



AUTOMOTIVE
汽车应用



SOLUTIONS THAT MAKE
THE DIFFERENCE
带来改变的解决方案

OUR COMPANY

BENEFITS IN ALL SHAPES AND SIZES

我们的公司

致力为各行各业提供优质热塑性弹性体 (TPE) 产品

Thermoplastic Elastomers (TPEs) are the materials used to make progress. Compounds from KRAIBURG TPE will open up all sorts of new opportunities in product development and processing making production efficient for you as well.

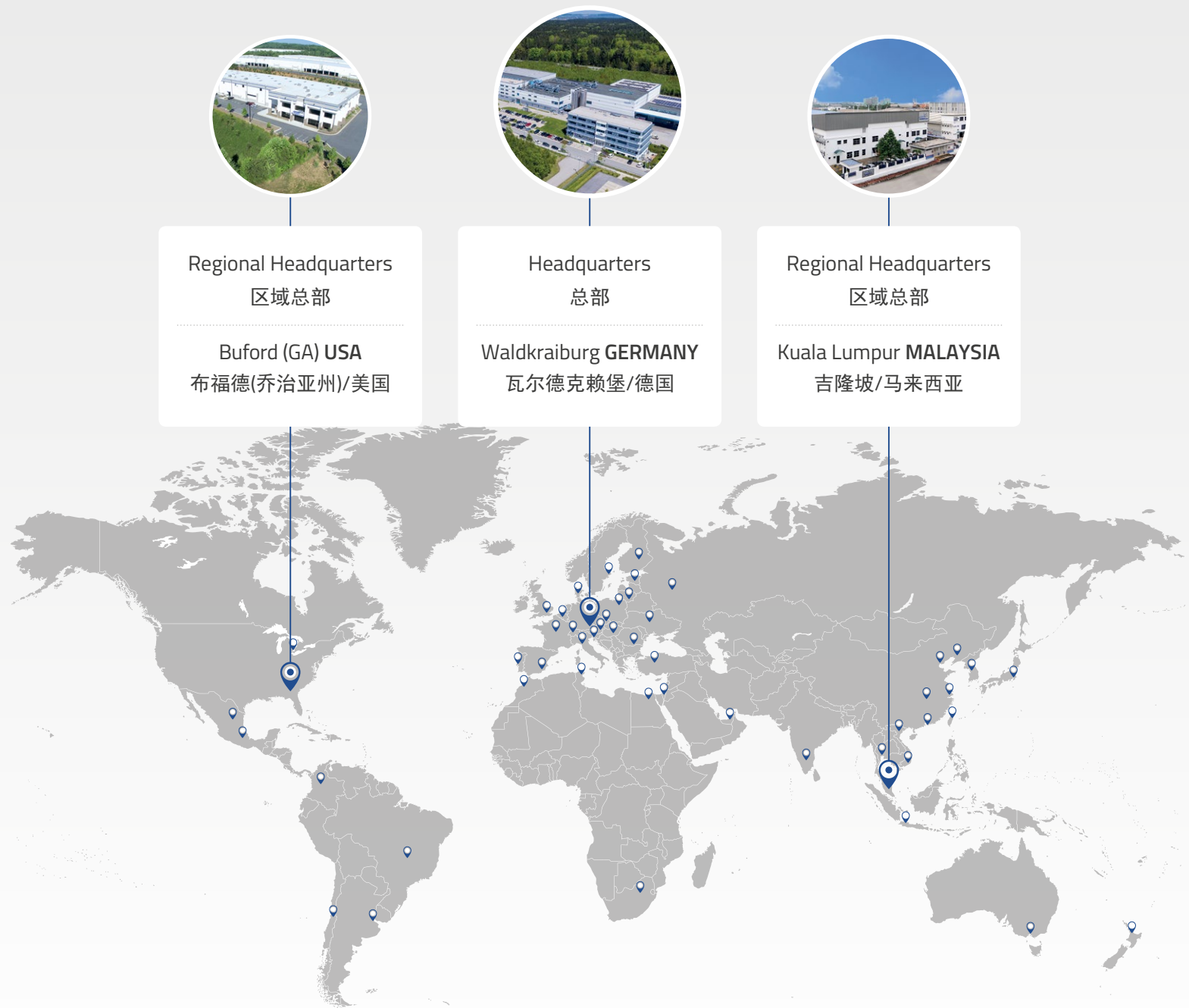
The solutions provided by KRAIBURG TPE will enable you to meet the highest requirements. Our company not only offers high-quality specially custom-engineered products, but also provides a unique level of comprehensive customer service.

The company's motto, "CUSTOM-ENGINEERED TPE AND MORE", is meant to be taken literally. Our goal is to identify the challenges you face with you and support you at all times anywhere in the world.

热塑性弹性体 (TPE) 是实现产品改进的重要材料。凯柏胶宝® 的化合物将为产品开发 and 加工开辟出全新的可能，让您的生产效率更加出色。

凯柏胶宝® 的TPE解决方案将竭力满足您的全部要求。我们公司不仅提供高品质的特殊定制产品，还用心提供全面而独家的客户服务。

公司一言一行，都在贯行“不只是定制 TPE”的座右铭。我们的目标是：与您携手，明确当前挑战，在世界各地随时随地为您提供支持。





THE MARKET

PIONEERING APPLICATIONS

市场

引领应用先锋

Some of our TPE compounds have now become indispensable in the automotive industry. The well-established portfolio series meet the highest requirements. In addition, the materials can be adjusted to meet customers' needs. For many years we have been collaborating with OEMs and suppliers on clearances for components and materials. This means: With KRAIBURG TPE, you are not just getting a supplier, you are getting a partner.

Our thermoplastic elastomers that have been specifically developed for the automotive industry are also used for alternative drive systems. Our lightweight materials enable you to set new standards for weight reduction and provide you with the right compounds for new mobility applications.

我们的许多 TPE 化合物已成为汽车部件生产必不可少的材料。品类丰富的产品系列能够轻松满足客户形形色色的需求。此外，我们还可以根据客户需求灵活调整提供定制化服务。多年来，我们始终做到与原始设备制造商和供应商保持密切的合作，从而解决零部件和材料供应之间可能存在的间隙。因此，选择凯柏胶宝®，您将拥有的不仅是一个供应商，更是一个共同发展的密切合作伙伴。

我们为汽车行业开发的热塑性弹性体也可应用于可替换驱动系统。轻质的TPE材料将刷新您对汽车轻量化的标准，并提供适合新型移动应用的理想化合物。

EXTERIOR

MATERIAL BENEFITS THAT ARE IMPRESSIVE

汽车外饰

卓越的材料优势

Quality and aesthetics are key properties for automotive exteriors. Our TPEs not only offer effective processing and low mold cavity pressure, but also provide excellent weather and UV resistance.

质量和美观是汽车外饰的两大关键特性。我们的 TPE 不仅支持高效加工和低模腔压力，还具有出色的耐候性和抗紫外线性能。

PROPERTIES

- Adhesion to EPDM
- Efficient processing in multi-component injection molding, excellent adhesion to PP, ASA, PC, PC/ABS, PMMA, etc.
- High surface quality
- Weather and UV resistant

产品特性

- 对 EPDM 的包胶性能
- 高效多组分注塑成型加工，对 PP, ASA, PC, PC/ABS 和 PMMA 等具有极佳的包胶性。
- 出色的表面触感
- 耐候性和抗紫外线性能

OEM APPROVALS INCLUDE | OEM 认证包括

- 03-10-104 (Renault)
- B62 0300 (PSA)
- DBL 5562, DBL 5422 (Daimler)
- GMW 15702, GMW 16233 (GM)
- GS 93042 (BMW)
- MS-DC-242 (FCA)
- STJLR.51.5306 (JLR)
- TM-1010 (Tesla)
- VW 50123, TL 52622 (VW)
- WSS-M2D505, WSS-M2D517 (Ford)



APPLICATIONS

应用

- | | |
|---|--|
| <ul style="list-style-type: none">▪ Antenna gaskets▪ Covers for A/B/C pillars▪ Multi-component door sealings▪ Roof rails base pads▪ Step pads, spoilers▪ Water deflectors▪ Window encapsulations▪ Window sealing systems (corner moldings and end caps)▪ Windshield cowl covers | <ul style="list-style-type: none">▪ 天线垫片▪ A/B/C 柱罩▪ 多组分门密封件▪ 车顶导轨底座垫▪ 脚垫、扰流板▪ 导水板▪ 车窗密封条▪ 车窗密封系统 (角压条和端盖)▪ 挡风玻璃罩 |
|---|--|

INTERIOR

SWITCHING TO DESIGN AND COMFORT

汽车内饰

设计感和舒适性完美融合

In automotive interiors, TPEs ensure a pleasant surface feel with their soft-touch elements & reduce disturbing rattling and creaking noises when used for damping elements. With our low-emission TPE solutions, we meet the high OEM requirements for the automotive interior.

