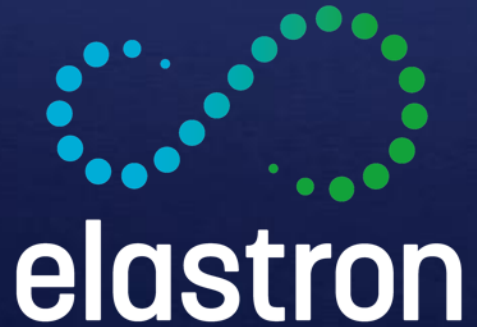


ENGI-
NEERING
LIFE

**TPE SOLUTIONS FOR
AUTOMOTIVE
APPLICATIONS**





**Everyday Life
Engineering
Partner of
Global TPE Users**

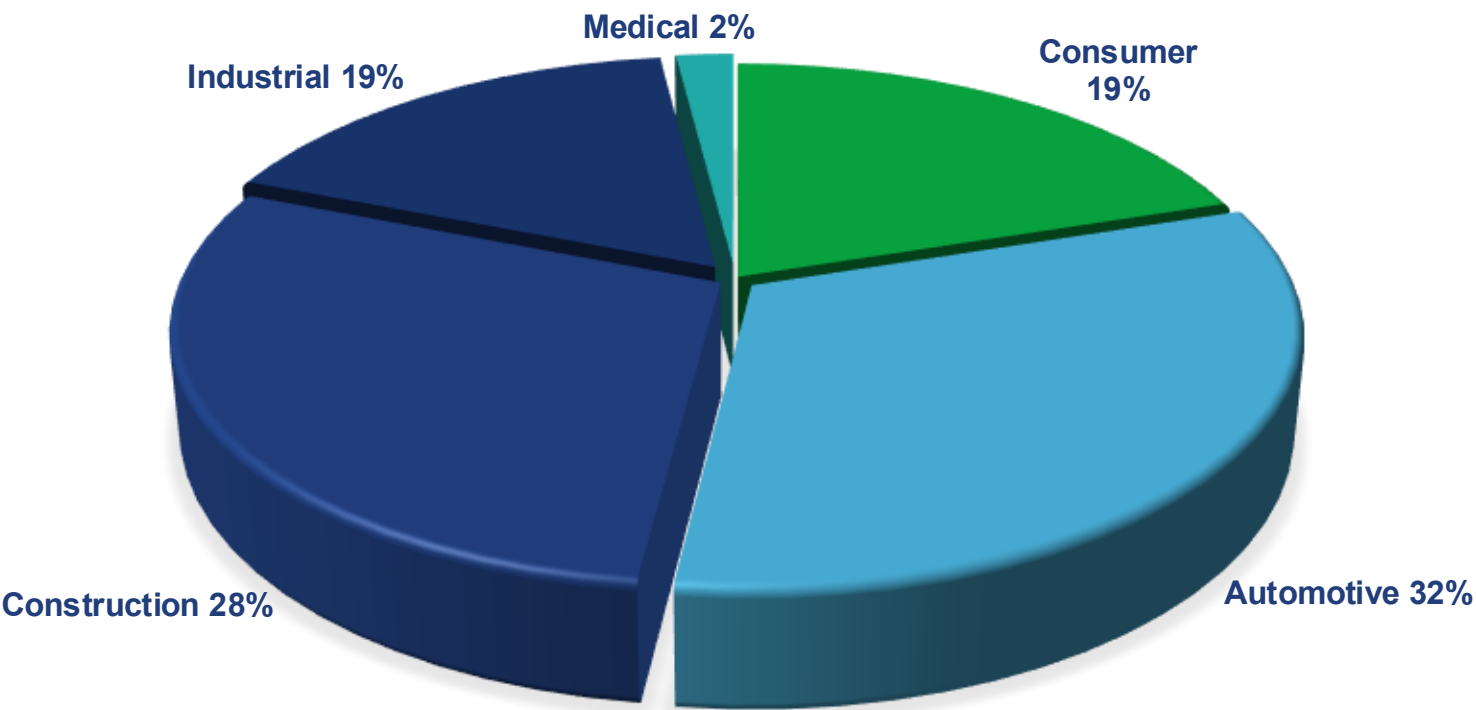


MARKETS



Market Sales Distribution

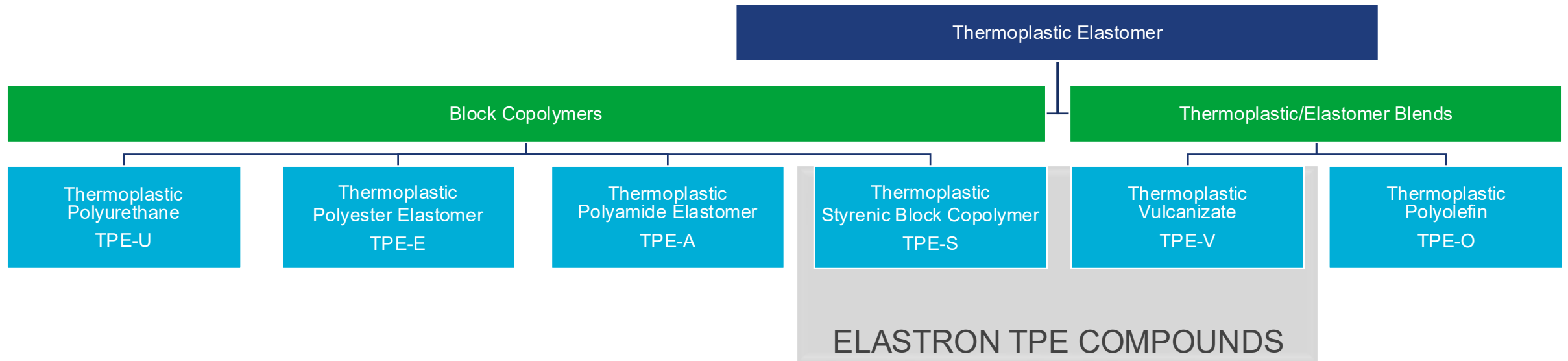
Markets	Percentage Distribution
Automotive	32%
Construction	28%
Consumer	19%
Industrial	19%
Medical	2%





Thermoplastic Elastomers

Thermoplastic elastomers are a group of rubber-like materials that, unlike vulcanized conventional rubber materials, can be processed and recycled like thermoplastic materials. Thermoplastic Elastomers do not require curing or vulcanization during processing and can be processed by traditional thermoplastic processing equipment.





Easy Coloring



Recyclability



Tempature
Resistance



Weathering
Resistance



Wide Hardness
Range



Flexibility



Elasticity



Recovery

	Elastron G	Elastron V	Elastron D
Structure	SEBS/PP based TPE compounds	Crosslinked TPE compounds	SBS/PP based TPE compounds
Hardness (Shore A/D)	12 A - 65 D	30 A - 65 D	20 A - 65 D
Density (g/cm ³)	Min. 0.88	Min. 0.90	Min. 0.89
Compression Set	Good	Very Good	Medium
Elasticity	High	Very High	Medium
Service Temperature (°C)	-50°C to 120°C	-50°C to 135°C	-50°C to 70°C
UV Resistance	Good	Good	Poor
