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一直在蜕变创新，我们专注于新材料的研发和制造！

Always transforming and innovating, we focus on the R&D and manufacturing of new materials!

我们是由一群肩负时代使命，勇于践行工匠精神，立志推动技术创新，肩负打造高品质使命的年轻代组成的团队。我们不盲目追求利益，更多的是用专业，一丝不苟，精益求精的创新和全力以赴的服务精神去赢取口碑，树立形象。专业独到的产品理念，融入到制造的每一个精细环节中，汇成终端解决方案，让产品设计构想变成最终现实。我们是为了将梦想蓝图搬到现实中而来的一个团队！

广东唯粒新材料科技有限公司属于香港唯力万集团的全资子公司，属于港澳台独资企业。专业从事热塑性弹性TPE/TPR/TPU/TPV/TPEE/TPO/SBS/SEBS，以及生物可降解材料PLA/PBAT/PBS/PHA等系列材料的创新研发，生产，销售。公司努力不懈地创建自主创新，资源节约，环境友好的高新科技企业。我们专注于严格的生产管控，精细化的品质流程，专心致志做好每一粒产品。

欢迎来探索唯粒！未来已来，比起期待，我们选择脚踏实地践行；比起去远方，我们更专注于如何去远方。我们将用心丈量世界，因梦想而生，为未来而改变，坚守微小而美好的信念，执着不懈地为客户提供最好的产品创新解决方案。

Thank you for coming to Veryone Technology !

We are a group of young spirit team who shoulder the mission of the times, dare to practice the spirit of craftsmanship, and aim to promote technological innovation and shoulder a high-quality mission. We do not blindly pursue the interests, but more with professionalism, meticulous, excellence and innovation, and the spirit of wholeheartedness service to win the public praise and establish an image. Professional and unique insights about products, integrated into every detail of manufacturing, and integrated into a terminal solution, making the product design concept a final reality. We are a team to bring the blueprint of dreams to reality.

Guang Dong Veryone Technology Co.,Ltd., a wholly-owned subsidiary of Hong Kong Veryone Group, specializing in the innovative R&D, production and sales of thermoplastic elastomer TPE/TPR/TPU/TPV/TPEE/TPO/SBS/SEBS, as well as biodegradable materials PLA/PBAT/PBS/PHA and other series of materials. We persevere in building this high-tech enterprise of self-innovation, energy-efficiency and environmental-friendliness, put production and quality under the most rigid control in order to produce each granule of production.

Welcome to explore Veryone, the future has come. We choose to practice on the ground compared to expectation, we are more focused on how to go farther than going far. Because of dreams, heart and soul we measure the world, make changes, stick to small but beautiful beliefs, provide firmly the best solutions to our customers.

Veryone® TPE 应用于玩具产品, 具有以下优点:

- * 高回弹性, 高拉力。
- * 易与胶水粘接, 制品做拉力测试时, 仍与胶水保持粘附力。
- * 可移印, 易附着油漆, 可通过介油测试。
- * 做超软制品时, 手感仍可保持爽滑, 当然亦可设计成粘连效果。
- * 可注塑, 挤出, 倒模, 流延, 发泡加工。
- * 成人玩具可水润自滑。
- * 低硬度到20A, 硅胶触感。

Veryone® TPE applied in toy products, has the following advantages:

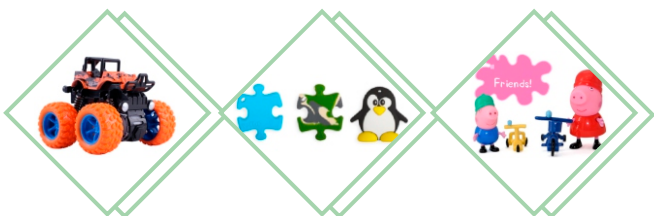
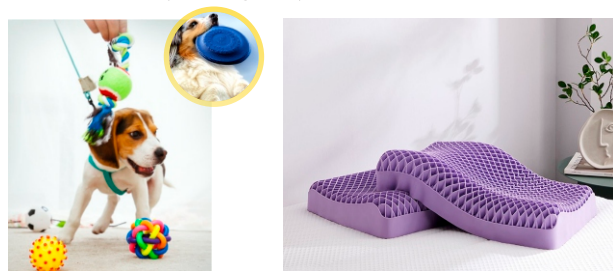
- * High resilience, high tensile force.
- * Easy to bond with glue, the product still maintains adhesion to the glue during the tensile test.
- * Able to pad printing, easy to attach paint, can pass the cut oil test.
- * When making ultra-soft hardness products, the hand feel can be kept smooth & dry, also can be designed to have viscosity effect.
- * Can be processed by injection molding, extruding, reverse mould casting, calendering, foaming.
- * Adult toys will automatically lubricate when wet with water.
- * Low hardness to Shore 20A, silicone touch feel.

