



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和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。



Regional Headquarters
区域总部

Buford (GA) USA
布福德(乔治亚州)/美国



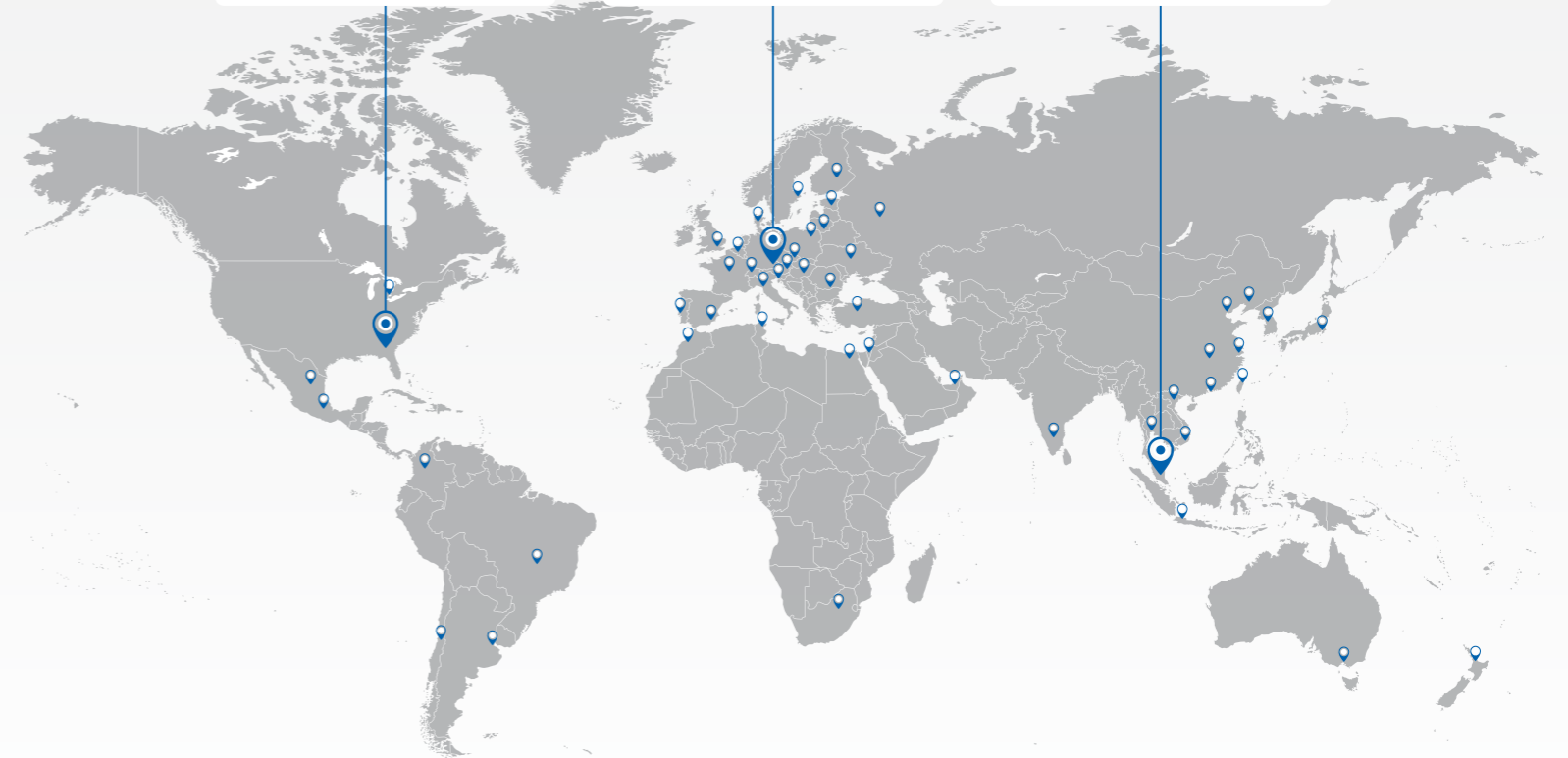
Headquarters
总部

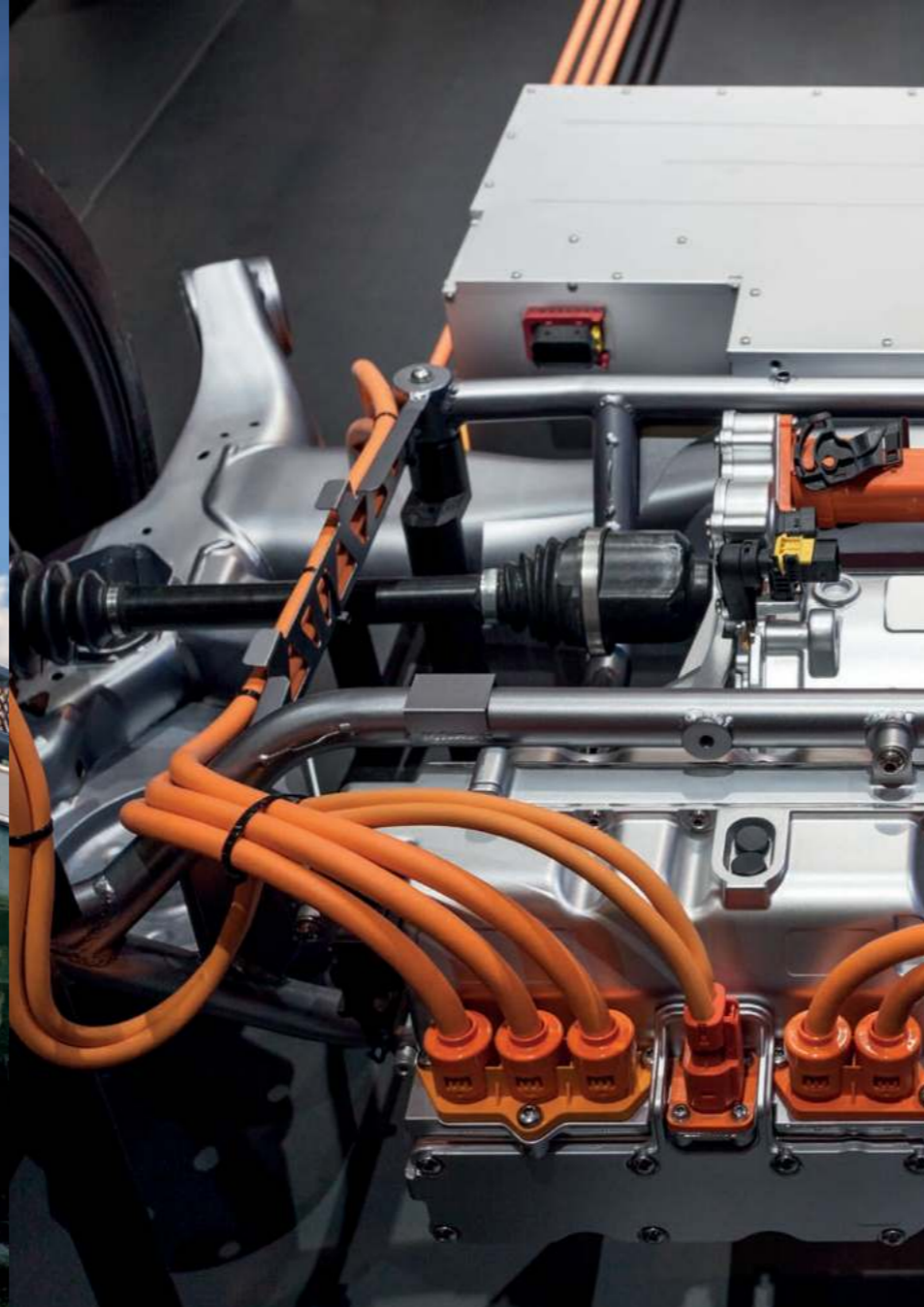
Waldkraiburg GERMANY
瓦尔德克赖堡/德国



Regional Headquarters
区域总部

Kuala Lumpur MALAYSIA
吉隆坡/马来西亚





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

- 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
- 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

- 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
- 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.

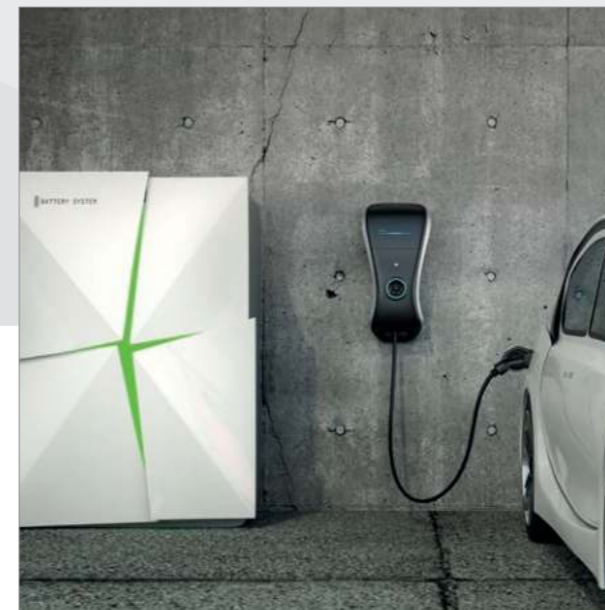
在自动驾驶过程中，汽车内饰对驾驶体验的影响更重要，TPE 依靠降噪、卓越的视觉和触摸感等特性，可为汽车带来更多附加值。



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。

请告诉我您在产品创新时遇到的挑战，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

Sustainability is not just a buzzword at KRAIBURG TPE, it is a principle we live by. With us you are choosing a partner who takes on responsibility for the environment and society. Today and tomorrow. For example, we do not use palm oil in the materials we produce.

Our compounds are PVC-free, halogen-free and recyclable.

- Certified worldwide in accordance with ISO 14001 and ISO 9001
- Headquarters in Germany certified in accordance with ISO 50001
- EH&S management, reporting & auditing
- Systematic energy management