在汽车内饰领域，我们的 TPE 材料用于制作软质触感元件，可提供制品舒适的表面触感；用于制作阻尼元件可达到降噪效果；此外低排放 TPE 解决方案还能满足高端 OEM 对汽车内饰应用的环保和安全要求。

PROPERTIES

- Adhesion to PP, ABS, ABS/PC, PA
- Dry and visually appealing surfaces with optimized touch
- Low VOC and fogging values
- Meets all the OEMs odor requirements
- Precise material color matching

产品特性

- 对 PP, ABS, ABS/PC 和 PA 的包胶性能
- 干爽美观的表面更有绝佳的触感
- 低 VOC 和雾化值
- 满足 OEM 在气味方面的所有要求
- 精准的材料配色

OEM APPROVALS INCLUDE | OEM 认证包括

- 03-10-104 (Renault)
- B62 0300 (PSA)
- DBL 5562 (Daimler)
- GMW 15702, GMW 17374, GMW 14722 (GM)
- GS 93042 (BMW)
- MS-DC-242 (FCA)
- STJLR.51.5306 (JLR)
- TM-1010 (Tesla)
- VW 50123 (VW)
- WSS-M2D507 (Ford)



APPLICATIONS

应用

- Adjusting lever for steering wheel and seat
- Buffering and damping elements
- Cable sleeves
- Cup holders
- Door sill panels
- Floor mats
- Gearshifts
- HVAC sealings
- Shelf mats
- Thumb wheels/sliders
- 方向盘和座椅调节杆
- 缓冲和阻尼元件
- 线缆套管
- 杯架
- 门槛板
- 地毯
- 变速排档
- HVAC 密封件
- 搁板垫
- 拇指旋轮/滑块

POWERTRAIN

SUPERIOR CHARACTERISTICS EVEN UNDER THE HOOD

动力系统

特殊应用，体现更优特性

With engine compartments becoming increasingly complex, our TPEs offer economical alternatives to conventional materials. Our compounds that have been specially developed for the automotive industry can be cost-effectively processed in multi-component injection molding. They exhibit optimal long-term stability when exposed to high temperatures and when in contact with motor oils and greases.

随着发动机舱结构越来越复杂，我们的 TPE 成为了替代传统材料且经济的理想之选。凯柏胶宝® 专为汽车行业开发的化合物，不仅能够实现极具成本效益的多组分注塑成型加工；而且，在高温、接触机油/润滑油脂的环境下，该系列 TPE 材料表现出长久的极佳稳定性。

PROPERTIES

- Adhesion – e.g., to PA, PP, POM, PBT
- Chemical stability to substances such as oils, greases, AdBlue and fuels
- Excellent deformation recovery
- High temperature resistance

产品特性

- 对PA，PP，POM 和 PBT 的包胶性能
- 对油、油脂、车用尿素和燃料等物质具有化学稳定性
- 出色的变形恢复性能
- 耐高温

OEM APPROVALS INCLUDE | OEM 认证包括

- 03-10-104 (Renault)
- B62 0300 (PSA)
- DBL 5562 (Daimler)
- GMW15702 (GM)
- GS 93042 (BMW)
- MS-DC-242 (FCA)
- VW 50123 (VW)
- WSS-M2D516 (Ford)



APPLICATIONS

应用

- | | |
|---|--|
| <ul style="list-style-type: none">▪ Air duct components, ventilation flap controls▪ Battery seals▪ E-box gaskets▪ Grommet▪ Mounting elements▪ Sealings in oil management▪ Tank recesses▪ Timing belt covers▪ Vibration control elements in the transmission | <ul style="list-style-type: none">▪ 风道部件、通风阀控件▪ 电池密封▪ 电子箱垫圈▪ 垫圈▪ 安装元件▪ 油耗管理密封件▪ 油箱凹槽▪ 正时皮带盖▪ 传动系统的振动控制元件 |
|---|--|

NEW MOBILITY

LOOKING TO THE FUTURE

适用于移动出行新方式

面向未来

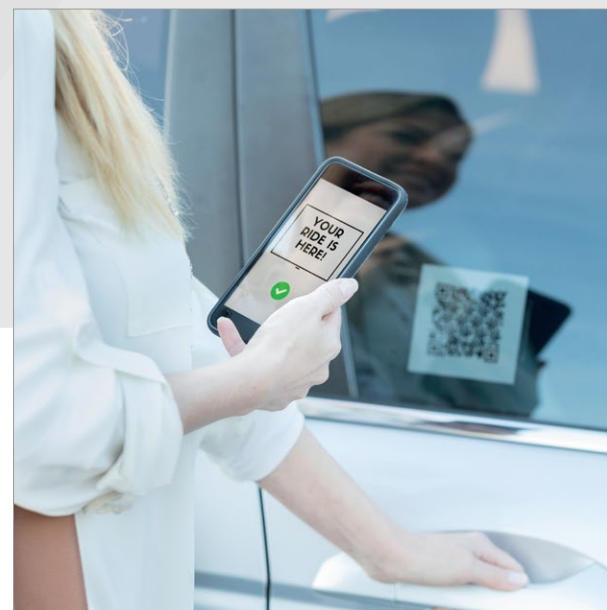


AUTONOMOUS DRIVING

自动驾驶

In autonomous driving, the interior becomes an experience, with TPEs providing that special added value and serving for noise reduction and for visual or touch elements, for example.

在自动驾驶过程中，汽车内饰对驾驶体验的影响更重要，TPE 依靠降噪、卓越的视觉和触摸感等特性，可为汽车带来更多附加值。

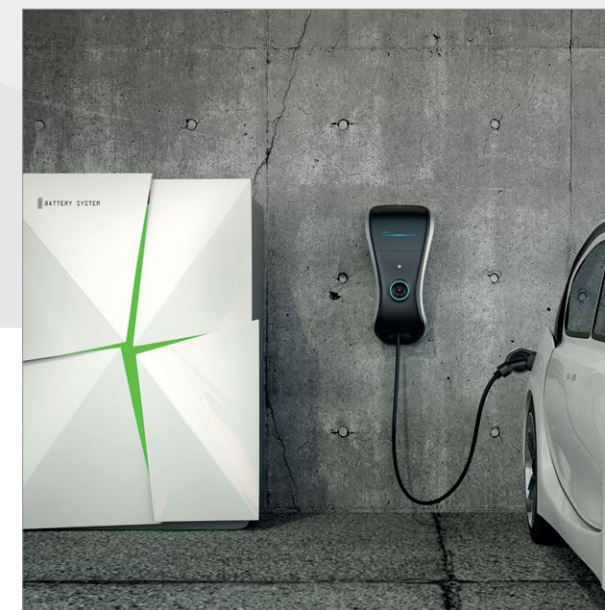


CAR SHARING

共享出行

Representation of durable designs: Our TPEs are convincing with their reproduction of fine surface structures and resistance to various antibacterial cleaning chemicals.

耐久设计的典范：我们的内饰应用 TPE 材料具有出色的表面结构再生性，可抵抗各种抗菌清洁化学品。



E-MOBILITY

电动汽车

Resistance to coolants, vibration protection and flame retardancy are only some of the challenges that need to be faced in electromobility. We have the right portfolio for your application – just get in touch with us.

电动汽车行业面临许多挑战，产品对材料提出耐冷却剂、防震和阻燃性等要求，但不止于此。凯柏胶宝® 可为您提供理想的产品组合——敬请随时联系。



NEXT MOBILITY

未来出行

Whatever the future has in store – we are ready. Many years of experience in a wide variety of markets make us your perfect partner for all new forms of mobility – whether in the air, in the water or on the road.

无论未来如何变化——我们做好准备迎接挑战。凯柏胶宝® 拥有多年服务于各行各业的市场经验和专业技术，选择我们，您将拥有一位携手前行的绝佳搭档。

CUSTOM-ENGINEERED PROPERTIES

WHAT ARE YOUR REQUIREMENTS?

定制设计解决方案

产品要求，您说了算

The TPE solutions are as multifaceted as the industry itself. Our compounds are established atop the industry in different sectors. For us, there is no such thing as a niche market.

Tell us about the challenges you may be facing while implementing your product idea and we will be pleased to help you improve your product's quality and functionality.

Have we left anything out that you need? Then feel free to contact us.

我们提供应用于各个行业的 TPE 解决方案。如今，我们的化合物已在这些行业中获得了良好的口碑。对于我们而言，所有市场，无论规模大小，都是我们认真探索和服务的对象。

请告诉我们您的产品创意落地时遇到的障碍，我们将努力帮助您改善产品的质量和功能。

还有其他需求？请随时与我们联系。





SERVICE

GOOD ADVICE IS INCLUDED

服务

中肯建议，与您同行

Your satisfaction is the standard we set for our work. To ensure the highest level of customer satisfaction, we have developed a quality assurance approach that covers the products, processes, and people involved. Our laboratories are designed and equipped to follow the latest state of the art technology.

In other words: you can tell us what challenges you are facing and we will dedicate ourselves to finding the best possible solution. Custom-engineered and extremely high-quality compounds provide the basis for this.

In addition, you will be able to benefit from our technical expertise, built up over many years of experience. Thanks to personal on-site consulting and unique global customer service, you will be able to enjoy the maximum support.

您的满意是我们的宗旨。为确保客户绝对的满意度，我们制定出了一项涵盖产品、加工和人员的质量保证方针。另外，我们拥有精心设计、设备齐全的实验室，以及最先进的技术。

简而言之，您只需告诉我们您所面临的挑战，凯柏胶宝® 将竭力提供定制设计和优质产品，为您给出理想的解决方案。

此外，我们在材料领域深耕多年所获得的丰富经验以及精进的技术专长，也能让你获益。依靠现场面对面咨询和独特的全球化客户服务，我们将为您提供最强力的支持。



SUSTAINABILITY

ALWAYS LOOKING TO THE FUTURE

可持续发展

立足当下，着眼未来

EXCELLENCE BY TRANSPARENCY

We rely on certified processes and established standards

KRAIBURG TPE acts and operates in accordance with recognized standards. These are:

- Integrated quality, environment and energy management systems
- Certified GRS standard for products produced in Malaysia
- Product Carbon Footprint of KRAIBURG TPE-Compounds
- Climate targets based on the guidelines of the Science Based Target Initiative (SBTi): Starting from the base year of 2021, the company's scope 1 and scope 2 CO₂e emissions are to be reduced by 46.2 percent by 2031, scope 3 CO₂e by 27.5 percent.
- ISCC PLUS certification available for many products in the EMEA sales region
- Carbon Disclosure Project (CDP) rating since 2020
- EcoVadis: The platform classifies the sustainability of companies in holistic ratings. Our commitment to sustainability at our locations has been awarded "Gold" and "Silver" in the past.