Organic Solvent Resistance	Variable	Variable	Poor
Acid-Base Resistance	Good	Good	Good
Adhesion (Standard grades)	PP, PE, EVA	PP, PE, EVA	PP, PE, EVA
Adhesion (Bondable grades)	ABS, PC, PC/ABS, PBT, PETG, ASA, SAN, PMMA, PET, PA6/6.6, PS, HIPS, EPDM	EPDM	PS



Product Line

General Purpose Grades

- Multi-purpose TPE-S and TPV compounds
- Various series lightweight to high density
- Extrusion grades to high flow grades
- **G101 – V101 Series**
- **G100 – V100 Series**

High Temperature Resistant Grades

- Excellent long-term performance at high temperatures for sealing applications
- **G201 – V201 Series**

Weatherseal Grades

- Excellent long-term performance for outdoor applications
- **G250 – G260 – V250 Series**
- **V251 – G261 Series**

High Flow Grades

- Low viscosity
- Easy filling of complex molds
- Long-term performance for outdoor applications
- **G150 – G104 Series**

Impact Modifiers for

- PP
- PE
- ABS
- PC
- PS
- PA
- **D100 – D400 Series**
- **G500 Series**

Bondable Grades

- PA, ABS, PC, PS and ABS/PC bondable grades for polar plastics to obtain soft touch property
- **G500 – PA/ABS/PS Series**
- **V510 – G510 – EM Series**

Special Grades Conforming Various Regulations

- NSF/ANSI 61
- EU 10/2011
- FDA 21 CFR
- USP CLASS VI – ISO 10993
- **F.G & F.V series**
- **P.G & P.V series**
- **V281 Series**