- Annually renewed environmental protection and occupational safety program
- Selection of raw materials suppliers based on quality and environmental impact

在凯柏胶宝®，可持续发展不仅仅是一个时下流行的概念，更是我们身体力行的原则。选择我们，您将会拥有一位对环境、对社会有责任有担当的合作伙伴，不止当下，还有未来。例如，我们生产的材料中不会使用棕榈油。

我们的化合物中不含PVC、卤素，并且可以回收利用。

- 全球所有生产基地皆符合 ISO 14001 和 ISO 9001 认证标准
- 德国总部符合 ISO 50001 认证标准
- EH&S 管理、报告和审计
- 系统的能源管理
- 每年更新环境保护和职业安全计划
- 根据质量和环境影响选择原材料供应商



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
AD1	ABS, PC, PC/ABS
AD1/CS	ABS, PC, PC/ABS
AD/PA	PA
AD/PA/CS	PA
AD/PA/CS2	PA
AD/POM	POM
FG/SF	PP
GP/FG	PP
GP/HF	PP
LW/CS/UV	PP
LW/PA	PA
LW/UV	PP
SCR	PP
UV/AD2	ABS, ASA, PC, PC/ABS, PMMA
UV/AP	PP
UV/FG	PP
UV/HF	PP
UV/HF/SF	PP
UV/LD/b	PP
VS/AD/HM	ABS, ASA, PA, PC, PC/ABS, SAN

热塑宝 A THERMOLAST® A	包胶材料 Adhesion Materials
UV/AD1	ABS, PC, PC/ABS

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

尼塑宝® For Tec E®	包胶材料 Adhesion Materials
AD/PAX/CR	PA

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 自然色	ABS, PC, PC/ABS
TCxMLZ		50 – 80 Shore A	Black 黑色	
TCxMSB		30 – 40 Shore A	Natural 自然色	
TCxMSZ		30 – 40 Shore A	Black 黑色	

Typical Applications	典型应用
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- | | |
|--|---|
| <ul style="list-style-type: none"> Bumpers Door sills Function and design elements Grommets Handles Seals Soft touch surface (thumb wheels, push buttons, switches) Thumb wheels | <ul style="list-style-type: none"> 保险杠 门槛 功能和设计要素 垫圈 手柄 密封件 软质表面（拨轮、按键、开关） 拨轮 |
|--|---|