以透明度来追求卓越性

我们依赖经过认证的流程和确立的标准

凯柏胶宝® 遵循公认的标准行事和运营。这些标准包括：

- 综合质量、环境和能源管理系统
- 马来西亚生产基地所生产的产品都经过 GRS 标准认证
- 凯柏胶宝® 精选 TPE 化合物的产品碳足迹
- 基于科学基准倡议 (SBTi) 指南的气候目标：从2021年基准年开始，公司计划到2031年将范围1和范围2的二氧化碳当量 (CO₂e) 排放量减少46.2%，将范围3的二氧化碳当量 (CO₂e) 排放量减少27.5%。
- ISCC PLUS 认证适用于 EMEA 销售地区的产品
- 2020 年以来对碳披露项目 (CDP) 的评级
- EcoVadis: 该平台对公司的可持续发展进行了整体评级。我们对可持续发展的承诺曾获得过“金牌”和“银牌”奖项。



TPE PORTFOLIO SERIES

AUTOMOTIVE SECTOR

TPE 产品系列

汽车应用

热塑宝 K THERMOLAST® K	包胶材料 Adhesion Materials	Page
AD1	ABS, PC, PC/ABS	21
AD1/AP	ABS, PC, PC/ABS	21
AD1/CS	ABS, PBT, PC, PC/ABS	22
AD/PA	PA	22
AD/PA/CS	PA	23
AD/POM	POM	23
CS	PP	24
FG/SF	PP	25
FG/SF/AP	PP	25
FR/AP	PP	26
FR2	PP	26
GP/FG	PP	27
LW/CS/UV	PP	28
LW/UV	PP	29
UV/AD2	ABS, ASA, PC, PC/ABS, PMMA, SAN	30
UV/FG	PP	31
UV/LD/b	PP	32
VS/AD/HM	ABS, ASA, PA, PC, PC/ABS, SAN	33

凯柏胶宝® R THERMOLAST® R	包胶材料 Adhesion Materials	Page
RC/GP/FG	PP	34
RC/UV/AP	PP	34

热塑宝 V THERMOLAST® V	包胶材料 Adhesion Materials	Page
LTP	PP	35
LTP/PA	PA	35

科柔宝® COPEC®	包胶材料 Adhesion Materials	Page
VS/AD1	ABS, ASA, PA, PC, PC/ABS, SAN	36

高温宝 HIPEX®	包胶材料 Adhesion Materials	Page
HTR/OR	PBT	37

THERMOLAST® K | 热塑宝 K

Series 系列	The AD1 series is your material solution for applications with adhesion to polar thermoplastics such as ABS, PC and PC/ABS. The compounds are available in black and natural colors. Natural color variants can be colored in many different ways.
AD1	AD1 系列材料解决方案适用于包胶极性热塑性材料（如 ABS、PC 和 PC/ABS）应用。这类化合物可选黑色和本色。本色产品系列可用多种不同方式着色。

Processing Method : Extrusion, Injection Molding | 加工方法 : 挤塑, 注塑成型

Compound Name	化合物名称	Hardness 硬度	Color 颜色	Adhesion 包胶
TCxMLB		50 – 80 Shore A	Natural 本色	ABS, PC, PC/ABS
TCxMLZ		50 – 80 Shore A	Black 黑色	
TCxMSB		30 – 40 Shore A	Natural 本色	
TCxMSZ		30 – 40 Shore A	Black 黑色	

Typical Applications	典型应用
- Bumpers - Door sills - Function and design elements - Grommets - Handles (tools and power tools, etc.) - Seals - Soft touch surface (thumb wheels, push buttons, switches) - Thumb wheels	- 保险杠 - 门槛 - 功能和设计应用 - 垫圈 - 手柄（手动工具和电动工具等） - 密封件 - 柔软的表面触感（拨轮、按键、开关） - 拨轮
Material Advantages	材料属性
- Adhesion to ABS, ASA, PC, PC/ABS, SAN - Colorable - Controlled level of emission & odor, suitable for automotive interior - Insert molding possible - Soft touch surface - Soft, non-sticky haptic	- 包胶 ABS、ASA、PC、PC/ABS、SAN - 可着色 - 可控的排放和气味水平，适合汽车内饰 - 可嵌入成型 - 柔软的表面触感 - 柔软不粘的触感
Regulations / Approvals	法规 / 批准
49 CFR §571.302 (FMVSS 302) - BMW GS 93042 - DIN 75201-B - Fogging - DIN EN ISO 105-B06 Method 3 - Ford WSS-M2D507 - Mercedes-Benz DBL 5562 - Renault 03-10-104 - Stellantis B62 0300 - UL 94 HB - VDA 270 B3 - Odor - VW 50123	49 CFR §571.302 (FMVSS 302) - 宝马 GS 93042 - DIN 75201-B – 雾化值 - DIN EN ISO 105-B06 Method 3 - 福特 WSS-M2D507 - 奔驰 DBL 5562 - 雷诺 03-10-104 - Stellantis B62 0300 - UL 94 HB - VDA 270 B3 – 气味 - VW 50123

THERMOLAST® K | 热塑宝 K

Series 系列	The AD1/AP series is your material solution for automotive interior applications with adhesion to polar thermoplastics such as ABS, PC and PC/ABS for Asia Pacific Market. The compounds are available in black colors.
AD1/AP	AD1/AP 系列适用于汽车内饰或工业应用的材料解决方案，包胶极性热塑性塑料（如ABS、PC、PC/ABS）。这些化合物有黑色可供选择。

Processing Method : Injection Molding | 加工方法 : 注塑成型

Compound Name	化合物名称	Hardness 硬度	Color 颜色	Adhesion 包胶
TCxPGG-BLCK		50 – 80 Shore A	Black 黑色	ABS, PC, PC/ABS

Typical Applications	典型应用
- Automotive Interior - Bumpers - Car mats - Door sills - Function and design elements - Grommets - Handles (tools and power tools, etc.) - Seals - Soft touch surface (thumb wheels, push buttons, switches) - Thumb wheels	- 汽车内饰 - 保险杠 - 车垫 - 门槛 - 功能和设计应用 - 垫圈 - 手柄（手动工具和电动工具等） - 密封件 - 柔软的表面触感（拨轮、按键、开关） - 拨轮
Material Advantages	材料属性
- Adhesion to ABS, PC, PC/ABS - Adhesion to POM - Automotive Interior UV Resistance - Controlled level of emission & odor, suitable for automotive interior - In-process recycling possible - Insert molding possible - Soft touch surface - Temperature stability up to 90 °C	- 包胶 ABS、PC、PC/ABS - 包胶 POM - 适用于汽车内饰，具有抗紫外线性能 - 可控的排放和气味水平，适合汽车内饰 - 可在制造过程中回收利用 - 可嵌入成型 - 柔软的表面触感 90 °C下的温度稳定性

THERMOLAST® K | 热塑宝 K

Series 系列

AD1/CS

The AD1/CS series is your material solution for applications with optimized compression set and adhesion to polar thermoplastics such as ABS, PC, PC/ABS, and PBT. The compounds are available in black and natural colors. Natural color variants can be colored in many different ways.

AD1/CS 系列材料解决方案适用于要求良好压缩的永久变形性能和包胶极性热塑性材料（如 ABS、PC、PC/ABS 和 PBT）的应用。这类化合物可选黑色和本色。本色产品系列可用多种不同方式着色。

Processing Method : Extrusion, Injection Molding | 加工方法 : 挤塑, 注塑成型

Compound Name	化合物名称	Hardness	硬度	Color	颜色	Adhesion	包胶
TPxVCN		50 – 80 Shore A		Natural	本色	ABS, PBT, PC, PC/ABS	
TPxVCZ		50 – 80 Shore A		Black	黑色		
Typical Applications				典型应用			
▪ Bumpers ▪ Cable clips ▪ Function and design elements ▪ Grommets ▪ Seals ▪ Soft touch surface (thumb wheels, push buttons, switches)				▪ 保险杠 ▪ 电缆固定夹 ▪ 功能和设计应用 ▪ 垫圈 ▪ 密封件 ▪ 柔软的表面触感（拨轮、按键、开关）			
Material Advantages				材料属性			
▪ Adhesion to ABS, ASA, PC, PC/ABS, SAN ▪ Adhesion to PBT ▪ Optimized compression set ▪ Optimized mechanical properties				▪ 包胶 ABS、ASA、PC、PC/ABS、SAN ▪ 包胶 PBT ▪ 出色的压缩永久变形性能 ▪ 优异的机械性能			
Regulations / Approvals				法规 / 批准			
▪ 49 CFR §571.302 (FMVSS 302) ▪ BMW G5 93042 ▪ Mercedes-Benz DBL 5562 ▪ Stellantis B62 0300 ▪ UL 94 HB ▪ VW 50123				▪ 49 CFR §571.302 (FMVSS 302) ▪ 宝马 G5 93042 ▪ 奔驰 DBL 5562 ▪ Stellantis B62 0300 ▪ UL 94 HB ▪ VW 50123			

THERMOLAST® K | 热塑宝 K

Series 系列

AD/PA

The AD/PA series is your material solution for applications with adhesion to PA. The compounds are available in black and natural colors. Natural color variants can be colored in many different ways.