应用示例:

- * **儿童玩具:** 粘粘球, 上油公仔, 水球, 麦芽灌胶玩具, 公仔皮肤, 蜘蛛壁虎等公仔玩具。
- * **成人用品:** 阳具, 仿真皮肤, 飞机杯, 跳蛋等。
- * **宠物玩具:** 飞碟, 玩具球, 狗骨头等。

Application cases:

- * **Children's toys:** Yoyo balls, painted toys, water balls, malt filled toys, toys skin, other dolls like Spider, Gecko.
- * **Adult products:** Penis, artificial skin, masturbation cup, vibrating egg, etc.
- * **Pet toys:** Frisbee, toy balls, dog bone, etc.



Veryone® TPE 在电子电器, 线材线缆应用提供优秀的解决方案。

该类别产品优点: 电绝缘性能优秀, 细腻爽滑触感, 抗皮肤过敏, 耐油性好, 美国UL认证 (档案号E509633)。

Veryone® TPE provides a good solution for electronic communication and wire/cable applications.

This category of products has good electrical insulation properties, comfortable hand feel, anti-skin allergy, oil resistant, UL certified (File no. E509633) and other characteristics.

应用示例:

耳机线, USB数据线, 电源线, 充电桩线等低功率线缆, 连接器, 鼠标滚轮, 电子按键, 电器支架/底座, 音响外壳包胶, 电子手环等等。

Application cases:

Low-power cable such as headphone cable, USB data cable, power cable, charging pile line, connectors, mouse wheels, electronic buttons, electrical devices' stands/bases, speaker shell, electronic bracelet and more.



Veryone® TPE 以良好的耐磨性, 低温韧性, 硬度范围广, 易着色等特性而广泛应用于家居日用类产品。此类应用具有以下优点:

- * 成型过程结晶快, 冷却快, 明显节省成型周期。
- * 触感柔软, 如硅胶般顺滑。
- * 高流动性, 生产针点入胶, 大面积胶量制品时, 制品表面均匀, 没有流纹水纹印。
- * 可提供超软到 Shore A -20A, 依然保持不粘手。
- * 与PP, PA, PS, GPPS, POM, PBT, PETG, PC, ABS, PMMA等硬胶有着优秀的粘附力。
- * 可注塑, 挤出, 倒模, 流涎, 发泡加工。
- * 可通过FDA, EU10/2011, LFGB, GB等食品级的油脂溶液测试。

Veryone® TPE is widely used in houseware & consumer products due to its good wear resistance, low temperature toughness, wide hardness range and easy coloring properties. Has the following advantages:

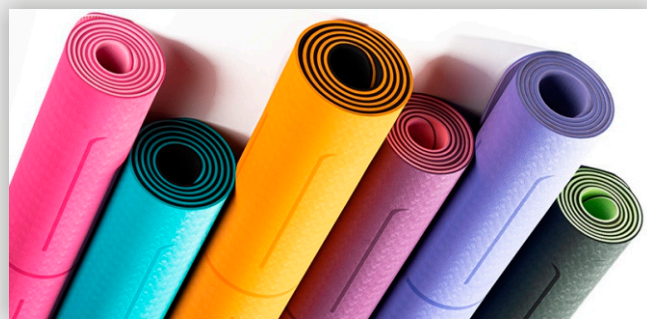
- * Quick crystallization while processing, fast cooling, and the molding cycle is obviously saved.
- * Soft touch feel, smooth like silicone.
- * High fluidity, the surface is uniform while the needle-point plastic filling the big area of the product, and there is no mark of flow liner/water wave.
- * Available in super soft to Shore A -20A, still not sticky.
- * Excellent adhesion to PP, PA, PS, GPPS, POM, PBT, PETG, PC, ABS, PMMA and other hard plastics.
- * Can be processed by injection molding, extruding, reverse mould casting, calendaring, foaming.
- * Can be tested by food grade grease solutions such as FDA, EU10/2011, LFGB, GB, etc.

应用示例:

- * **日用制品:** 餐具密封圈, 鞋材, 脚垫, 防滑垫, 牙刷手柄, 箱包脚轮, 冰格, 折叠桶篮等。
- * **文具制品:** 硅胶触感护套, 笔杆二次成型, 橡皮擦, 透明橡皮擦, 文件夹包胶, 文具剪, 订书机等。
- * **运动制品:** 瑜伽垫, 指压板, 膝盖护套, 扩胸拉带, 潜水面罩, 泳镜, 蛙鞋等。
- * **工具制品:** 电动工具手柄, 园林剪, 文具剪等。

Application cases:

- * **Consumer products,** such as: Lunch box seals, shoe soles/insoles/protectors, indoor carpets/foot pads/anti-slip mats, toothbrush handles, luggage casters, ice trays, folding bucket basket. . .
- * **Stationery products,** such as: Silicon feel protector, pen holder secondary molding, eraser, transparent eraser, folder wrapping, stationery scissors, stapler. . .
- * **Sports products,** such as: Yoga mats, finger pressboards, knee elbow pads, chest straps, diving masks, goggles, flippers. . .
- * **Tool products,** such as: Power tool handle, garden scissors, stationery scissors. . .