Material Advantages	材料属性
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- | | |
|---|---|
| <ul style="list-style-type: none"> Adhesion to PC, ABS, PC/ABS, ASA, SAN Colorable Controlled level of emission & odor, suitable for automotive interior Insert molding possible Soft touch surface Soft, non-sticky haptic | <ul style="list-style-type: none"> 包胶 PC、ABS、PC/ABS、ASA、SAN 可染色 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
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- | | |
|--|--|
| <ul style="list-style-type: none"> 49 CFR §571.302 (FMVSS 302) BMW GS 93042 Daimler DBL 5562 DIN 75201-B - Fogging DIN EN ISO 105-B06 Method 3 Ford WSS-M2D507 PSA B62 0300 Renault 03-10-104 UL 94 HB VDA 270 B3 - Odor VW 50123 | <ul style="list-style-type: none"> 49 CFR §571.302 (FMVSS 302) BMW GS 93042 Daimler DBL 5562 DIN 75201-B - 雾化值 DIN EN ISO 105-B06 Method 3 Ford WSS-M2D507 PSA B62 0300 Renault 03-10-104 UL 94 HB VDA 270 B3 - 气味 VW 50123 |
|--|--|

THERMOLAST® K | 热塑宝 K

Series 系列	The AD1/CS series is your material solution for applications with optimized compression set and 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/CS	AD1/CS 系列材料解决方案适用于要求良好压缩形变特性和包胶极性热塑性材料（如 ABS、PC 和 PC/ABS）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 – 75 Shore A	Natural 自然色	ABS, PC, PC/ABS
TPxVCZ		50 – 80 Shore A	Black 黑色	

Typical Applications	典型应用
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- | | |
|---|--|
| <ul style="list-style-type: none"> Bumpers Connectors Function and design elements Grommets Seals Soft touch surface (thumb wheels, push buttons, switches) | <ul style="list-style-type: none"> 保险杠 连接器 功能和设计要素 垫圈 密封件 软质表面（拨轮、按键、开关） |
|---|--|

Material Advantages	材料属性
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- | | |
|--|--|
| <ul style="list-style-type: none"> Adhesion to PBT Adhesion to PC, ABS, PC/ABS, ASA, SAN Optimized compression set Optimized mechanical properties Resilience | <ul style="list-style-type: none"> 包胶 PBT 包胶 PC、ABS、PC/ABS、ASA、SAN 出色的压缩形变特性 优异的机械特性 韧性 |
|--|--|

Regulations / Approvals	法规 / 批准
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- | | |
|--|--|
| <ul style="list-style-type: none"> BMW GS 93042 Daimler DBL 5562 PSA B62 0300 UL 94 HB VW 50123 | <ul style="list-style-type: none"> BMW GS 93042 Daimler DBL 5562 PSA B62 0300 UL 94 HB VW 50123 |
|--|--|

THERMOLAST® K | 热塑宝 K

Series 系列 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。

AD/PA

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 TCxPAZ		20 – 80 Shore A 20 – 80 Shore A		Natural Black	自然色 黑色	PA	

Typical Applications	典型应用
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- Cable clips
- Function and design elements
- Grommets
- Handles
- Seals
- Thumb wheels

Material Advantages

- Adhesion to PA6 and PA6.6, up to 50% glass fiber
- Adhesion to PA12
- Colorable
- Demolding
- Dry haptics
- Halogen content (chlorine + bromine) < 900 ppm
- Optimized flow properties
- Soft touch surface

Regulations / Approvals

- 49 CFR §571.302 (FMVSS 302)
- BMW GS 93042
- Daimler DBL 5562
- DIN 75201-B – Fogging
- DIN EN ISO 105-B06 Method 3
- GM GMW15702
- PSA B62 0300
- Renault 03-10-104
- UL 94 HB
- VW 50123

THERMOLAST® K | 热塑宝 K

Series 系列 The AD/PA/CS series is your material solution for applications with 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包胶 PA 和密封功能应用。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
TCxPCN TCxPCZ		40 – 80 Shore A 35 – 75 Shore A		Natural Black	自然色 黑色	PA	

Typical Applications	典型应用
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- Connectors
- Fastenings
- Grommets
- Handles
- Membranes
- Seals

Material Advantages

- Adhesion to PA6 and PA6.6, up to 50% glass fiber
- Long-term sealing function
- Optimized compression set
- Optimized flow properties
- Optimized mechanical properties

Regulations / Approvals

- 49 CFR §571.302 (FMVSS 302)
- BMW GS 93042
- Daimler DBL 5562
- GM GMW15702
- PSA B62 0300
- Renault 03-10-104
- UL 94 HB
- VW 50123

法规 / 批准

- 49 CFR §571.302 (FMVSS 302)
- BMW GS 93042
- Daimler DBL 5562
- GM GMW15702
- PSA B62 0300
- Renault 03-10-104
- UL 94 HB
- VW 50123

材料属性

- 包胶 PA6 和 PA6.6，玻璃纤维高达 50%
- 长期密封功能
- 出色的压缩形变特性
- 优异的流动性
- 优异的机械特性

典型应用

- 连接器
- 紧固件
- 垫圈
- 手柄
- 薄膜
- 密封件

材料属性

- 包胶 PA6 和 PA6.6，玻璃纤维高达 50%
- 长期密封功能
- 出色的压缩形变特性
- 优异的流动性
- 优异的机械特性

法规 / 批准

- 49 CFR §571.302 (FMVSS 302)
- BMW GS 93042
- Daimler DBL 5562
- GM GMW15702
- PSA B62 0300
- Renault 03-10-104
- UL 94 HB
- VW 50123

THERMOLAST® K | 热塑宝 K

Series 系列 The AD/PA/CS2 Series is your material solution for applications with excellent adhesion to PA as well as outstanding compression set. The compounds are available in natural and black colors. AD/PA/CS2 系列用于需要卓越包胶性能应用的材料解决方案，能包胶 PA，同时具有出色的压缩形变。该化合物拥有自然色和黑色可供选择。