AD/PA 系列材料解决方案适用于包胶 PA 应用。这类化合物可选黑色和本色。本色产品系列可用多种不同方式着色。

Processing Method : Injection Molding | 加工方法 : 注塑成型

Compound Name	化合物名称	Hardness	硬度	Color	颜色	Adhesion	包胶
TCxPAN		20 – 80 Shore A		Natural	本色	PA	
TCxPAZ		20 – 80 Shore A		Black	黑色		
Typical Applications				典型应用			
▪ Cable clips ▪ Function and design elements ▪ Grommets ▪ Handles (hand tools and power tools etc.) ▪ Thumb wheels				▪ 电缆固定夹 ▪ 功能和设计应用 ▪ 垫圈 ▪ 手柄（手动工具和电动工具等） ▪ 拨轮			
Material Advantages				材料属性			
▪ Adhesion to PA6 and PA6.6, up to 50% glass fiber ▪ Adhesion to PA12 ▪ Colorable ▪ Dry haptics ▪ Halogen-free (according to IEC 61249-2-21) ▪ Temperature stability up to 90 °C				▪ 包胶 PA6 和 PA6.6，玻璃纤维高达 50% ▪ 包胶 PA12 ▪ 可着色 ▪ 干爽触感 ▪ 不含卤素（符合 IEC 61249-2-21 标准） ▪ 90 °C 下的温度稳定性			
Regulations / Approvals				法规 / 批准			
▪ 49 CFR §571.302 (FMVSS 302) ▪ BMW GS 93042 ▪ DIN 75201-B – Fogging ▪ DIN EN ISO 105-B06 Method 3 ▪ GM GMW15702 ▪ Mercedes-Benz DBL 5562 ▪ Renault 03-10-104 ▪ Stellantis B62 0300 ▪ UL 94 HB ▪ VW 50123				▪ 49 CFR §571.302 (FMVSS 302) ▪ 宝马 GS 93042 ▪ DIN 75201-B – 雾化值 ▪ DIN EN ISO 105-B06 Method 3 ▪ 通用汽车 GMW15702 ▪ 奔驰 DBL 5562 ▪ 雷诺 03-10-104 ▪ Stellantis B62 0300 ▪ UL 94 HB ▪ VW 50123			

THERMOLAST® K | 热塑宝 K

Series 系列

AD/PA/CS

The AD/PA/CS series is your material solution for applications with excellent adhesion to PA and sealing function. The compounds are available in black and natural colors. Natural color variants can be colored in many different ways.

AD/PA/CS 系列材料解决方案适用于对 PA 有卓越包胶性和出色的压缩永久变形性能的应用领域。这类化合物有黑色和本色可选。本色产品系列可用多种不同方式着色。

Processing Method : Extrusion, Injection Molding | 加工方法 : 挤塑, 注塑成型

Compound Name	化合物名称	Hardness	硬度	Color	颜色	Adhesion	包胶
TCxPCN		40 – 80 Shore A		Natural	本色	PA	
TCxPCZ		35 – 75 Shore A		Black	黑色		
Typical Applications				典型应用			
- Cable clips - Fastenings - Grommets - Membranes - Seals				- 电缆固定夹 - 紧固件 - 垫圈 - 薄膜 - 密封件			
Material Advantages				材料属性			
- Adhesion to PA6 and PA6.6, up to 50% glass fiber - Optimized compression set - Optimized flow properties				- 包胶 PA6 和 PA6.6，玻璃纤维高达 50% - 出色的压缩永久变形性能 - 优异的流动性能			
Regulations / Approvals				法规 / 批准			
- BMW GS 93042 - GM GMW15702 - Mercedes-Benz DBL 5562 - Renault 03-10-104 - Stellantis B62 0300 - UL 94 HB - VW 50123				- 宝马 GS 93042 - 通用汽车 GMW15702 - 奔驰 DBL 5562 - 雷诺 03-10-104 - Stellantis B62 0300 - UL 94 HB - VW 50123			

THERMOLAST® K | 热塑宝 K

Series 系列

AD/POM

The AD/POM series is your material solution for applications with adhesion to POM. The compounds are available in black and natural colors. Natural color variants can be colored in many different ways.

AD/POM 系列材料解决方案适用于包胶 POM 应用。这类化合物可选黑色和本色。本色产品系列可用多种不同方式着色。

Processing Method : Extrusion, Injection Molding | 加工方法 : 挤塑, 注塑成型

Compound Name	化合物名称	Hardness 硬度	Color 颜色	Adhesion 包胶
TCxHAA		50 – 80 Shore A	Natural 本色	POM
TCxHAZ		50 – 80 Shore A	Black 黑色	
TCxHBA		60 – 70 Shore A	Natural 本色	
TCxHBZ		60 – 70 Shore A	Black 黑色	
Typical Applications			典型应用	
▪ Bumpers ▪ Components for conveying systems ▪ Function and design elements ▪ Handles (tools and power tools, etc.) ▪ Thumb wheels			▪ 保险杠 ▪ 输送系统零件 ▪ 功能和设计应用 ▪ 手柄（手动工具和电动工具等） ▪ 拨轮	
Material Advantages			材料属性	
▪ Adhesion to POM ▪ Colorable ▪ Soft touch surface			▪ 包胶 POM ▪ 可着色 ▪ 柔软的表面触感	
Regulations / Approvals			法规 / 批准	
▪ 49 CFR §571.302 (FMVSS 302) ▪ BMW G5 93042 ▪ DIN 75201-B – Fogging ▪ DIN EN ISO 105-B06 Method 3 ▪ GM GMW15702 ▪ Mercedes-Benz DBL 5562 ▪ Renault 03-10-104 ▪ VDA 270 B3 – Odor ▪ VW 50123			▪ 49 CFR §571.302 (FMVSS 302) ▪ 宝马 G5 93042 ▪ DIN 75201-B – 雾化值 ▪ DIN EN ISO 105-B06 Method 3 ▪ 通用汽车 GMW15702 ▪ 奔驰 DBL 5562 ▪ 雷诺 03-10-104 ▪ VDA 270 B3 – 气味 ▪ VW 50123	

THERMOLAST® K | 热塑宝 K

Series 系列

CS

The CS series is your material solution for sealing applications with adhesion to PP. The compounds are available in black and natural colors. Natural color variants can be colored in many different ways.

CS 系列材料解决方案适用于密封应用和包胶 PP 应用。这类化合物可选黑色和本色。本色产品系列可用多种不同方式着色。

Processing Method : Extrusion, Injection Molding | 加工方法 : 挤塑, 注塑成型

Compound Name	化合物名称	Hardness	硬度	Color	颜色	Adhesion	包胶
TCxCSN		30 – 90 Shore A		Natural	本色		
TCXCSZ		30 – 90 Shore A		Black	黑色	PP	
Typical Applications				典型应用			
- Applications in e-mobility - Bumpers - Cable clips - Fastenings - Grommets - Membranes - Seals				- 电动汽车应用 - 保险杠 - 电缆固定夹 - 紧固件 - 垫圈 - 薄膜 - 密封件			
Material Advantages				材料属性			
- Adhesion to PP - In-process recycling possible - Optimized compression set - Optimized mechanical properties - Optimized resilience - Resistance to polar coolants				- 包胶 PP - 可在制造过程中回收利用 - 出色的压缩永久变形性能 - 优异的机械性能 - 出色的弹性 - 耐极性冷却剂			
Regulations / Approvals				法规 / 批准			
49 CFR §571.302 (FMVSS 302) - BMW GS 93042 - DIN 75201-B - Fogging - Mercedes-Benz DBL 5562 - PV 3929 Kalahari (1 year) - PV 3929 Kalahari (2 years) - PV 3930 Florida (1 year) - PV 3930 Florida (2 years) - Renault 03-10-104 - Stellantis B62 0300 - Stellantis MS-DC-242 - UL 94 HB - VW 50123				49 CFR §571.302 (FMVSS 302) - 宝马 GS 93042 - DIN 75201-B - 雾化值 - 奔驰 DBL 5562 - PV 3929 卡拉哈里试验（1 年） - PV 3929 卡拉哈里试验（2 年） - PV 3930 佛罗里达试验（1 年） - PV 3930 佛罗里达试验（2 年） - 雷诺 03-10-104 - Stellantis B62 0300 - Stellantis MS-DC-242 - UL 94 HB - VW 50123			

THERMOLAST® K | 热塑宝 K

Series 系列

FG/SF

The FG/SF series is your material solution for automotive interior applications with special surface appearance and adhesion to PP. The material offers low emission and odor values combined with high abrasion resistance. The compounds are available in black and many other automotive interior colors.