Veryone® TPE/TPV 广泛应用于各类汽车配件, 此类应用具有以下优点:

- * 耐臭氧耐老化等性能突出。
- * 工作温度可耐高温达到135℃, 低温-40℃。
- * 出色的抗UV耐黄变效果。
- * 可通过压缩永久变形测试要求。
- * 耐油耐腐蚀, 适用于各类汽车配件。

Veryone® TPE/TPV is widely used in different kinds of auto parts. This application has the following advantages:

- * Outstanding ozone resistance, anti-aging properties.
- * The working temperature can withstand high temperature up to 135 ° C, low temperature -40 ° C.
- * Excellent anti-UV and yellowing resistance.
- * Can pass the compression permanent deformation test requirements.
- * Oil and corrosion resistant, suitable for all kinds of auto parts.

应用示例:

汽车密封条, 汽车脚垫, 挡泥板, 防尘罩, 内饰件, 方向盘护套, 档位护套, 安全气囊盖等等

Application cases:

Automotive window sealings, car mats, mud guards, dust covers, interior parts, steering wheel covers, gear shift covers, safety airbag covers, etc.



工业建筑应用 Industrial, Building & Construction

Veryone® TPE 应用于工业建筑, 密封类产品, 具有以下优点:

- * 良好的耐高温耐候性。
- * 挤出制品顺滑平整。
- * 可与硬胶双层共挤, 可流涎, 可高温模压成型。
- * 可高效发泡成型。

Veryone® TPE is used in industrial buildings, sealing products, with the following advantages:

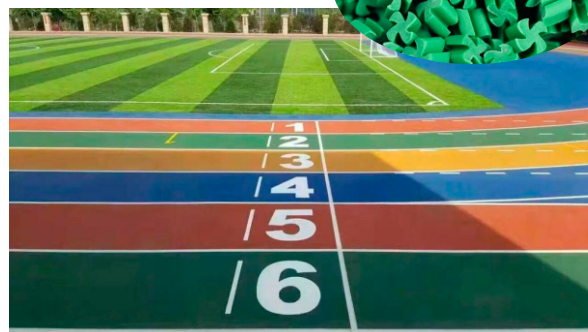
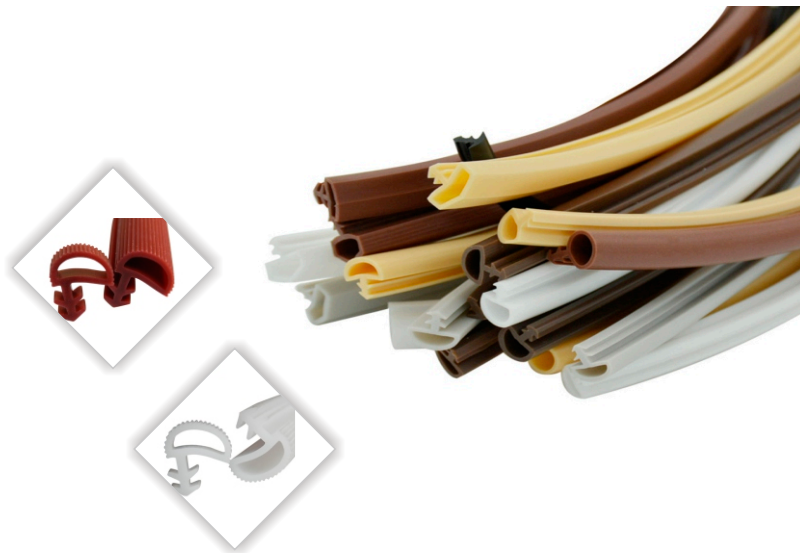
- * Good temperature and weather resistance.
- * The extruded product is smooth and flat.
- * It can be co-extruded with hard plastic double layer, can be casted, also can be formed by high temperature compression molding process.
- * High efficiency foaming molding.

应用示例:

- * 建筑密封边条
- * 塑胶跑道
- * 防水卷材
- * 箱包密封条
- * 瑜伽垫, 汽车脚垫
- * 发泡鞋材发泡保护套等

Application cases:

- * Building sealing strips
- * Plastic runway
- * Waterproof rolls
- * Luggage seals
- * Yoga mats, car mats
- * Foamed shoe material, foamed protective cover, etc...