AD/PA/CS2

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
TCxPRN TCxPRZ		40 – 80 Shore A 40 – 80 Shore A		Natural Black	自然色 黑色	PA	

Typical Applications	典型应用
----------------------	------

- Fastenings
- Grommets
- Handles
- Membranes
- Seals

Material Advantages

- Adhesion to PA6 and PA6.6, up to 50% glass fiber
- Colorable
- Insert molding possible
- Optimized compression set

Regulations / Approvals

- Daimler DBL 5562
- PV 3930 Florida (2 years) – Weathering Test
- UL 94 HB

THERMOLAST® K | 热塑宝 K

Series 系列 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。

AD/POM

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 TCxHAZ TCxHBA TCxHBZ		50 – 80 Shore A 50 – 80 Shore A 60 – 70 Shore A 60 – 70 Shore A		Natural Black Natural Black	自然色 黑色 自然色 黑色	POM	

Typical Applications	典型应用
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- Bumpers
- Fastenings
- Function and design elements
- Grommets
- Handles
- Seals
- Thumb wheels

Material Advantages

- Adhesion to POM
- Colorable
- Demolding
- Soft touch surface

Regulations / Approvals

- 49 CFR §571.302 (FMVSS 302)
- BMW GS 93042
- Daimler DBL 5562
- DIN 75201-B – Fogging
- DIN EN ISO 105-B06 Method 3
- Renault 03-10-104
- VDA 270 B3 – Odor
- VW 50123

典型应用

- 保险杠
- 紧固件
- 功能和设计要素
- 垫圈
- 手柄
- 密封件
- 拨轮

材料属性

- 包胶 POM
- 可染色
- 脱模
- 柔软的表面触感

法规 / 批准

- 49 CFR §571.302 (FMVSS 302)
- BMW GS 93042
- Daimler DBL 5562
- DIN 75201-B - 雾化值
- DIN EN ISO 105-B06 Method 3
- Renault 03-10-104
- VDA 270 B3 - 气味
- VW 50123

THERMOLAST® K | 热塑宝 K

Series 系列 The FG/SF series is your material solution for automotive interior applications with special surface appearance and quality requirements. It is characterized by its easy processability. The compounds are available in black. FG/SF 材料解决方案适用于有特殊表面外观和触感要求的汽车内饰。该材料具有易于加工的特点。这类化合物为黑色。

FG/SF

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
- Bumpers
- Car mats
- Function and design elements
- Grip applications
- Soft touch for grips, switches and mats
- Soft touch surface (thumb wheels, push buttons, switches)

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

Regulations / Approvals	法规 / 批准
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- 49 CFR §571.302 (FMVSS 302)
- BMW GS 93042
- Daimler DBL 5562
- DIN 75201-B – Fogging
- DIN EN ISO 105-B06 Method 3
- VDA 270 B3 - Odor
- VW 50123

- 49 CFR §571.302 (FMVSS 302)
- BMW GS 93042
- Daimler DBL 5562
- DIN 75201-B - 雾化值
- DIN EN ISO 105-B06 Method 3
- VDA 270 B3 - 气味
- VW 50123

- 汽车内饰
- 保险杠
- 车垫
- 功能和设计要素
- 把手应用
- 把手、开关和橡胶垫的柔软触感
- 软质表面（拨轮、按键、开关）

- 耐磨性
- 包胶 PP
- 可染色
- 可控的排放和气味水平，适合汽车内饰
- 低密度
- 非粘性表面
- 优异的流动性
- 柔软的表面触感

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 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。

GP/FG

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		20 – 90 Shore A / 32 Shore D		Natural	自然色		
TCxGPZ		20 – 90 Shore A / 33 Shore D		Black	黑色	PP	

Typical Applications	典型应用
----------------------	------

- Bumpers
- Car mats
- Function and design elements
- Handles
- Soft touch surface (thumb wheels, push buttons, switches)

- 保险杠
- 车垫
- 功能和设计要素
- 手柄
- 软质表面（拨轮、按键、开关）

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
- 可染色
- 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
- 柔软的表面触感

Regulations / Approvals	法规 / 批准
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- 49 CFR §571.302 (FMVSS 302)
- BMW GS 93042
- Daimler DBL 5562
- DIN 75201-B - Fogging
- DIN EN ISO 105-B06 Method 3
- Ford WSS-M2D507
- Ford WSS-M2D516
- GM GMW15702
- PSA B62 0300
- PV 3929 Kalahari (1 year) – Weathering Test
- PV 3930 Florida (1 year) – Weathering Test
- Renault 03-10-104
- UL 94 HB
- VDA 270 B3 - Odor
- VW 50123

- 49 CFR §571.302 (FMVSS 302)
- BMW GS 93042
- Daimler DBL 5562
- DIN 75201-B - 雾化值
- DIN EN ISO 105-B06 Method 3
- Ford WSS-M2D507
- Ford WSS-M2D516
- GM GMW15702
- PSA B62 0300
- PV 3929 卡拉哈里试验（1年）- 耐候性测试
- PV 3930 佛罗里达试验（1年）- 耐候性测试
- Renault 03-10-104
- UL 94 HB
- VDA 270 B3 - 气味
- VW 50123

THERMOLAST® K | 热塑宝 K

Series 系列 The GP/HF series is your material solution for automotive interior applications with long flow paths. The compounds are available in black.