FG/SF 系列具有高质量的外观表面，且对 PP 具有包胶性，是适合汽车内饰的理想材料解决方案。该材料排放低，气味小，耐摩擦，耐磨性高。该系列化合物有黑色和多种其他汽车内饰颜色可选。

Processing Method : Injection Molding | 加工方法 : 注塑成型

Compound Name	化合物名称	Hardness	硬度	Color	颜色	Adhesion	包胶
TCxFEZ		50 – 80 Shore A		Black	黑色	PP	
Typical Applications				典型应用			
- Automotive Interior - Car mats - Floor mats - Function and design elements - Grip applications				- 汽车内饰 - 车垫 - 地板垫 - 功能和设计应用 - 把手应用			
Material Advantages				材料属性			
- Abrasion resistance - Adhesion to PP - Colorable - Controlled level of emission & odor, suitable for automotive interior - Low density - Non-sticky surface - Optimized flow properties - Soft touch surface				- 耐磨性 - 包胶 PP - 可着色 - 可控的排放和气味水平，适合汽车内饰 - 低密度 - 不粘表面 - 优异的流动性能 - 柔软的表面触感			
Regulations / Approvals				法规 / 批准			
- BMW GS 93042 - Mercedes-Benz DBL 5562 - Renault 03-10-104 - Stellantis B62 0300 - VW 50123				- 宝马 GS 93042 - 奔驰 DBL 5562 - 雷诺 03-10-104 - Stellantis B62 0300 - VW 50123			

THERMOLAST® K | 热塑宝 K

Series 系列

FG/SF/AP

The FG/SF/AP series is your material solution for automotive interior applications with a good surface appearance and quality requirements for the Asia Pacific market. It is characterized by its easy processability. The compounds are available in black.

FG/SF/AP 系列是您用于汽车内饰应用的材料解决方案，具有良好的表面外观和符合亚太市场的质量要求。其特点是易于加工。这些化合物有黑色。

Processing Method : Injection Molding | 加工方法 : 注塑成型

Compound Name	化合物名称	Hardness	硬度	Color	颜色	Adhesion	包胶
TCXOPS-BLCK		60 – 80 Shore A		Black	黑色	PP	
Typical Applications				典型应用			
- Automotive interior - Bumper - Car mats - Door sills - Function and design elements - Grommets - Handles (hand tools and power tools etc.) - Seals - Soft touch surface (thumb wheels, push buttons, switches) - Thumb wheels				- 汽车内饰 - 保险杠 - 车垫 - 门槛 - 功能和设计应用 - 垫圈 - 手柄（手动工具和电动工具等） - 密封件 - 柔软的表面触感（拨轮、按键、开关） - 拨轮			
Material Advantages				材料属性			
- Adhesion to PP - Controlled level of emission & odor, suitable for automotive interior - Demolding - In-process recycling possible - Insert molding possible - Low density - Optimized flow properties - Surface mapping - Temperature stability up to 100 °C				- 包胶 PP - 可控的排放和气味水平，适合汽车内饰 - 脱模 - 可在制造过程中回收利用 - 可嵌入成型 - 低密度 - 优异的流动性能 - 表面映射 100 °C 下的温度稳定性			

THERMOLAST® K | 热塑宝 K

Series 系列	The FR/AP series is your material solution for applications with flame retardant requirements for the Asia Pacific market. The compounds are halogen-free according to IEC 61249-2-21. The UL94 V-0 (3.0 mm) certificate is valid for available hardness range and for natural and coloured compounds.
FR/AP	FR/AP 系列材料解决方案适用于亚太市场有阻燃需求的低壁厚应用。这类化合物不含卤素（根据 IEC 61249-2-21 标准）。UL94 V-0 (3.0 mm) 认证书对可用的硬度范围和本色及有色化合物有效。

Processing Method : Extrusion, Injection Molding | 加工方法 : 挤塑, 注塑成型

Compound Name	化合物名称	Hardness 硬度	Color 颜色	Adhesion 包胶
TCxFLN TCxFLZ		40 – 90 Shore A 40 – 90 Shore A	Natural Black 本色 黑色	pp
Typical Applications	典型应用			
- Cable management systems e.g. cable holders, cable glands and grommets - Gaskets for electric and electronic applications e.g. cable boxes				- 电缆管理系统，例如电缆支架、电缆密封套和索环 - 电气和电子应用垫片，例如电缆箱
Material Advantages	材料属性			
- Adhesion to PP - Halogen-free (according to IEC 61249-2-21) - High glow-wire flammability index (GWFI) - In-process recycling possible - Precoloration in all colors - Self-extinguishing, no release of burning droplets - Temperature stability up to 85 °C				- 包胶 PP - 不含卤素（符合 IEC 61249-2-21 标准） - 高灼热丝可燃性指数 (GWFI) - 可在制造过程中回收利用 - 可进行所有颜色的预着色 - 自熄性，不会产生燃烧液滴 85°C 下的温度稳定性
Regulations / Approvals	法规 / 批准			
UL 94 V-0 (3 mm)				UL 94 V-0 (3 mm)

THERMOLAST® K | 热塑宝 K

Series 系列	The FR2 series is your material solution for applications with high flame-retardant requirements. The compounds are halogen-free according to IEC 61249-2-21. The UL94 V-0 (1.5 mm) certificate and the classification according to DIN EN 45545-2 R22 HL2 and DIN EN 45545-2 R23 HL3 is valid for available hardness range and for natural and colored compounds.
FR2	FR2 系列材料解决方案适用于有高阻燃需求的应用。根据 IEC 61249-2-21 标准，这类化合物经认证，不含卤素。现有的硬度范围以及本色和有色化合物 UL94 V-0 (1.5 mm) 证书，DIN EN 45545-2 R22 HL 2 和 DIN EN 45545-2 R23 HL 3 的分类标准。

Processing Method : Extrusion, Injection Molding | 加工方法 : 挤塑, 注塑成型

Compound Name	化合物名称	Hardness 硬度	Color 颜色	Adhesion 包胶
TCxFTN TCxFTZ		50 – 90 Shore A / 40 Shore D 50 – 90 Shore A / 40 Shore D	Natural Black 本色 黑色	pp
Typical Applications	典型应用			
- Applications in railway sector - Cable management systems e.g. cable holders, cable glands and grommets - Electrical insulation for busbars - Gaskets for electric and electronic applications e.g. cable boxes				- 铁路行业应用 - 电缆管理系统，例如电缆支架、电缆密封套和索环 - 母线电绝缘 - 电气和电子应用垫片，例如电缆箱
Material Advantages	材料属性			
- Adhesion to PP - Fulfills railway requirements such as high LOI, low toxicity and smoke density - Halogen-free (according to IEC 61249-2-21) - High glow-wire flammability index (GWFI) - In-process recycling possible - No silicones added - Precoloration in all colors - Self-extinguishing, no release of burning droplets - Stability in conditions up to 60 °C and 75% humidity - Temperature stability up to 85 °C				- 包胶 PP - 符合铁路行业要求，例如高 LOI、低毒性和烟雾密度 - 不含卤素（符合 IEC 61249-2-21 标准） - 高灼热丝可燃性指数 (GWFI) - 可在制造过程中回收利用 - 未添加有机硅 - 可进行所有颜色的预着色 - 自熄性，不会产生燃烧液滴 - 温度 60°C 和湿度 75% 条件下的材料稳定性 85°C 下的温度稳定性
Regulations / Approvals	法规 / 批准			
- DIN EN 45545-2 R22 HL2 - DIN EN 45545-2 R23 HL3 - DIN EN 45545-2 R26 - IEC 60695-2-12:2021-10 (GWFI) 960 °C / 2 mm - UL 94 V-0 (1.5 mm)				- DIN EN 45545-2 R22 HL2 - DIN EN 45545-2 R23 HL3 - DIN EN 45545-2 R26 - IEC 60695-2-12:2021-10 (GWFI) 960 °C / 2 mm - UL 94 V-0 (1.5 mm)

THERMOLAST® K | 热塑宝 K

Series 系列	The GP/FG series is your material solution for a variety of applications. It is suitable for automotive interiors. The compounds are available in black and natural colors. Natural colored variants can be colored in many different ways.
GP/FG	GP/FG 系列材料解决方案适合多种不同应用。该系列适用于汽车内饰。这类化合物可选黑色和本色。本色产品系列可用多种不同方式着色。

Processing Method : Extrusion, Injection Molding | 加工方法 : 挤塑, 注塑成型

Compound Name	化合物名称	Hardness 硬度	Color 颜色	Adhesion 包胶
TCxGPN TCxGPZ		20 – 90 Shore A / 33 Shore D 20 – 90 Shore A / 34 Shore D	Natural Black 本色 黑色	pp
Typical Applications	典型应用			
- Air flap control - Air guide elements - Bumpers - Cable clips - Car mats - Fasteners - Handles (tools and power tools, adjustment lever, etc.) - Joint sealing - Seals for housings				- 空调出风口叶片 - 导风元件 - 保险杠 - 电缆固定夹 - 车垫 - 紧固件 - 手柄（工具和电动工具，调整杆等） - 机壳密封件 - 门缝条
Material Advantages	材料属性			
- Adhesion to PP - Colorable - Controlled level of emission & odor, suitable for automotive interior - Dry haptics - Halogen-free (according to IEC 61249-2-21) - In-process recycling possible - Optimized mechanical properties - Soft touch surface				- 包胶 PP - 可着色 - 可控的排放和气味水平，适合汽车内饰 - 干爽触感 - 不含卤素 (符合 IEC 61249-2-21 标准) - 可在制造过程中回收利用 - 优异的机械特性能 - 柔软的表面触感
Regulations / Approvals	法规 / 批准			
49 CFR §571.302 (FMVSS 302) - BMW GS 93042 - DIN 75201-B – Fogging - DIN EN ISO 105-B06 Method 3 - Ford WSS-M2D507 - Ford WSS-M2D516 - GM GMW15702 - Mercedes-Benz DBL 5562 - PV 3929 Kalahari (1 year) - PV 3930 Florida (1 year) - Renault 03-10-104 - Stellantis B62 0300 - UL 94 HB - VDA 270 B3 – Odor - VW 50123				49 CFR §571.302 (FMVSS 302) - 宝马 GS 93042 - DIN 75201-B – 雾化值 - DIN EN ISO 105-B06 Method 3 - 福特 WSS-M2D507 - 福特 WSS-M2D516 - 通用汽车 GMW15702 - 奔驰 DBL 5562 - PV 3929 卡拉哈里试验（1 年） - PV 3930 佛罗里达试验（1 年） - 雷诺 03-10-104 - Stellantis B62 0300 - UL 94 HB - VDA 270 B3 – 气味 - VW 50123

THERMOLAST® K | 热塑宝 K

Series 系列

LW/CS/UV

The LW/CS/UV Series is your lightweight material solution for applications with superior requirements on sealing performance. The compounds are especially suited for automotive exterior applications. They are available in black colors.

