electrical Properties	○	△	△	✕	◎	◎	✕	◎	△	○	◎
色泽稳定性/Color Stability	○	○	○	□	◎	○	✕	◎	✕	△	○
粘著性/Tackiness	◎	△	△	○	△	△	○	○	○	○	◎
加工性能/Processability	◎	○	△	○	○	✕	△	◎	△	✕	○
耐水性/Water Resistance	◎	○	◎	○	◎	◎	○	○	✕	◎	◎
主要特点/Feature	回弹性好、绝缘性好、隔水性好、可塑性好 Good elasticity Good electrical properties Good water resistance Good plasticity	耐磨、耐热、耐老化 Good abrasion resistant Good heat resistance Good aging resistance	耐磨、耐水、抗疲劳性好 Good abrasion resistant Good water resistance Good fatigue resistance	耐油、耐液体燃料、气密性好 Good oil resistance Good liquid fuel resistant Good gas barrier properties	耐热、电绝缘性好、耐化学稳定性、耐臭氧 Good heat resistance Excellent electrical properties Good chemical resistance Good ozone Resistance	化学稳定性优异、气密性好、耐水性、吸震性好 Good chemical resistance Good gas barrier properties Good water resistance Good vibrate resistant	耐热、耐候、阻燃性好、粘性好 Good heat resistance Good weather resistance Good flame retardance Good tackiness.	耐高低温、耐老化、绝缘性好、色泽稳定 Good high/low temperature resistance Good aging resistance Good electrical properties Good color stability	在高温下耐燃料油、耐润滑油 Resistant to fuel oil and lubricating oil under high temperature	耐高温、耐油、耐化学品、阻燃性好 Good high temperature resistant Good oil resistance Good chemical resistance Good flame retardance	耐高低温、耐油、耐溶剂、耐气油 Good high/low temperature resistance Good oil resistance Good solvent resistance Good gas resistance
主要用途/Application	轮胎、工业制品、胶鞋、胶管、胶布 Tire, Industrial products, Rubber shoes, Rubber tube, Rubber belt	轮胎、工业制品、胶鞋、运动护具 Tire, Industrial products, Rubber shoes, Sports protective gear	轮胎、工业制品、胶鞋、弹球 Tire, Industrial products, Rubber shoes, Pinball, toy	O型圈、防水垫、防油密封件、工业制品、胶辊 O-ring, Water-proof gasket, Oil-seal, Industrial products, Rubber roller	汽车配件、电线电缆、建筑防水材料、工业制品 Auto parts, Electric wires and cables, Building waterproof materials, Industrial products	内胎、防水建材、电气制品、防震马达套、药瓶塞 Inner tube, Waterproof building materials, Electrical accessories, Shock proof motor sleeve, Medicine stopper	工业制品、胶粘剂、桥梁支座、耐热传输带 Industrial products, Rubber glue, Bearing block of bridge, Heat-resistant transmission band	O型圈、垫片、密封件、绝缘制品、奶嘴、汽车配件 O-ring, Gasket, Seal, Insulation products, Rubber nipple, Automation accessories	O型圈、垫片、密封件、发动机配件 Oring, Gasket, Seal, Generator, Engine accessories	O型圈、垫片、橡胶、配件、油封、橡胶密封件 O-ring, Gasket Rubberparts, Oil-seal, Rubbersear	O型圈、垫片、橡胶密封圈 O-ring, Gasket, Rubber seal
原料供应商/Suppliers	马来西亚 Malaysia 泰国 Thailand 中国 china	日本 Nippon Zeon, JSR 台湾 Taipol, Synthetic 韩国 Kosyn 中国 Shenhua	日本 JSR, Niplo 中国 GaoQiao	日本 JSR, Niplo 德国 Bayer 台湾 Nantex 中国 LanHua	美国 DSM, Du Pont 美国 Uniroyal 日本 JSR, Mitsui 德国 Bayer	美国 Exxon 日本 JSR 德国 Bayer	德国 Bayer 日本 Tosoh, Denka 美国 Du Pont	日本 Toshiba, Shin-Etsu 美国 Dow Corning 中国 Tanyu	日本 Daikin 美国 Hy Temp	日本 Daikin 美国 Du Pont, 3M	美国 Dow Corning