GP/HF是您在汽车内饰的材料解决方案，具有高流动特性，提供黑色TPE。

GP/HF

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
TCxOIP-BLCK		60 – 80 Shore A		Black	黑色	PP	

Typical Applications	典型应用
----------------------	------

- Automotive Interior
- Car mats
- Damping elements
- Over molded housing

- 汽车内饰
- 车垫
- 阻尼零件
- 包胶成型外壳

Material Advantages	材料属性
---------------------	------

- Adhesion to PP
- Controlled level of emission & odor, suitable for automotive interior
- Optimized flow properties
- Surface mapping

- 包胶 PP
- 可控的排放和气味水平，适合汽车内饰
- 优异的流动性
- 阻尼零件

Regulations / Approvals	法规 / 批准
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- 49 CFR §571.302 (FMVSS 302)
- DIN 75201-B - Fogging
- DIN EN ISO 105-B06 Method 3
- VDA 270 B3 - Odor

- 49 CFR §571.302 (FMVSS 302)
- DIN 75201-B - 雾化值
- DIN EN ISO 105-B06 Method 3
- VDA 270 B3 - 气味

THERMOLAST® K | 热塑宝 K

Series 系列	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	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。该系列的颜色为黑色。

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
TLxOCW-BLCK		55 – 65 Shore A	Black 黑色	PP
Typical Applications			典型应用	
<ul style="list-style-type: none">Automotive ExteriorCowls gasketsDoor sillsGlass Run ChannelGrommetsSeals			<ul style="list-style-type: none">汽车外饰通风隔栅垫片门槛车窗玻璃导槽垫圈密封件	
Material Advantages			材料属性	
<ul style="list-style-type: none">Adhesion to PPColorableIn-process recycling possibleLow densityNon-sticky surfaceOptimized compression setResilienceUV and weathering resistance			<ul style="list-style-type: none">包胶 PP可染色可在制造过程中回收利用低密度非粘性表面出色的压缩形变特性韧性抗紫外线和耐候性	

THERMOLAST® K | 热塑宝 K

Series 系列	The LW/PA Series is your lightweight material solution for applications with adhesion to PA. The compounds are available in natural and black colors.
LW/PA	LW/PA 系列具有轻质和 PA 包胶的特点，是满足相关领域应用的理想材料选择。可选自然色和黑色。

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
TLxNGG-BLCK		50 – 70 Shore A	Black 黑色	PA
Typical Applications			典型应用	
<ul style="list-style-type: none">BumpersFunction and design elementsGrip applicationsSoft touch			<ul style="list-style-type: none">保险杠功能和设计要素把手应用软触感	
Material Advantages			材料属性	
<ul style="list-style-type: none">Adhesion to PA6 and PA12ColorableDry hapticsLow densitySoft, non-sticky haptic			<ul style="list-style-type: none">包胶 PA6 和 PA12可染色干爽触感低密度柔软不粘的触感	

THERMOLAST® K | 热塑宝 K

Series 系列	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	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。该系列的颜色为黑色。

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	
<ul style="list-style-type: none">Automotive ExteriorBumpersDoor sillsEdge guardFunction and design elementsRoof rimsSoft touchWater deflectorsWindow encapsulations			<ul style="list-style-type: none">汽车外饰保险杠门槛防撞角功能和设计要素车顶架软触感导水器窗密封件	
Material Advantages			材料属性	
<ul style="list-style-type: none">Adhesion to PPColorableIn-process recycling possibleLow densityNon-sticky surfaceUV and weathering resistance			<ul style="list-style-type: none">包胶 PP可染色可在制造过程中回收利用低密度非粘性表面抗紫外线和耐候性	

THERMOLAST® K | 热塑宝 K

Series 系列	The SCR series is your material solution for applications with scratch resistance requirements. The range is characterized by a pleasant feel to the touch. The compounds are available in natural colors and can be colored in many different ways.
SCR	SCR 系列材料解决方案适用于耐刮擦应用。该系列材料具有触感舒适的特点。这类化合物为本色，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
TCxSCE		30 – 80 Shore A	Natural 自然色	PP
Typical Applications			典型应用	
<ul style="list-style-type: none">Car matsFunction and design elementsHandlesSoft touch surface (thumb wheels, push buttons, switches)			<ul style="list-style-type: none">车垫功能和设计要素手柄软质表面（拨轮、按键、开关）	
Material Advantages			材料属性	
<ul style="list-style-type: none">Abrasion resistanceAdhesion to PPColorableControlled level of emission & odor, suitable for automotive interiorOptimized mechanical propertiesSoft, velvety feel			<ul style="list-style-type: none">耐磨性包胶 PP可染色可控的排放和气味水平，适合汽车内饰优异的机械特性天鹅绒般柔软触感	

THERMOLAST® K | 热塑宝 K

Series 系列	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	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。该系列尤其适用于汽车外饰。这类化合物为黑色。

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
TCxMUZ		55 – 85 Shore A	Black 黑色	PC, ABS, PC/ABS, ASA, PMMA
Typical Applications	典型应用			
<ul style="list-style-type: none">A/B/C/D cappings and coversDoor sillsFront trianglesRear spoilersRoof rim coversTrunk openersWater deflectorsWindow encapsulations	<ul style="list-style-type: none">A/B/C/D 柱门槛前三角盖板后扰流汽车行李架行李箱开启器落水条玻璃封边			
Material Advantages	材料属性			
<ul style="list-style-type: none">Adhesion to PC, ABS, PC/ABS, ASA, SANOptimized flow propertiesOptimized mechanical propertiesSurface mappingTemperature stability up to 90 °CWeather resistant, suitable for automotive exterior	<ul style="list-style-type: none">包胶 PC、ABS、PC/ABS、ASA、SAN优异的流动性优异的机械特性表面映射90°C 下的温度稳定性耐候性，适合汽车外			
Regulations / Approvals	法规 / 批准			
<ul style="list-style-type: none">PV 3929 Kalahari (2 years) – Weathering TestPV 3930 Florida (2 years) – Weathering Test	<ul style="list-style-type: none">PV 3929 卡拉哈里试验（2 年）- 耐候性测试PV 3930 佛罗里达试验（2 年）- 耐候性测试			

THERMOLAST® K | 热塑宝 K

Series 系列	The UV/AP series is your material solution for applications with UV resistance requirements. It is suitable for automotive exterior applications. The compounds are listed according to GM Standard GMW 16233 and are available in black.
UV/AP	UV/AP 系列材料解决方案适用于抗紫外线应用。该系列适用于汽车外饰。该系列产品符合 GM 标准 GMW 16233，颜色为黑色。