LW/CS/UV 系列具有轻质和高密封性的特点，是满足严格行业要求的理想材料选择。这些化合物尤其适用于汽车外饰应用，并提供黑色可选。

Processing Method : Extrusion, Injection Molding | 加工方法 : 挤塑, 注塑成型

Compound Name	化合物名称	Hardness	硬度	Color	颜色	Adhesion	包胶
TLxOCW-BLCK		35 – 75 Shore A		Black	黑色	PP	
Typical Applications		典型应用					
- Automotive Exterior - Bumpers - Glass Run Channel - Grommets - Heavy-walled parts - Seals - Seals for windows and doors		- 汽车外饰 - 保险杠 - 车窗玻璃导槽 - 垫圈 - 厚壁配件 - 密封件 - 门窗密封件					
Material Advantages		材料属性					
- Adhesion to PP - In-process recycling possible - Low density - Low shrinkage properties - Low tendency to warpage - Non-sticky surface - Optimized compression set - Resilience - UV and weathering resistance		- 包胶 PP - 可在制造过程中回收利用 - 低密度 - 低收缩率 - 低翘曲倾向 - 不粘表面 - 出色的压缩永久变形性能 - 回弹性 - 抗紫外线和耐候性					
Regulations / Approvals		法规 / 批准					
49 CFR §571.302 (FMVSS 302) - Mercedes-Benz DBL 5562 - Outdoor Weathering Arizona 12 month SAE J1976 - Outdoor Weathering Arizona 24 month SAE J1976 - Outdoor Weathering Florida 12 month SAE J1976 - Outdoor Weathering Florida 24 month SAE J1976 - PV 3929 Kalahari (1 year) - PV 3929 Kalahari (2 years) - PV 3930 Florida (1 year) - PV 3930 Florida (2 years) - VW 50123		49 CFR §571.302 (FMVSS 302) - 奔驰 DBL 5562 - 室外耐候性测试 亚利桑那 12 个月 SAE J1976 - 室外耐候性测试 亚利桑那 24 个月 SAE J1976 - 室外耐候性测试 佛罗里达 12 个月 SAE J1976 - 室外耐候性测试 佛罗里达 24 个月 SAE J1976 - PV 3929 卡拉哈里试验（1 年） - PV 3929 卡拉哈里试验（2 年） - PV 3930 佛罗里达试验（1 年） - PV 3930 佛罗里达试验（2 年） - VW 50123					

THERMOLAST® K | 热塑宝 K

Series 系列

LW/UV

The LW/UV Series is your lightweight material solution for applications with high UV- and weathering resistance, especially in automotive exterior. The compounds are available in black colors.

LW/UV 系列具有轻质、抗紫外线和耐候性的特点，是满足严格行业要求的理想材料选择，尤其适合汽车外饰应用。可选黑色。

Processing Method : Extrusion, Injection Molding | 加工方法 : 挤塑, 注塑成型

Compound Name	化合物名称	Hardness	硬度	Color	颜色	Adhesion	包胶
TLxOWG-BLCK		60 – 80 Shore A		Black	黑色	PP	
Typical Applications				典型应用			
- Automotive Exterior - Bumpers - Cowls gaskets - Edge guards - Function and design elements - Heavy-walled parts - Roof racks - Water deflectors				- 汽车外饰 - 保险杠 - 通风隔栅垫片 - 防撞角 - 功能和设计应用 - 厚壁配件 - 车顶架 - 导水器			
Material Advantages				材料属性			
- Adhesion to PP - In-process recycling possible - Low density - Low shrinkage properties - Low tendency to warpage - Non-sticky surface - UV and weathering resistance				- 包胶PP - 可在制造过程中回收利用 - 低密度 - 低收缩率 - 低翘曲倾向 - 不粘表面 - 抗紫外线和耐候性			
Regulations / Approvals				法规 / 批准			
49 CFR §571.302 (FMVSS 302) - Mercedes-Benz DBL 5562 - Outdoor Weathering Arizona 12 month SAE J1976 - Outdoor Weathering Arizona 24 month SAE J1976 - Outdoor Weathering Florida 12 month SAE J1976 - Outdoor Weathering Florida 24 month SAE J1976 - PV 3929 Kalahari (1 year) - PV 3929 Kalahari (2 years) - PV 3930 Florida (1 year) - PV 3930 Florida (2 years)				49 CFR §571.302 (FMVSS 302) - 奔驰 DBL 5562 - 室外耐候性测试 亚利桑那 12 个月 SAE J1976 - 室外耐候性测试 亚利桑那 24 个月 SAE J1976 - 室外耐候性测试 佛罗里达 12 个月 SAE J1976 - 室外耐候性测试 佛罗里达 24 个月 SAE J1976 - PV 3929 卡拉哈里试验（1 年） - PV 3929 卡拉哈里试验（2 年） - PV 3930 佛罗里达试验（1 年） - PV 3930 佛罗里达试验（2 年）			

THERMOLAST® K | 热塑宝 K

Series 系列

UV/AD2

The UV/AD2 series is your material solution for applications requiring UV resistance and adhesion to polar thermoplastics such as PC, ABS, PC/ABS, ASA and PMMA. It is particularly suitable for automotive exterior applications. The compounds are available in black.

UV/AD2 系列材料解决方案适用于抗紫外线和包胶极性热塑性塑料材料（如 PC、ABS、PC/ABS、ASA 和 PMMA）应用。该系列适用于汽车外饰， 并提供黑色可选。

Processing Method : Injection Molding | 加工方法 :注塑成型

Compound Name	化合物名称	Hardness	硬度	Color	颜色	Adhesion	包胶
TCxMUZ		55 – 80 Shore A		Black	黑色	ABS, ASA, PC, PC/ABS, PMMA, SAN	
Typical Applications				典型应用			
- A/B/C/D cappings and covers - Brake lights - Door sills - Front triangles - Head lights - Rear spoilers - Roof rim covers - Trunk openers - Water deflectors				- A/B/C/D 柱 - 刹车灯 - 门槛 - 前三角盖板 - 前大灯 - 后扰流板 - 汽车行李架 - 行李箱开启器 - 导水器			
Material Advantages				材料属性			
- Adhesion to ABS, ASA, PC, PC/ABS, PMMA, SAN - Surface mapping - Weather resistant, suitable for automotive exterior				- 包胶 ABS、ASA、PC、PC/ABS、PMMA、SAN 的包胶性 - 表面映射 - 耐候性，适合汽车外饰			
Regulations / Approvals				法规 / 批准			
- BMW GS 93042 - GM GMW15702 - Mercedes-Benz DBL 5562 - Outdoor Weathering Arizona 12 month SAE J1976 - Outdoor Weathering Arizona 24 month SAE J1976 - Outdoor Weathering Florida 12 month SAE J1976 - Outdoor Weathering Florida 24 month SAE J1976 - PV 3929 Kalahari (1 year) - PV 3929 Kalahari (2 years) - PV 3930 Florida (1 year) - PV 3930 Florida (2 years) - Renault 03-10-104 - Rivian - VW 50123				- 宝马 GS 93042 - 通用汽车 GMW15702 - 奔驰 DBL 5562 - 室外耐候性测试 亚利桑那 12 个月 SAE J1976 - 室外耐候性测试 亚利桑那 24 个月 SAE J1976 - 室外耐候性测试 佛罗里达 12 个月 SAE J1976 - 室外耐候性测试 佛罗里达 24 个月 SAE J1976 - PV 3929 卡拉哈里试验（1 年） - PV 3929 卡拉哈里试验（2 年） - PV 3930 佛罗里达试验（1 年） - PV 3930 佛罗里达试验（2 年） - 雷诺 03-10-104 - Rivian - VW 50123			

THERMOLAST® K | 热塑宝 K

Series 系列

UV/FG

The UV/FG series is your material solution for applications requiring UV resistance and adhesion to PP. The compounds are suitable for automotive exterior applications and available in black.