医疗器械应用 Medical Application

Veryone® TPE 专为医疗行业设计的一类特殊弹性体, 具有以下优点:

- * 高透明度, 非过敏性, 无毒性设计。
- * 不含卤素, 不含增塑剂。
- * 可通过酒精, 环氧乙烷等消毒测试。
- * 良好的耐化学耐溶剂性能。

Veryone® TPE is designed for the Medical industry, it is a class of special elastomers, with the following advantages:

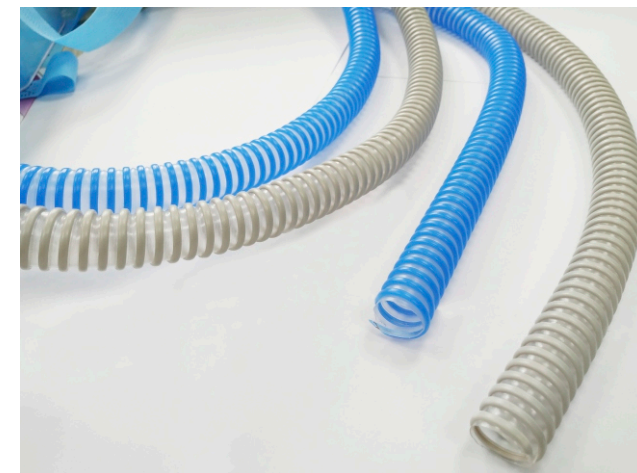
- * Highly transparent design, non-allergenic, non-toxic design.
- * Halogen free, no plasticizer.
- * Can be tested by disinfection of alcohol, ethylene oxide, etc.
- * Good chemical and solvent resistance.

应用示例:

- * 止血带
- * 输液管, 滴斗
- * 医用喉管
- * 医用面罩
- * 薄膜和药瓶
- * 与PP双层共挤导管等

Application cases:

- * Tourniquet
- * Infusion tube, drip bucket
- * Medical hose
- * Medical mask
- * Film and pill bottle
- * Co-extrusion catheter with PP double layer, etc.



提高生产效率专用料

此类TPE设计应用在单独注塑成型，与PP二次注塑成型时，具有快速结晶，冷却快，高流动性，明显减少成型时间，可解决大面积胶量的流纹印等特点。对于有高生产效率要求的日用品制品优点明显。实践验证，对于同等价位同等要求下，此款TPE以10G左右的产品胶量计量下，注塑周期能有效缩短5-10秒。

Special material for improving production efficiency

This type of TPE is designed for single injection molding or over molding with PP which has rapid crystallization, fast cooling, high fluidity, and significantly reduced molding time. It can solve the flow liner mark of large-area plastic. The advantages of commodity products with high efficiency requirements are obvious. Practice verification, for the same price requirements, this TPE is measured by the plastic amount of about 10G, the injection cycle can effectively shorten 5-10S.

市面通用TPE与我们的TPE在提高生产效率方面的对比
Comparison of common TPE and our TPE in improving production efficiency



Typical grade and properties

Grades	Hardness Shore A	Specific Gravity (g/cm ³)	100% Tensile Stress (Kg/cm ²)	Tensile strength (Kg/cm ²)	Elongation at break (%)	Tear strength (Kg/cm)	Melt flow index	
V10-A0849	60	0.88	17	61	680	30	10	190°C/2.16Kg
V10-A1222	26	0.88	6	25	580	13	15	190°C/3.24Kg
V10-A0071	50	1.15	13	35	620	20	20	190°C/2.16Kg
V10-A0191	65	1.15	22	35	350	22	15	190°C/2.16Kg
V10-A0221	80	0.98	36	55	420	34	22	190°C/1.2Kg



对比硅胶的优点：

可注塑成型，耐油污，耐色素浸染，可高周波焊接，不同食品的包装切换时可防串味。

The advantages of contrasting silica gel:

Can be injection molded. Oil resistant, pigment resistant. Can be high frequency welded. Prevents odors when switching packaging of different food.

Typical grade and properties

Grades	Hardness Shore A	Specific Gravity (g/cm ³)	100% Tensile Stress (Kg/cm ²)	Tensile strength (Kg/cm ²)	Elongation at break (%)	Tear strength (Kg/cm)	Melt flow index	
V10-A0405	40	0.86	12	52	550	16	8	1190°C/2.16Kg
V10-A1890	40	0.87	11	45	650	16	15	190°C/2.16Kg
V10-A1389	56	0.92	16	47	580	24	25	190°C/2.16Kg
V10-A1693	70	0.94	24	89	740	32	4	190°C/2.16Kg

硅胶触感

此类TPE具有触感柔软，具有硅胶的蓝底透明色，触感干爽，顺滑，对比硅胶成型效率高，综合成本同比硅胶具有无可比拟的优势。具有的高流动性可使制品做到隐藏入胶点设计。在日常家居制品有手触感要求的应用领域，是替代硅胶材料的最佳选择，尤其是易耗品和快速消费品领域。

The silicon touch feel

This type of TPE has a soft touch, like the blue transparent color of silica gel, the touch feel is smooth and no sticky, it is high in molding efficiency contrasting silica gel, and the comprehensive cost is unmatched by the silica gel. The high fluidity allows the product to be hidden into the gel dot design. In the application field of daily household products with hand touch requirements, it is the best choice for replacing silicon materials, especially in the field of consumables and fast moving consumer goods.