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
TCxUVZ		50 – 70 Shore A	Black 黑色	PP
Typical Applications	典型应用			
<ul style="list-style-type: none">Roof rimsWater deflectorsWindow encapsulations	<ul style="list-style-type: none">车顶架导水器窗密封件			
Material Advantages	材料属性			
<ul style="list-style-type: none">Adhesion to PPIn-process recycling possibleUV and weathering resistanceWeather resistant, suitable for automotive exterior	<ul style="list-style-type: none">包胶 PP可在制造过程中回收利用抗紫外线和耐候性耐候性，适合汽车外饰			
Regulations / Approvals	法规 / 批准			
<ul style="list-style-type: none">GM GMW17374	<ul style="list-style-type: none">GM GMW17374			

THERMOLAST® K | 热塑宝 K

Series 系列	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	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，颜色为黑色。

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
TCxLEZ		30 – 90 Shore A / 35 Shore D	Black 黑色	PP
Typical Applications	典型应用			
<ul style="list-style-type: none">Automotive ExteriorBumpersCowls gasketsDoor sillsFunction and design elementsRoof rimsStatic window encapsulationsWater deflectors	<ul style="list-style-type: none">汽车外饰保险杠通风隔栅垫片门槛功能和设计要素车顶架静态玻璃封边导水器			
Material Advantages	材料属性			
<ul style="list-style-type: none">Adhesion to PPIn-process recycling possibleOptimized flow propertiesOptimized mechanical propertiesSurface mappingWeather resistant, suitable for automotive exterior	<ul style="list-style-type: none">包胶 PP可在制造过程中回收利用优异的流动性优异的机械特性表面映射耐候性，适合汽车外饰			
Regulations / Approvals	法规 / 批准			
<ul style="list-style-type: none">49 CFR §571.302 (FMVSS 302)BMW GS 93042Daimler DBL 5562GM GMW 16233Outdoor Weathering Arizona 24 month SAE J1976Outdoor Weathering Florida 24 month SAE J1976PSA B62 0300PV 3929 Kalahari (1 year) – Weathering TestPV 3929 Kalahari (2 years) – Weathering TestPV 3930 Florida (1 year) – Weathering TestPV 3930 Florida (2 years) – Weathering TestRenault 03-10-104VW 50123	<ul style="list-style-type: none">49 CFR §571.302 (FMVSS 302)BMW GS 93042Daimler DBL 5562GM GMW 16233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 J1976PSA B62 0300PV 3929 卡拉哈里试验（1 年）- 耐候性测试PV 3929 卡拉哈里试验（2 年）- 耐候性测试PV 3930 佛罗里达试验（1 年）- 耐候性测试PV 3930 佛罗里达试验（2 年）- 耐候性测试Renault 03-10-104VW 50123			

THERMOLAST® K | 热塑宝 K

Series 系列 The UV/HF series is your material solution for applications with long flow paths and requirements for UV resistance. The compounds are suitable for automotive exterior applications and available in black. UV/HF 系列材料解决方案适用于长流道和有抗紫外线要求的应用。该系列适用于汽车外饰，颜色为黑色。

UV/HF

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
TCxWEZ		50 – 80 Shore A		Black	黑色	PP	

Typical Applications	典型应用
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- Automotive Exterior
- Bumpers
- Cowls gaskets
- Door sills
- Function and design elements
- Roof rims
- Water deflectors
- Window encapsulations

Material Advantages	材料属性
---------------------	------

- Adhesion to PP
- In-process recycling possible
- Optimized flow properties
- Surface mapping
- Weather resistant, suitable for automotive exterior

Regulations / Approvals	法规 / 批准
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- 49 CFR §571.302 (FMVSS 302)
- BMW GS 93042
- Daimler DBL 5562
- DIN 75201-B – Fogging
- Ford WSS-M2D517
- Outdoor Weathering Arizona 24 month SAE J1976
- Outdoor Weathering Florida 24 month SAE J1976
- PSA B62 0300
- PV 3929 Kalahari (1 year) – Weathering Test
- PV 3929 Kalahari (2 years) – Weathering Test
- PV 3930 Florida (1 year) – Weathering Test
- PV 3930 Florida (2 years) – Weathering Test
- Renault 03-10-104
- VDA 270 B3 - Odor
- VW 50123

Typical Applications	典型应用
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- 汽车外饰
- 保险杠
- 通风隔栅垫片
- 门槛
- 功能和设计要素
- 车顶架
- 导水器
- 窗密封件

Material Advantages	材料属性
---------------------	------

- 包胶 PP
- 可在制造过程中回收利用
- 优异的流动性
- 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
- Daimler DBL 5562
- DIN 75201-B - 雾化值
- Ford WSS-M2D517
- 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
- PSA B62 0300
- PV 3929 卡拉哈里试验（1 年）- 耐候性测试
- PV 3929 卡拉哈里试验（2 年）- 耐候性测试
- PV 3930 佛罗里达试验（1 年）- 耐候性测试
- PV 3930 佛罗里达试验（2 年）- 耐候性测试
- Renault 03-10-104
- VDA 270 B3 - 气味
- VW 50123

THERMOLAST® K | 热塑宝 K

Series 系列 The UV/HF/SF series is your material solution for applications with long flow paths, requirements for UV resistance and surface quality. The compounds are suitable for automotive exterior applications and available in black. UV/HF/SF 系列材料解决方案适用于长流道和有抗紫外线及表面触感要求的应用。该系列适用于汽车外饰，颜色为黑色。

UV/HF/SF

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
TCxHFZ		50 – 90 Shore A		Black	黑色	PP	

Typical Applications	典型应用
----------------------	------

- Static window encapsulations
- Water deflectors
- Window encapsulations

Material Advantages	材料属性
---------------------	------

- Adhesion to PP
- In-process recycling possible
- Optimized flow properties
- Surface mapping
- Weather resistant, suitable for automotive exterior

Regulations / Approvals	法规 / 批准
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- 49 CFR §571.302 (FMVSS 302)
- BMW GS 93042
- Daimler DBL 5562
- DIN 75201-B – Fogging
- Ford WSS-M2D517
- GM GMW 16233
- Outdoor Weathering Arizona 24 month SAE J1976
- Outdoor Weathering Florida 24 month SAE J1976
- PSA B62 0300
- PV 3929 Kalahari (1 year) – Weathering Test
- PV 3929 Kalahari (2 years) – Weathering Test
- PV 3930 Florida (1 year) – Weathering Test
- PV 3930 Florida (2 years) – Weathering Test
- Renault 03-10-104
- VDA 270 B3 - Odor
- VW 50123