Flame Retardant Grades

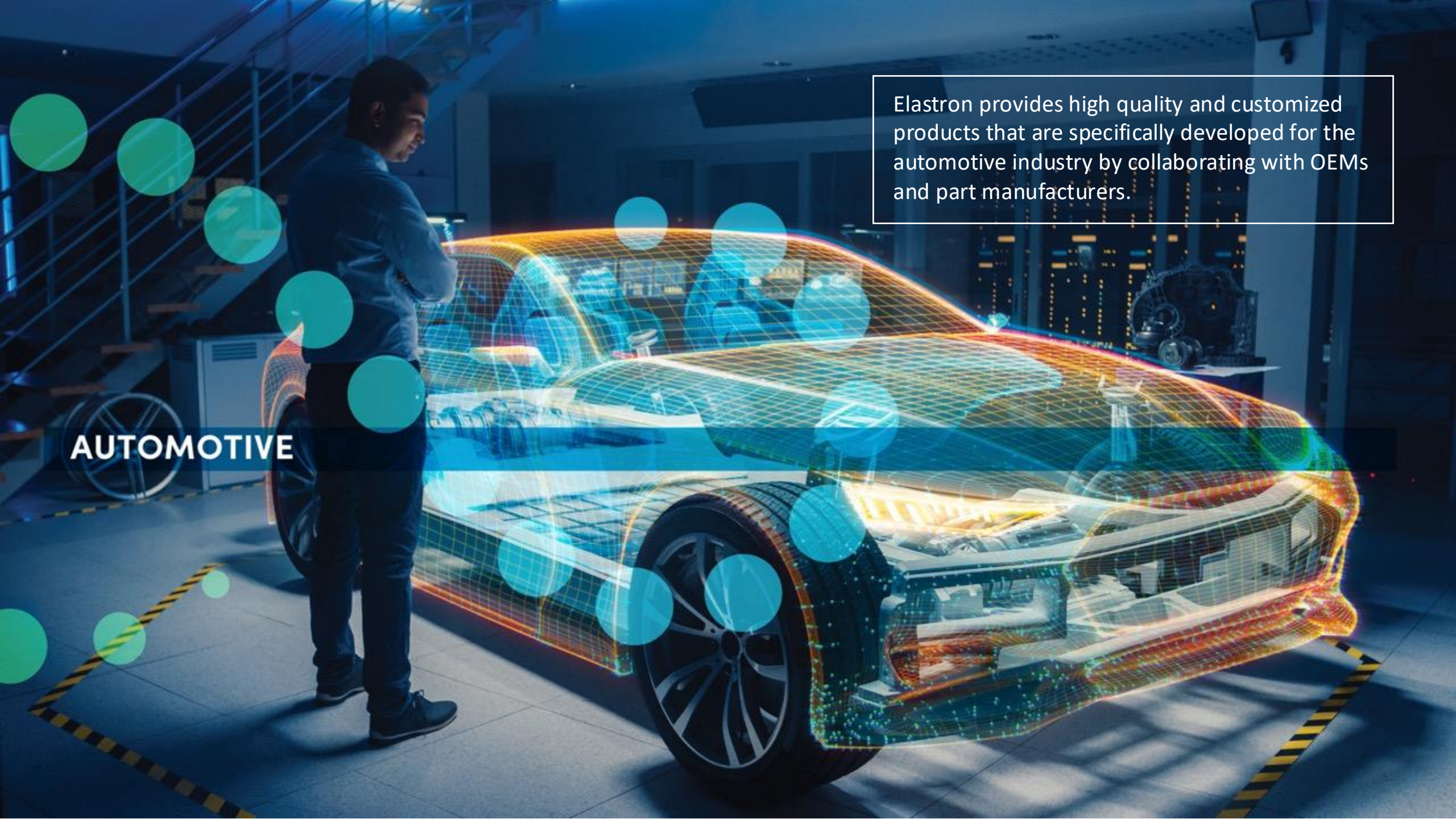
- UL 94 V0 listed grades
- Low smoke density
- V1 – V2 grades
- HFFR – FR grades
- **G601 – V601 HFFR Series**

Low Coefficient of Friction Grades

- Low friction for semi-dynamic applications
- **V216 – V206 Series**

Non-hygroscopic TPVs

- Non-hygroscopic TPVs where good sealing properties and surface appearance are important
- **V860 – V861 Series**



Elastron provides high quality and customized products that are specifically developed for the automotive industry by collaborating with OEMs and part manufacturers.