仿硅胶手感护套



过橄榄油、正己烷食品级测试

此类TPE可通过EU/LFGB/FDA/GB测试标准里的正己烷，异辛烷，橄榄油测试，硬度最低为65A。可与PP,ABS,SAN,PMMA,PCTG等硬胶二次注塑包胶。适合应用在食品包装袋，饭盒盖密封圈，冰格，儿童餐具，厨房用具，密封罐，密封圈，家居折叠收纳制品等有油脂油污类接触的制品上。此TPE还具有抗油污，抗食物色素染色，可高周波焊接等独特优点。



Food grade test of olive oil, n-hexane

This type of TPE can be tested with n-hexane, isooctane, and olive oil in the EU/LFGB/FDA/GB test standard with a minimum hardness of 65A. It can be over-molded with PP, ABS, SAN, PMMA, PCTG and other hard plastics. It is suitable for use in food packaging bags, lunch box cover seals, ice trays, children's tableware, kitchen utensils, sealed can seals, household folding storage products and other products that are exposed to grease and oil. This TPE also has the unique advantages of oil stain resistance, food coloring resistance, and can be high frequency welded.

Typical grade and properties

Grades	Hardness Shore A	Specific Gravity (g/cm ³)	100% Tensile Stress (Kgf/cm ²)	Tensile strength (Kgf/cm ²)	Elongation at break (%)	Tear strength (Kgf/cm)	Melt flow index	
V10-A1892	75	1.01	15	53	515	35	6	190°C/5Kg
V10-A1893	78	0.87	40	130	495	55	1	190°C/5Kg
V10-A1894	70	1.19	30	205	950	70	18	190°C/2.16Kg
V10-A0097	80	0.87	35	110	780	58	20	190°C/2.16Kg
V10-A0231	83	1.21	43	240	750	85	25	190°C/2.16Kg



上油公仔

玩具公仔对环保的要求越来越严格，玩具公仔领域所用材料大部分已经由TPE取代PVC；我们针对这一领域，开发出一系列材料，满足大部分玩具公仔的要求，硬度从0-95A，均可上油（且上油前无需表面清洗），耐候性好，无龟裂。

Painting toys & dolls

Toy dolls are becoming more and more strict with environmental protection requirements. Most of the materials used in toy dolls have been replaced by TPE. We have developed a series of materials for this field to meet the requirements of most toy dolls, with hardness ranging from Shore A 0-95. It can be oiled (no need surface cleaning before oiling), good weather resistance and no cracks.

特殊包胶应用

此类TPE可与特殊工程塑料PBT,PA12,PA9T,PA6+纤,PA66+纤,PET,PCTG,POM的注塑包胶。此材料具有包胶效果好，易注塑，美国UL黄卡认证，具有阻燃等明显优点。

Special overmolding applications

This type of TPE can be injection molded with special engineering plastics PBT, PA12, PA9T, PA6+ fiber, PA66+ fiber, PET, PCTG, POM. This material has good overmolding effect, easy injection molding, has America UL yellow card certification, and has obvious advantages such as flame retardant.



Typical grades

Grades	Hardness Shore A	Specific Gravity (g/cm ³)	100% Tensile Stress (Kgf/cm ²)	Tensile strength (Kgf/cm ²)	Elongation at break (%)	Tear strength (Kgf/cm)	Melt flow index	
V10-A0169	65	1.1	26	52	400	28	15	190°C/5Kg
V10-A0126	60	1.18	20	105	650	38	35	190°C/5Kg
V10-A0261	60	1.01	18	65	580	30	8	190°C/2.16Kg
V10-A1726	40	1.08	4	20	760	11	35	190°C/1.2Kg
V10-A1729	60	0.99	11	37	560	18	8	190°C/2.16Kg

特殊纹路效果制品

此类TPE具有仿木纹，木塑视觉，大理石纹路，星星点点等流行元素效果。此材料适合应用在有独特表面效果，能快速吸引消费者眼球，希望达到标新立异要求的制品设计上。可单独注塑成型，亦可与 PP, ABS, PC/ABS, PC硬胶材料的二次注塑包胶成型。

Special grain effect products

This type of TPE has imitation wood grain, wood-plastic vision, marble lines, stars and other popular elements. This material is suitable for product design with unique surface effects, which can quickly attract consumers' attention and meet the unconventional requirements. It can be injection molded separately, or over molded with PP, ABS, PC/ABS, PC materials.