Typical Applications	典型应用
----------------------	------

- 静态玻璃封边
- 导水器
- 窗密封件

Material Advantages	材料属性
---------------------	------

- 包胶 PP
- 可在制造过程中回收利用
- 优异的流动性
- 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
- Daimler DBL 5562
- DIN 75201-B - 雾化值
- Ford WSS-M2D517
- GM GMW 16233
- 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
- PSA B62 0300
- PV 3929 卡拉哈里试验（1 年）- 耐候性测试
- PV 3929 卡拉哈里试验（2 年）- 耐候性测试
- PV 3930 佛罗里达试验（1 年）- 耐候性测试
- PV 3930 佛罗里达试验（2 年）- 耐候性测试
- Renault 03-10-104
- VDA 270 B3 - 气味
- 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 and 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。该系列适用于汽车外饰，颜色为黑色。

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
TPxLDZ		30 – 80 Shore A / 35 Shore D		Black	黑色	PP	

Typical Applications

- Automotive Exterior
- Cowls gaskets
- Function and design elements
- Roof rims
- Water deflectors
- Window encapsulations

Material Advantages

- Adhesion to PP
- Heat stability
- In-process recycling possible
- Optimized compression set
- Optimized mechanical properties
- Surface mapping
- Weather resistant, suitable for automotive exterior

Regulations / Approvals

- 49 CFR §571.302 (FMVSS 302)
- BMW G5 93042
- Daimler DBL 5562
- DIN 75201-B – Fogging
- FCA MS-DC-242
- Ford WSS-M2D517
- GM GMW 15702
- GM GMW 16233
- Outdoor Weathering Arizona 24 month SAE J1976
- Outdoor Weathering Florida 24 month SAE J1976
- PSA B62 0300
- PV 3929 Kalahari (1 year) – Weathering Test
- PV 3929 Kalahari (2 years) – Weathering Test
- PV 3930 Florida (1 year) – Weathering Test
- PV 3930 Florida (2 years) – Weathering Test
- Renault 03-10-104
- UL 94 HB
- VDA 270 B3 – Odor
- VW 50123

典型应用

- 汽车外饰
- 通风隔栅垫片
- 功能和设计要素
- 车顶架
- 导水器
- 窗密封件

材料属性

- 包胶 PP
- 热稳定性
- 可在制造过程中回收利用
- 出色的压缩形变特性
- 优异的机械特性
- 表面映射
- 耐候性，适合汽车外饰

法规 / 批准

- 49 CFR §571.302 (FMVSS 302)
- BMW G5 93042
- Daimler DBL 5562
- DIN 75201-B - 雾化值
- FCA MS-DC-242
- Ford WSS-M2D517
- GM GMW 15702
- GM GMW 16233
- 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
- PSA B62 0300
- PV 3929 卡拉哈里试验（1 年）- 耐候性测试
- PV 3929 卡拉哈里试验（2 年）- 耐候性测试
- PV 3930 佛罗里达试验（1 年）- 耐候性测试
- PV 3930 佛罗里达试验（2 年）- 耐候性测试
- Renault 03-10-104
- 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 resistance requirements. It convinces by its adhesion properties to polar thermoplastics as well as by its resistance to chemicals, especially sebum skin grease. 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耐磨性应用。它对极性热塑性材料具有包胶性，对化学品（尤其是皮脂润滑脂）具有耐受性。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
TCxCEN TCxCEU TCxCEZ		60 – 80 Shore A 60 – 80 Shore A 60 – 80 Shore A		Natural Natural Black	自然色 自然色 黑色	ABS, ASA, PA, PC, PC/ABS, SAN	

Typical Applications

- Automotive Interior
- Car mats
- Function and design elements
- Handles
- Soft touch surface (thumb wheels, push buttons, switches)

Material Advantages

- Abrasion resistance
- Adhesion to PA6 and PA12
- Adhesion to PC, ABS, PC/ABS, ASA, SAN
- Halogen content (chlorine + bromine) < 900 ppm
- Optimized mechanical properties
- Resistance to skin oils, sunscreen or olive oil
- Scratch resistance
- Soft, velvety feel

Regulations / Approvals

- 49 CFR §571.302 (FMVSS 302)
- BMW G5 93042
- Daimler DBL 5562
- DIN 75201-B – Fogging
- DIN EN ISO 105-B06 Method 3
- PSA B62 0300
- Renault 03-10-104
- UL 94 HB
- VDA 270 B3 – Odor
- VW 50123

典型应用

- 汽车内饰
- 车垫
- 功能和设计要素
- 手柄
- 软质表面（拨轮、按键、开关）

材料属性

- 耐磨性
- 包胶 PA6 和 PA12
- 包胶 PC、ABS、PC/ABS、ASA、SAN
- 卤素含量（氯+溴）< 900 ppm
- 优异的机械特性
- 耐皮肤油脂、防晒霜或橄榄油
- 耐刮擦
- 天鹅绒般柔软触感

法规 / 批准

- 49 CFR §571.302 (FMVSS 302)
- BMW G5 93042
- Daimler DBL 5562
- DIN 75201-B - 雾化值
- DIN EN ISO 105-B06 Method 3
- PSA B62 0300
- Renault 03-10-104
- UL 94 HB
- VDA 270 B3 - 气味
- VW 50123