UV/FG 系列材料解决方案适用于抗紫外线和包胶 PP 应用。该系列适用于汽车外饰， 并提供黑色可选。

Processing Method : Injection Molding | 加工方法 :注塑成型

Compound Name	化合物名称	Hardness	硬度	Color	颜色	Adhesion	包胶
TCxLEZ		30 – 90 Shore A / 35 Shore D		Black	黑色	PP	
Typical Applications				典型应用			
- A/B/C/D cappings and covers - Active Grill Shutter (AGS) - Air guide elements - Air intake duct and air filter - Cowls gaskets - Door opener - Door trims - Roof racks - Underbody guard - Water deflectors - Wheel arch liner				- A/B/C/D 柱 - 主动式格栅 (AGS) - 导风元件 - 进气管和空气过滤器 - 通风隔栅垫片 - 车门开关 - 车门内饰板 - 车顶架 - 车身底护板 - 导水器 - 轮毂罩			
Material Advantages				材料属性			
- Adhesion to PP - In-process recycling possible - Weather resistant, suitable for automotive exterior				- 包胶 PP - 可在制造过程中回收利用 - 耐候性，适合汽车外饰			
Regulations / Approvals				法规 / 批准			
49 CFR §571.302 (FMVSS 302) - BMW GS 93042 - GM GMW 16233 - Mercedes-Benz DBL 5562 - Outdoor Weathering Arizona 24 month SAE J1976 - Outdoor Weathering Florida 24 month SAE J1976 - PV 3929 Kalahari (1 year) - PV 3929 Kalahari (2 years) - PV 3930 Florida (1 year) - PV 3930 Florida (2 years) - Renault 03-10-104 - Stellantis B62 0300 - VW 50123				49 CFR §571.302 (FMVSS 302) - 宝马 GS 93042 - 通用汽车 GMW 16233 - 奔驰 DBL 5562 - 室外耐候性测试 亚利桑那 24 个月 SAE J1976 - 室外耐候性测试 佛罗里达 24 个月 SAE J1976 - PV 3929 卡拉哈里试验（1 年） - PV 3929 卡拉哈里试验（2 年） - PV 3930 佛罗里达试验（1 年） - PV 3930 佛罗里达试验（2 年） - 雷诺 03-10-104 - Stellantis B62 0300 - VW 50123			

THERMOLAST® K | 热塑宝 K

Series 系列

UV/LD/b

The UV/LD/b series is your material solution for applications requiring optimized mechanics and UV resistance. The compounds are suitable for automotive exterior applications with adhesion to PP. They are available in black.

UV/LD/b 系列材料解决方案适用于要求卓越机械性能和抗紫外线的应用。该系列化合物适用于对 PP 有包胶性的汽车外饰应用，并提供黑色可选。

Processing Method : Extrusion, Injection Molding | 加工方法 : 挤塑, 注塑成型

Compound Name	化合物名称	Hardness	硬度	Color	颜色	Adhesion	包胶
TPxLDZ		30 – 80 Shore A / 35 Shore D		Black	黑色	PP	
Typical Applications				典型应用			
- Automotive Exterior - Brake lights - Cowls gaskets - Function and design elements - Head lights - Roof racks - Water deflectors - Window encapsulations				- 汽车外饰 - 刹车灯 - 通风隔栅垫片 - 功能和设计应用 - 前大灯 - 车顶架 - 导水器 - 窗密封件			
Material Advantages				材料属性			
- Adhesion to PP - In-process recycling possible - Optimized compression set - Optimized mechanical properties - Surface mapping - Weather resistant, suitable for automotive exterior				- 包胶 PP - 可在制造过程中回收利用 - 出色的压缩永久变形性能 - 优异的机械性能 - 表面映射 - 耐候性，适合汽车外饰			
Regulations / Approvals				法规 / 批准			
49 CFR §571.302 (FMVSS 302) - BMW GS 93042 - DIN 75201-B – Fogging - Ford WSS-M2D517 - GM GMW 15702 - GM GMW 16233 - Mercedes-Benz DBL 5562 - Outdoor Weathering Arizona 24 month SAE J1976 - Outdoor Weathering Florida 24 month SAE J1976 - PV 3929 Kalahari (1 year) - PV 3929 Kalahari (2 years) - PV 3930 Florida (1 year) - PV 3930 Florida (2 years) - Renault 03-10-104 - Stellantis B62 0300 - Stellantis MS-DC-242 - UL 94 HB - VDA 270 B3 – Odor - VW 50123				49 CFR §571.302 (FMVSS 302) - 宝马 GS 93042 - DIN 75201-B – 雾化值 - 福特 WSS-M2D517 - 通用汽车 GMW 15702 - 通用汽车 GMW 16233 - 奔驰 DBL 5562 - 室外耐候性测试 亚利桑那 24 个月 SAE J1976 - 室外耐候性测试 佛罗里达 24 个月 SAE J1976 - PV 3929 卡拉哈里试验（1 年） - PV 3929 卡拉哈里试验（2 年） - PV 3930 佛罗里达试验（1 年） - PV 3930 佛罗里达试验（2 年） - 雷诺 03-10-104 - Stellantis B62 0300 - Stellantis MS-DC-242 - UL 94 HB - VDA 270 B3 – 气味 - VW 50123			

THERMOLAST® K | 热塑宝 K

Series 系列

VS/AD/HM

The VS/AD/HM series is your material solution for applications with velvety surfaces and wear high resistance requirements. It convinces by its adhesion properties to polar thermoplastics as well as by its resistance to nonpolar substances, especially sebum skin grease and skin oils. The compounds are available in black and natural colors. Natural color variants can be colored in many different ways.

VS/AD/HM 系列材料解决方案适用于要求绒面触感和高度耐磨性应用。包胶极性热塑性塑料材料 具有包胶性，对非极性物质（尤其是皮肤油脂和护肤油）具有耐受性。该系列化合物有黑色和本色可选。本色产品系列可用多种不同方式着色。

Processing Method : Extrusion, Injection Molding | 加工方法 : 挤塑, 注塑成型

Compound Name	化合物名称	Hardness	硬度	Color	颜色	Adhesion	包胶
TCxCEN		40 – 80 Shore A		Natural	本色	ABS, ASA, PA, PC, PC/ABS, SAN	
TCxCEU		60 – 80 Shore A		Natural	本色		
TCxCEZ		40 – 80 Shore A		Black	黑色		
Typical Applications				典型应用			
- Automotive interior - Car mats - Cell phone covers - Earphones - Function and design elements - Handles (tools and power tools, etc.) - Remote controls - Soft touch surface (thumb wheels, push buttons, switches) - Wearables				- 汽车内饰 - 车垫 - 手机套 - 耳机 - 功能和设计应用 - 手柄（手动工具和电动工具等） - 遥控器 - 柔软的表面触感（拨轮、按键、开关） - 可穿戴设备			
Material Advantages				材料属性			
- Abrasion resistance - Adhesion to ABS, ASA, PA, PC, PC/ABS, SAN - Adhesion to PA6 and PA12 - Halogen content (chlorine + bromine) < 900 ppm - Optimized mechanical properties - Resistance to skin oils, sunscreen or olive oil - Scratch resistance - Soft, velvety feel				- 耐磨性 - 包胶 ABS、ASA、PA、PC、PC/ABS、SAN - 包胶 PA6 和 PA12 - 卤素含量（氯+溴）< 900 ppm - 优异的机械特性能 - 耐皮肤油脂、防晒霜或橄榄油 - 耐刮擦 - 天鹅绒般柔软触感			
Regulations / Approvals				法规 / 批准			
- BMW GS 93042 - ISO 10993-10 (Skin irritation) - Mercedes-Benz DBL 5562 - Renault 03-10-104 - Stellantis B62 0300 - Stellantis MS-DC-242 - TESLA TM-1010 - UL 94 HB - VW 50123				- 宝马 GS 93042 - ISO 10993-10（皮肤刺激） - 奔驰 DBL 5562 - 雷诺 03-10-104 - Stellantis B62 0300 - Stellantis MS-DC-242 - TESLA TM-1010 - UL 94 HB - VW 50123			

THERMOLAST® R | 凯柏胶宝®R

Series 系列

RC/GP/FG

The RC/GP/FG series is your material solution for a variety of applications with a recycling content above 70%. It fullfills requirements for automotive applications. The compounds are available in black.

RC/GP/FG 含有超过 70% 的回收成分，是各种应用绝佳的材料解决方案。该系列化合物符合汽车应用的要求，同时提供黑色可选。

Processing Method : Extrusion, Injection Molding | 加工方法 : 挤塑, 注塑成型

Compound Name	化合物名称	Hardness 硬度	Color 颜色	Adhesion 包胶
RRxGPZ		25 – 95 Shore A	Black 黑色	PP
Typical Applications	典型应用			
2-component seals for doors - Active Grill Shutter (AGS) - Air guide elements - Handles (tools and power tools, etc.) - HVAC applications - Interior mats, e.g. floor, console, dashboard and door mats				- 车门双组份密封件 - 主动式格栅 (AGS) - 导风元件 - 手柄（手动工具和电动工具等） - HVAC 应用 - 内饰脚垫，例如：地垫、仪表盘、仪表板和车门防滑垫
Material Advantages	材料属性			
- Adhesion to PP - Controlled level of emission & odor, suitable for automotive interior - Dry haptics - In-process recycling possible - Recycled raw material content - Recycling-specific raw material influences are possible - Reduced PCF compared to virgin compound - Soft touch surface - Sustainable material				- 包胶 PP - 可控的排放和气味水平，适合汽车内饰 - 干爽触感 - 可持续利用的材料 - 回收原材料含量 - 与原始材料相比，降低了生产碳足迹 - 回收专用的原材料会对化合物带来影响 - 柔软的表面触感 - 可在制造过程中回收利用

THERMOLAST® R | 凯柏胶宝®R

Series 系列

RC/UV/AP

The RC/UV/AP series is your material solution with a post-consumer recycled content of 15-40% (hardness-dependent) for applications requiring UV resistance and adhesion to PP for Asia Pacific Market. The compounds are suitable for automotive exterior applications and are available in black.