Typical grades

Grades	Hardness Shore A	Specific Gravity (g/cm ³)	100% Tensile Stress (Kgf/cm ²)	Tensile strength (Kgf/cm ²)	Elongation at break (%)	Tear strength (Kgf/cm)	Melt flow index	
V10-A1221	70	0.95	22	28	20	180	32	190°C/2.16Kg
V10-A1234	85	0.99	38	48	42	285	8	190°C/2.16Kg
V10-A1891	70	1.2	32	115	38	650	18	190°C/5Kg

水润自滑材料

此类TPE 具有触感爽滑，超低柔软性，硬度低至 -15A 依然手感干爽，保持如肌肤般的弹性和触感。此材料独具遇水自润滑，水干又能保持肌肤触感的特点，应用在成人用品的飞机杯制品上亮点非常明显。干爽的触感系列，当然亦可免去传统的吸粉工序，适合当今流行的人体肌肤设计要求。亦适合应用于医学研究上，需要制造的仿真人体皮肤。

Water moistening self-lubricating TPE material

This kind of TPE has a smooth touch feel, ultra-low softness, and the hardness is as low as -15A. It still feels dry and maintains the elasticity and touch like the skin. This material has the characteristics of self-lubricating when meet water, and maintaining the touch feel of the skin when water-drying. It's the obvious highlights of the masturbation cup products used in adult products. The dry touch feel series, of course, also eliminates the traditional powder-absorbing process and is suitable for today's popular human skin design requirements. It is also suitable for use in medical research, and it is necessary to manufacture artificial human skin.



Typical grades

Grades	Hardness Shore C	Specific Gravity (g/cm ³)	100% Tensile Stress (Kgf/cm ²)	Tensile strength (Kgf/cm ²)	Elongation at break (%)	Tear strength (Kgf/cm)	Melt flow index	
V10-A1866	5	0.84	0.5	2	1000	1	15	130°C/0.325Kg
V10-A0793	10	0.85	0.8	4	1150	2	20	150°C/0.325Kg
V10-A1084	15	0.85	0.9	5	1080	3	15	150°C/0.325Kg
V10-A1538	18	0.85	1	6	1100	5	8	150°C/0.325Kg





咖啡渣TPE

大量咖啡渣产生于咖啡产品工厂，以往使用堆埋或者焚烧的方式去处理。我们通过特殊工艺，将回收的咖啡渣融入PP和TPE材料中，这些特殊材料将重新应用回生活用品中，一方面做到“变废为宝”，另一方面，也在为地球减塑作贡献。随着环保意识的增强，咖啡渣回收再利用的价值越来越受到重视，有望成为未来经济效益最佳的新一代环保再生资源。此材料有天然咖啡香，深咖啡色，可单独注塑成型，亦可用于与PP硬胶材料的二次注塑包胶成型。

Coffee grounds TPE

A large amount of coffee grounds are produced in coffee product factories and used to be disposed of by burying or incinerating. Through a special process, we integrate recycled coffee grounds in to PP and TPE materials, which will be reused back into daily necessities, on the one hand, to "turn waste into treasure", on the other hand, to contribute to the reduction of plastic on the earth. With the enhancement of environmental awareness, the value of coffee grounds recycling has been paid more and more attention, and it is expected to become a new generation of environmentally friendly renewable resources with excellent economic benefits in the future. This material has a natural coffee aroma, dark coffee color, can be single injection molded, can also be used for overmolding with PP material.



Typical grades

Grades	Hardness	Specific Gravity (g/cm ³)	Shrinkage rate	Tensile strength (Kgf/cm ²)	Elongation at break (%)	Tear strength (Kgf/cm)	Melt flow index
V10-A1746	55A	0.9	1.6	4.2	650	23	12
V10-A1732	67D	0.93	1.5	20	180	80	8



VDE 工具材料(包含TPE和PP)

此类材料专门应用在VDE工具中，能满足耐高压，耐燃，在使用中除提供舒适以外，还必须通过德国VDE和GS认证，符合IEC 60900耐高压1000V安全规范，可确保使用者在1000V活电环境下使用上的安全，VDE工具的使用环境通常为极恶劣的环境，例如极冷，极热的状态，应用在该工具的材料能通过国际标准条件下的低温压力冲击测试 高温脱柄测试以及耐燃测试，以保证稳定可靠的绝缘性能。

VDE tool materials (Includes TPE and PP)

Such materials are specially used in VDE tools, can meet the high pressure resistance, flame resistance, in addition to providing comfort in use, must also pass the German VDE and GS certification, in accordance with IEC 60900 high voltage resistance 1000V safety specifications, To ensure the safety of the user in the 1000V active electric environment, the use environment of VDE tools is usually extremely harsh environment, such as extremely cold, extremely hot state. The materials used in this tool can pass low temperature pressure impact tests under international standard conditions, high temperature handle fall off tests and flame resistance tests to ensure stable and reliable insulation performance.