Thermolast® A | 热塑宝 A

Series 系列	The UV/AD1 series is your material solution for applications requiring UV resistance and adhesion to polar thermoplastics such as PC, ABS and PC/ABS. It is particularly suitable for automotive exterior applications. The compounds are available in black and natural colors. Natural color variants can be colored in many different ways.
UV/AD1	UV/AD1 系列材料解决方案适用于抗紫外线和包胶极性热塑性材料（如 ABS、PC 和 PC/ABS）应用。该系列尤其适用于汽车外饰。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
TAxAOZ		60 – 80 Shore A	Black 黑色	ABS, PC, PC/ABS
Typical Applications			典型应用	
<ul style="list-style-type: none">Automotive ExteriorBumpersFasteningsHandlesStatic window encapsulations			<ul style="list-style-type: none">汽车外饰保险杠紧固件手柄静态玻璃封边	
Material Advantages			材料属性	
<ul style="list-style-type: none">Adhesion to PC, ABS, PC/ABS, ASA, SANAdhesion to PET and PETGOptimized flow propertiesResistance to grease and oilsSurface mappingWeather resistant, suitable for automotive exterior			<ul style="list-style-type: none">包胶 PC、ABS、PC/ABS、ASA、SAN包胶 PET 和 PETG优异的流动性耐油脂表面映射耐候性, 适合汽车外饰	
Regulations / Approvals			法规 / 批准	
<ul style="list-style-type: none">BMW GS 93042CSTB/DER/BV-PEMDaimler DBL 5562FCA MS-DC-242GM GMW15702Outdoor Weathering Arizona 24 month SAE J1976Outdoor Weathering Florida 24 month SAE J1976PV 3929 Kalahari (1 year) – Weathering TestPV 3929 Kalahari (2 years) – Weathering TestPV 3930 Florida (1 year) – Weathering TestPV 3930 Florida (2 years) – Weathering TestRenault 03-10-104VW 50123			<ul style="list-style-type: none">BMW GS 93042CSTB/DER/BV-PEMDaimler DBL 5562FCA MS-DC-242GM GMW15702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 J1976PV 3929 卡拉哈里试验 (1 年) - 耐候性测试PV 3929 卡拉哈里试验 (2 年) - 耐候性测试PV 3930 佛罗里达试验 (1 年) - 耐候性测试PV 3930 佛罗里达试验 (2 年) - 耐候性测试Renault 03-10-104VW 50123	

Thermolast® V | 热塑宝 V

Series 系列	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	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 自然色 黑色	PP
Typical Applications			典型应用	
<ul style="list-style-type: none">ConnectorsFasteningsGrommetsSeals			<ul style="list-style-type: none">连接器紧固件垫圈密封件	
Material Advantages			材料属性	
<ul style="list-style-type: none">Adhesion to PPHysteresisIn-process recycling possibleLong-term sealing functionOptimized compression setOptimized mechanical propertiesTemperature stability up to 135 °C			<ul style="list-style-type: none">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形变特性优异的机械特性135 °C下的温度稳定性	
Regulations / Approvals			法规 / 批准	
<ul style="list-style-type: none">BMW GS 93042Daimler DBL 5562GM GMW15702UL 94 HBVW 50123			<ul style="list-style-type: none">BMW GS 93042Daimler DBL 5562GM GMW15702UL 94 HBVW 50123	

Thermolast® V | 热塑宝 V

Series 系列	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	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

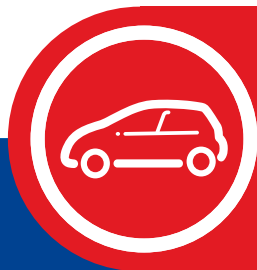
Compound Name	化合物名称	Hardness 硬度	Color 颜色	Adhesion 包胶
TVxVAN TVxVAZ		60 – 80 Shore A 50 – 80 Shore A	Natural Black 自然色 黑色	PP
Typical Applications			典型应用	
<ul style="list-style-type: none">FasteningsGrommetsSeals			<ul style="list-style-type: none">紧固件垫圈密封件	
Material Advantages			材料属性	
<ul style="list-style-type: none">Adhesion to PA6 and PA6.6, up to 50% glass fiberAdhesion to PA12HysteresisIn-process recycling possibleLong-term sealing functionOptimized compression setOptimized mechanical propertiesTemperature stability up to 135 °C			<ul style="list-style-type: none">包胶 PA6 和 PA6.6 , 玻璃纤维高达 50%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形变特性优异的机械特性135 °C下的温度稳定性	
Regulations / Approvals			法规 / 批准	
<ul style="list-style-type: none">BMW GS 93042Daimler DBL 5562UL 94 HBVW 50123			<ul style="list-style-type: none">BMW GS 93042Daimler DBL 5562UL 94 HBVW 50123	

For Tec E® | 尼塑宝®

Series 系列	The AD/PAX/CR series is your material solution for 2-component seals in electronic applications and softtouch handles. The material is resistant to skin oils, sun cream and olive oil. The compounds are characterized by their adhesion to polyamides such as PA 12, PA 6 and PA 6.6, partially aromatic polyamides and polyarylamides. The compounds are available in black and natural colors. Natural color variants can be colored in many different ways.
AD/PAX/CR	AD/PAX/CR 系列材料解决方案适用于电子应用中的双组件密封和柔软触感手柄。该系列材料可抵抗皮肤油脂、防晒霜和橄榄油。这类化合物具有包胶聚酰胺（如 PA 12、PA 6 和 PA 6.6，部分芳族聚酰胺和聚丙烯酰胺）的特点。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
OCxOAN OCxOAZ		60 – 80 Shore A 60 – 80 Shore A	Natural Black 自然色 黑色	PA
Typical Applications			典型应用	
<ul style="list-style-type: none">BumpersConnectorsHandlesSeals			<ul style="list-style-type: none">保险杠连接器手柄密封件	
Material Advantages			材料属性	
<ul style="list-style-type: none">Adhesion to PA6 and PA6.6, up to 50% glass fiberAdhesion to PA12Adhesion to partially aromatic polyamides (PAX) and polyarylamides (PARA)ColorableResistance to skin oils, sunscreen or olive oil			<ul style="list-style-type: none">包胶 PA6 和 PA6.6 , 玻璃纤维高达 50%包胶 PA12包胶部分芳族聚酰胺（PAX）和聚丙烯酰胺（PARA） <ul style="list-style-type: none">可染色耐皮肤油脂、防晒霜或橄榄油	
Regulations / Approvals			法规 / 批准	
<ul style="list-style-type: none">UL 94 HB			<ul style="list-style-type: none">UL 94 HB	



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