AUTOMOTIVE



Key Features of Elastron TPE Grades for Automotive Applications

- OEM approved grades
- Excellent weathering and ozone resistance
- Abrasion resistance
- Adhesion to PP, PE, EPDM etc. and engineering plastics (ABS,PC,PA, etc.)
- High temperature resistance
- Excellent compression set
- Low temperature resistance
- Recyclability





Segments & Highlighted Applications

WEATHERSEALS

- Inner & Outer Belt Line Seals
- Glass Run Channels
- Sunroof Seals
- Glass Encapsulation
- Corner Molding
- Slip Coat
- End Caps

UNDER THE HOOD & CHASIS

- Active Grill Shutters
- Air Guide Shutters
- Air Duct
- Grommets & Plugs
- Boots & Bellows
- Hose, Pipes & Connectors
- Cable

INTERIOR

- Pad Heel
- Pads & Cup Holders
- Gearshift & Handbrake Bellow
- HVAC Flap Seals
- Floor Mats
- Pedal Cover
- Glovebox Cover & Housings

EXTERIOR

- Side & Front Spoiler
- Mud Flaps & Wheel Protection
- Exterior Mirror Seal
- Cowl Vent Seal
- Wiper Blade
- Fuel Entrance Cover Seal
- Charge Port Seal





Material Properties	Design	Processing	Safety & Regulation	OEM Approvals	Sustainability
•Weathering Resistance •Heat Resistance •Low Compression Set •Weight Reduction •Abrasion and Scratch Resistance •Rubbing Performance •Wide Hardness Range	•Smooth Surface •Glossy Finish to a Matt Look •Adhesion to Engineering Plastics •OEM Approved Color Codes	•Single / Multi-injection •Overmolding •Recyclability •High Flow Grades •Short Processing Cycle Time •Lower Energy Consumption •No Curing Required	•ELV (2000/53/CE) •TL 1010 •FMVSS 302 •ISO 3795	•CHRYSLER MS-AR-100 •GMW 15812 •RENAULT 03-10-104 •QK – 003513 •QK - 003521	•PIR/PCR Grades •LCA Data •High Recycle Content •In Process Recycability •Reducing of CO2 Emission



Automotive

ELASTRON V
ELASTRON G
FOR AUTOMOTIVE APPLICATIONS





Key Benefits of Elastron V, Elastron G for Automotive Weatherseals Applications

- Long term durability
- Excellent weathering resistance
- Excellent sealing performance
- Elasticity
- Low weight
- Fast production , reduced labor cost
- Process advantages
- Recyclable

Glass Run Channel

Elastron V grades provide lower cost and fast processing, as well as good surface quality and excellent dimensional stability.

Sunroof Seal

Specially designed Elastron V products for weatherseal applications reduce total vehicle weight and provide short cycle time compared with EPDM rubber.

INNER & OUTER BELT LINE SEAL
GLASS RUN CHANNEL
SUN ROOF SEAL
GLASS ENCAPSULATION
COWL VENT SEAL

Cowl Vent Seal

High flow SEBS based Elastron G products can be used 2K injection process with PP.