Typical grades

Grades	Hardness	Specific Gravity (g/cm ³)	Shrinkage rate	Tensile strength (Kgf/cm ²)	Elongation at break (%)	Tear strength (Kgf/cm)	Melt flow index
PP-V10-A1916	70D	0.92	1.5	26	400	110	15
TPE-V10-A1768	85A	1.23	0.8	28	750	105	25

密封类材料

此材料专门应用于食品容器封装配件，根据食品行业接触材料相关标准进行开发，致力打破一直以来国外技术的垄断，为国内包装容器行业提供多一些选择，材料属性无味无毒、高回弹、耐热好，能够满足装载食物容器的高温或蒸汽消毒，同时，也可配合铁盖、铝盖多种材质，可与多种粘剂体系配套，满足不同消毒方式要求的瓶盖粘合要求。

Sealing type material

This material is specially used in food container packaging accessories, developed according to the relevant standards of contact materials in food industry, and is committed to breaking the monopoly of foreign technology and providing more choices for the domestic packaging container industry. The material properties are odorless, non-toxic, high resilience, good heat resistance, and can meet the high temperature or steam sterilization of loaded food containers. At the same time, it can also be matched with a variety of materials such as iron caps and aluminum caps, and can be matched with a variety of adhesive systems to meet the requirements of bottle cap bonding requirements for different disinfection methods.



Typical grades

Grades	Hardness	Specific Gravity (g/cm ³)	Shrinkage rate	Tensile strength (Kgf/cm ²)	Elongation at break (%)	Tear strength (Kgf/cm)	Melt flow index
V10-A1734	90A	0.9	1.6	1.5	550	70	10

感温感光变色材料

冷热光变有惊喜，TPE魔法快乐如随变。

遇热变色：材料随着温度升高到一定程度，由常温（23度）的一种颜色变为另外一种颜色。

遇冷变色：材料随着温度下降到一定程度，由常温（23度）的一种颜色变为另外一种颜色。

感光变色：指在可见光或其他紫外线的照射下，材料吸收了光能，在其内部发生物理变化，可由无色变成有色，可应用于TPE、TPR、TPU等软胶，以及ABS、PC、AS等硬胶制品上。

（可由无色变有色，有色变无色，也可有色变其它有色状态）。

Materials discoloration in case of heat/cold/photoreception

Heat/cold/photoreception change surprises, the pleasure of TPE magic is like changing.

Heat: the material changes from one color at room temperature (23°C) to another color as the temperature rises to a certain extent;

Cold: the material changes from one color at room temperature (23°C) to another color as the temperature drops to a certain extent.

Photoreception: refers to the exposure of visible light or other ultraviolet rays, the material absorbs light energy, physical changes occur inside it, it can be applied to soft rubber such as TPE, TPR, TPU, and hard plastic products such as ABS, PC, AS.

(change from colorless to colorful, or from colorful to colorless, and can also change from colored to other colored states)



Typical grades

Grades	Hardness	Specific Gravity (g/cm ³)	Shrinkage rate	Tensile strength (Kgf/cm ²)	Elongation at break (%)	Tear strength (Kgf/cm)	Melt flow index
V10-A2217	80A	0.88	4.3	10	669	56	8



透明白 光变紫色 光变蓝色 光变黄色 光变红色 光变黑色

→ TPE类别

热塑性弹性体(TPE)材料的类别

Types of thermoplastic elastomer (TPE) materials

热塑性弹性体(Thermoplastic Elastomer),简称TPE。又称为热塑性橡胶(Thermoplastic Rubber),简称TPR,或称为人造橡胶。其中包含一系列不同种类的弹性体塑料,市面应用较多的是SBS, SEBS, TPU, TPV, TPEE等等。TPE具有热塑性塑料及硫化橡胶的优点,既有热塑性塑胶的循环可塑性,也有硫化橡胶的弹性及形状记忆。TPE可使用一般塑料的简易加工方法成型,大大简化了加工过程。

Thermoplastic Elastomer (TPE), also known as Thermoplastic Rubber (TPR), or known as man made rubber. It contains a series of different kinds of elastomer plastics. SBS, SEBS, TPU, TPV, TPEE and so on are widely used in the market. TPE has the advantages of thermoplastics and vulcanized rubber, both cyclic plasticity of thermoplastics and elasticity and shape memory of vulcanized rubber. TPE can be processed on conventional plastics equipment, which greatly simplifies the processing.