RC/UV/AP 含有 15-40%（取决于硬度）的消费后回收成分，可抗UV紫外线和与PP包胶，是亚太市场应用的绝佳材料解决方案。这些化合物适用于汽车外饰应用，并且有黑色可供选择。

Processing Method : Injection Molding | 加工方法 : 注塑成型

Compound Name	化合物名称	Hardness 硬度	Color 颜色	Adhesion 包胶
RCxOWM		50 – 90 Shore A	Black 黑色	PP
Typical Applications	典型应用			
- Applications for new mobility - Automotive Exterior - Covers - Cowls gaskets - Door and window seals for outdoor applications - End caps - Roof rack seals - Underbody applications - Water deflector - Window encapsulations				- 全新移动出行的应用 - 汽车外饰 - 罩盖 - 通风隔栅垫片 - 户外应用门窗密封条 - 端盖 - 车顶架密封件 - 底盘应用 - 导水器 - 窗密封件
Material Advantages	材料属性			
- Adhesion to PP - Low density - Recycled raw material content - Recycling-specific raw material influences are possible - Temperature stability up to 90 °C - Weather resistant, suitable for automotive exterior				- 包胶 PP - 低密度 - 回收原材料含量 - 回收专用的原材料会对化合物带来影响 90°C 下的温度稳定性 - 耐候性，适合汽车外饰

THERMOLAST® V | 热塑宝 V

Series 系列

LTP

The LTP series is your material solution for applications with sealing function and temperature resistance requirements. The compounds are characterized by their adhesion to PP. They are available in black and natural colors. Natural color variants can be colored in many different ways.

LTP 系列材料解决方案适用于要求密封性和耐高温应用。这类化合物具有包胶 PP 的特点。可选黑色和本色。本色产品系列可用多种不同方式着色。

Processing Method : Injection Molding | 加工方法 : 注塑成型

Compound Name	化合物名称	Hardness 硬度	Color 颜色	Adhesion 包胶
TVxLVN TVxLVZ		50 – 90 Shore A 50 – 90 Shore A	Natural Black 本色 黑色	pp
Typical Applications	典型应用			
- Applications in e-mobility - Bumpers - Fastening - Grommets - Mechanical components - Seals				- 电动汽车应用 - 保险杠 - 紧固件 - 垫圈 - 机械部件 - 密封件
Material Advantages	材料属性			
- Adhesion to PP - Hysteresis - In-process recycling possible - Long-term sealing function - Optimized compression set - Optimized mechanical properties - Resistance to polar coolants				- 包胶 PP - 滞后 - 可在制造过程中回收利用 - 长期密封功能 - 出色的压缩永久变形性能 - 优异的机械特性能 - 耐极性冷却剂
Regulations / Approvals	法规 / 批准			
- BMW GS 93042 - GM GMW15702 - Mercedes-Benz DBL 5562 - Stellantis B62 0300 - UL 94 HB - VW 50123				- 宝马 GS 93042 - 通用汽车 GMW15702 - 奔驰 DBL 5562 - Stellantis B62 0300 - UL 94 HB - VW 50123

THERMOLAST® V | 热塑宝 V

Series 系列

LTP/PA

The LTP/PA range is your material solution for sealing applications and temperature resistance requirements. The compounds are characterized by their adhesion to PA. The compounds are available in black and natural. Natural color variants can be colored in a variety of ways.

LTP/PA 系列材料解决方案适用于要求密封性和耐高温应用。这类化合物具有包胶 PA 的特点。该化合物产品可选黑色和本色。本色产品系列可用多种不同方式着色。

Processing Method : Injection Molding | 加工方法 : 注塑成型

Compound Name	化合物名称	Hardness 硬度	Color 颜色	Adhesion 包胶
TVxVAN TVxVAZ		60 – 80 Shore A 50 – 80 Shore A	Natural Black 本色 黑色	pp
Typical Applications	典型应用			
- Applications in e-mobility - Bumpers - Fastening - Grommets - Mechanical components - Seals				- 电动汽车应用 - 保险杠 - 紧固件 - 垫圈 - 机械部件 - 密封件
Material Advantages	材料属性			
- Adhesion to PA6 and PA6.6 - Adhesion to PA12 - Hysteresis - In-process recycling possible - Long-term sealing function - Optimized compression set - Optimized mechanical properties - Resistance to polar coolants				- 包胶 PA6 和 PA6.6 - 包胶 PA12 - 滞后 - 可在制造过程中回收利用 - 长期密封功能 - 出色的压缩永久变形性能 - 优异的机械特性能 - 耐极性冷却剂
Regulations / Approvals	法规 / 批准			
- BMW GS 93042 - Mercedes-Benz DBL 5562 - UL 94 HB - VW 50123				- 宝马 GS 93042 - 奔驰 DBL 5562 - UL 94 HB - VW 50123

Series 系列

VS/AD1

The VS/AD1 series is your material solution for consumer electronics applications. It is characterized by a silky and velvety surface. The compounds convince by their adhesion to polar thermoplastics such as ABS, PC or PC/ABS. They are available in black and natural. Naturally colored variants can be coloured in many different ways.

VS/AD1 系列材料解决方案适用于消费电子产品。该化合物具有天鹅绒般的丝滑触感并对 ABS、PC 或 PC/ABS 等极性热塑性材料拥有包胶性能的特点。可选黑色和本色。本色产品系列可用多种不同方式着色。

Processing Method : Extrusion, Injection Molding | 加工方法 : 挤塑, 注塑成型

Compound Name	化合物名称	Hardness 硬度	Color 颜色	Adhesion 包胶
CCxOCN		60 – 80 Shore A	Natural	
CCxOCZ		60 – 80 Shore A	Black	ABS, ASA, PA, PC/ABS, SAN

Typical Applications	典型应用
▪ Attenuators for electronic housings ▪ Cell phone covers ▪ Earphones ▪ Games consoles ▪ Handles (tools and power tools, etc.) ▪ Handles and grips for consumer applications ▪ Remote controls ▪ Seals ▪ Wearables	▪ 电器外壳消声器 ▪ 手机套 ▪ 耳机 ▪ 游戏主机 ▪ 手柄（手动工具和电动工具等） ▪ 消费品应用的手柄和把手 ▪ 遥控器 ▪ 密封件 ▪ 可穿戴设备

Material Advantages	材料属性
▪ Adhesion to ABS, ASA, PC, PC/ABS, SAN ▪ Color consistency ▪ Colorable ▪ Insert molding possible ▪ Resistance to skin oils, sunscreen or olive oil ▪ Soft touch surface ▪ Soft, velvety feel	▪ 包胶 ABS、ASA、PC、PC/ABS、SAN ▪ 色彩一致性 ▪ 可着色 ▪ 可嵌入成型 ▪ 耐皮肤油脂、防晒霜或橄榄油 ▪ 柔软的表面触感 ▪ 天鹅绒般柔软触感

Regulations / Approvals	法规 / 批准
▪ 49 CFR §571.302 (FMVSS 302) ▪ BMW GS 93042 ▪ DIN 75201-B – Fogging ▪ DIN EN ISO 105-B06 Method 3 ▪ Mercedes-Benz DBL 5562 ▪ Stellantis B62 0300 ▪ UL 94 HB ▪ VDA 270 B3 - Odor ▪ VW 50123	▪ 49 CFR §571.302 (FMVSS 302) ▪ 宝马 GS 93042 ▪ DIN 75201-B – 雾化值 ▪ DIN EN ISO 105-B06 Method 3 ▪ 奔驰 DBL 5562 ▪ Stellantis B62 0300 ▪ UL 94 HB ▪ VDA 270 B3 – 气味 ▪ VW 50123

Series 系列

HTR/OR

The HTR/OR series is your material solution for applications requiring temperature and oil resistance. The compounds are available in black and natural colors. Natural colored variants can be colored in many different ways.

HTR/OR 系列材料解决方案适用于耐极端温度和耐油性应用。这类化合物可选黑色和本色。本色产品系列可用多种不同方式着色。

Processing Method : Injection Molding | 加工方法 : 注塑成型

Compound Name	化合物名称	Hardness 硬度	Color 颜色	Adhesion 包胶
HXXIDN		60 – 80 Shore A	Natural	
HXXIDZ		60 – 80 Shore A	Black	PBT

Typical Applications	典型应用
▪ Bumpers ▪ Closures ▪ Fastenings ▪ Flexible Connections ▪ Mechanical components ▪ Seals ▪ Seals for housings	▪ 保险杠 ▪ 封口 ▪ 紧固件 ▪ 柔性连接器 ▪ 机械部件 ▪ 密封件 ▪ 机壳密封件

Material Advantages	材料属性
▪ Adhesion to PBT ▪ In-process recycling possible ▪ Oil resistant TPV ▪ Resistance to engine and gear oils ▪ Resistance to grease and oils ▪ Temperature stability up to 150 °C ▪ Thermoplastic alternative to elastomers	▪ 包胶 PBT ▪ 可在制造过程中回收利用 ▪ 耐油 TPV ▪ 耐发动机和齿轮油脂 ▪ 耐油脂 ▪ 150°C 下的温度稳定性 ▪ 弹性体的热塑性替代品



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