SBS: 苯乙烯-丁二烯-苯乙烯嵌段共聚物

SBS: (Styrene-butadiene-styrene block copolymer)

SEBS: 苯乙烯-乙烯-丁二烯-苯乙烯嵌段共聚物

SEBS: (Styrene-ethylene-butadiene-styrene block copolymer)

TPV: 热塑性硫化橡胶

TPV: (Thermoplastic Vulcanizate)

TPU: 聚氨酯类热塑性弹性体

TPU: (Urethane Thermoplastic Elastomer)

TPEE: 热塑性聚酯弹性体

TPEE: (Thermoplastic copolyester)

TPEs 苯乙烯类热塑性弹性体

Styrenic Thermoplastic Elastomer

一类以SBS, SEBS为基材的热塑性弹性体,在室温下与橡胶一样,具有弹性,耐寒性,电绝缘性,在高温下,能像塑胶一样熔融,用于一般塑料成型加工,如注塑,挤出,吹塑,压延等。TPE具有加工简单,成型周期短,生产效率高,产品质量稳定,比重轻,易着色,可回收,安全环保等优点。可单独成型,也可以通过二次注塑成型,牢固包附在PP, PS, BS, PC, POM, PA/PA66, PETG/PCTG等材料上,是一种应用广泛,经济价值巨大的材料。

A kind of thermoplastic elastomer based on SBS/SEBS that has the properties of elasticity, cold resistance and electrical insulation. It can be melted like plastic at high temperature and used for conventional plastic molding processing, such as injection molding, extrusion, blow molding, calendaring, etc. TPE has the advantages of easy processing, short molding cycle, high production efficiency, stable quality, low density, easy coloring, recyclability, safety and environmental protection. It can be molded separately or through double injection molding. It can be firmly attached to PP, PS, ABS, PC, POM, PA/PA66, PETG / PCTG and other materials. It is an ideal material with economic value for diverse applications.



TPV 热塑性硫化橡胶

Thermoplastic Vulcanizate

一类以PP/EPDM为基材的、动态硫化的热塑性弹性体,又称热塑性硫化橡胶(TPV)。此类产品可广泛应用于汽车内外饰、密封系统、罩盖、发动机舱内零部件、垫圈垫片、建筑密封系、电子电器、日用消费品以及其它对柔韧性和一致性有要求的工业和民用领域。该系列产品可在注塑机、挤出机、吹塑设备上加工,并且可以完全回收利用。

Thermoplastic Vulcanizates (TPVs), a kind of dynamic vulcanized thermoplastic elastomer based on PP / EPDM. This series was designed for injection molding, extrusion, and blow molding applications. They can be considered for automotive interior and exterior, under-the-hood applications, sealing systems, constructions seals, electricals, and consumer products where softness and conformity is needed. They are completely recyclable.

TPU 聚氨酯类热塑性弹性体

Urethane Thermoplastic Elastomer

一类以氨基甲酸酯共聚物为基材的聚氨酯热塑性弹性体。该产品分别聚醚和聚酯两种类型,可广泛应用于汽车配件、保护套、电子组件、运动配件、密封件、鞋饰片、材料复合改性、管材、电线电缆、传送带、异型材挤出等领域,该产品适合注塑或挤出加工,并且可以完全回收利用。

A kind of polyurethane thermoplastic elastomer based on carbamate copolymer, has polyether and polyester two types. This series provides processors with an elastomeric option for applications that demand flexibility combined with exceptional durability (wear resistance, scratch /mar resistance). These products can be considered in applications such as automotive accessories, protective cases, electronics, sports gear, seals, shoe parts, polymer modification, wire and cable, profile extrusion, as well as other applications where clarity, flexibility, and mar resistance is required. These products are designed for extrusion and injection molding. They are completely recyclable.

TPEE 热塑性聚酯弹性体

Thermoplastic Copolyester

一类含有PBT(聚对苯二甲酸丁二醇酯)聚酯硬段(结晶相)和脂肪族聚酯或聚酯(非晶相)软段的线型嵌段共聚物。TPEE属于高性能工程级弹性体,具有机械强度高、弹性好、抗冲击、耐蠕变、耐寒、耐弯曲疲劳性、耐油、耐化学药品和溶剂侵蚀等优点,并可填充、增强及合金化改性,TPEE具有优异的耐疲劳性能,与高弹性特点相结合,使该材料成为多次循环负载使用条件下的理想材料,适宜制作高档防尘罩、齿轮、胶辊、挠性联轴节、皮带等。

TPEE is a high performance engineering grade elastomer with high mechanical strength, good elasticity, impact resistance, creep resistance, cold resistance, bending fatigue resistance, oil resistance, chemical resistance and solvent erosion. It can be filled, reinforced and alloyed. Modified, TPEE has excellent fatigue resistance, combined with high elastic characteristics, making this material an ideal material for multiple cycle load conditions, suitable for making high-grade dust covers, gears, rubber rollers, flexible couplings, belts, etc.