Inner & Outer Belt Line Seals

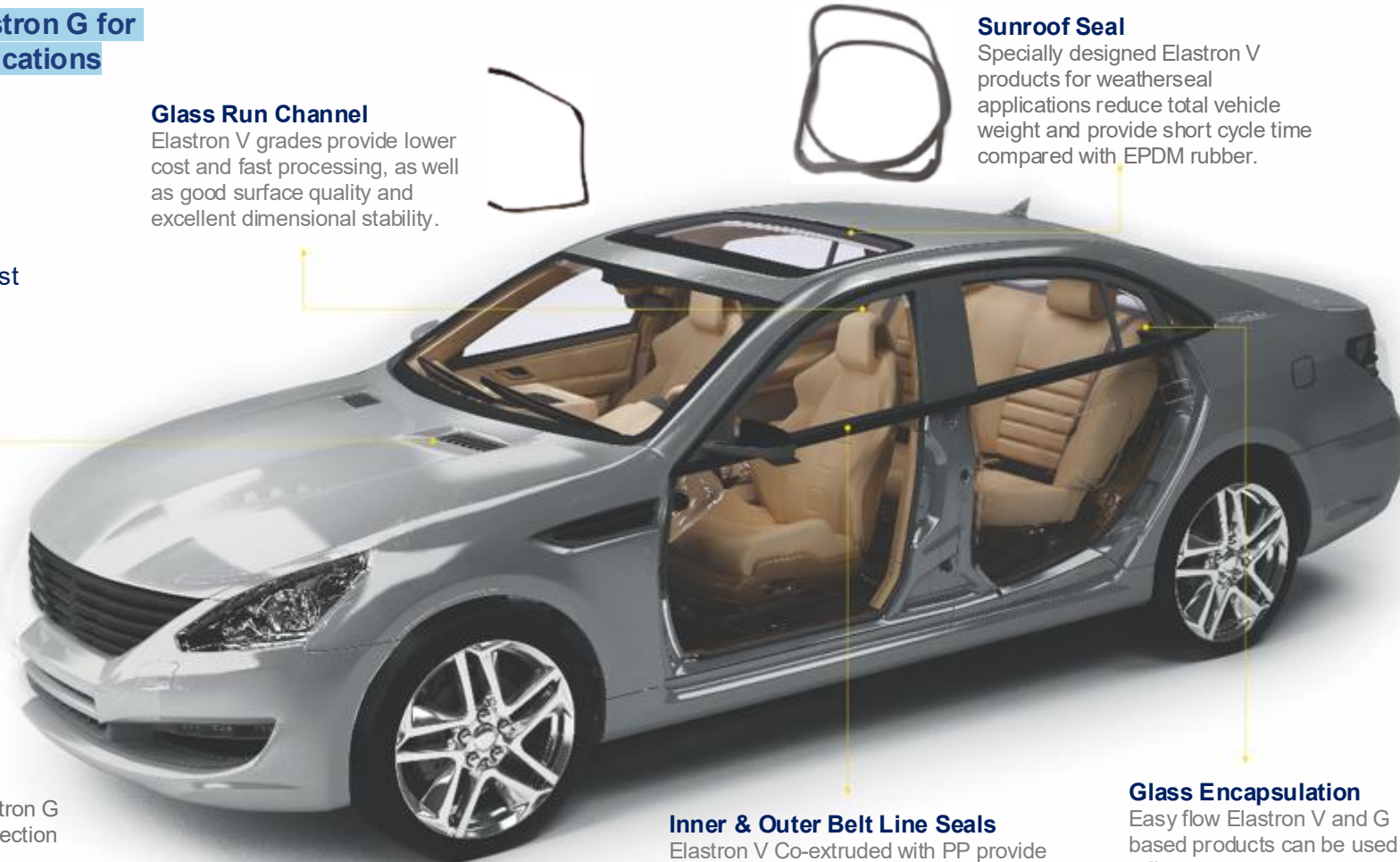
Elastron V Co-extruded with PP provide excellent sealing performance and weathering resistance.



Glass Encapsulation

Easy flow Elastron V and G based products can be used in two different ways.

- Direct injection on glass
- Assembling to the glass after injection.





Key Benefits of Elastron V, Elastron G for Automotive Under the Hood & Chassis Applications Part 1

- Long term durability
- Eliminates the clamp need with system component welding
- Excellent fluid resistance
- Reduced leakage risk
- Low weight
- Fast production, reduced labor cost
- Process advantages
- Vibration dampening
- Elasticity
- Recyclable

AIR FILTER SEAL
AC WASTE WATER PIPE
CLEAN AIR DUCT
STEERING BELLOW & DUST BOOT
RADIATOR SEAL
MECHANISM CABLE COVER & BRAKE CONDUIT
GROMMET & PLUG
SUSPENSION BELLOW

Air Grille Shutter(AGS), Air Guide

Elastron G provides long-term dimensional stability and sealing and offers easy processability for complex geometries. It is bondable to various plastics.



Suspension Bellow

Suspension Bellows can be produced with Extrusion Blow Molding. Bellow produced with Elastron V reduces cycle time and labor cost.



Radiator Seal

Elastron V coextruded with PP dampens the noise around the radiator and provides long term heat and chemical resistance.



Steering Bellows & Dust Boot

Bellows made with Elastron V provides reduced cost, design flexibility with the recommended processing option of Injection Blow Molding Extrusion Blow Molding continuous vacuum corrugation and Press Injection.





Key Benefits of Elastron V, Elastron G for Automotive Under the Hood & Chassis Applications Part 2

- Long term durability
- Eliminates the clamp need with system component welding
- Excellent fluid resistance
- Reduced leakage risk
- Low weight
- Fast production, reduced labor cost
- Process advantages
- Vibration dampening
- Elasticity
- Recyclable

Air Filter Seal

Elastron V grades bondable to PP provide high heat and chemical resistance, long term sealing and fast processing for air filter seals.



AC Wastewater Pipe

Elastron V bondable to PP prevents leakage and reduce the labor cost with 2K injection molding process in tubing applications.



AIR FILTER SEAL
AC WASTE WATER PIPE
CLEAN AIR DUCT
STEERING BELLOW & DUST BOOT
RADIATOR SEAL
MECHANISM CABLE COVER & BRAKE CONDUIT
GROMMET & PLUG
SUSPENSION BELLOW



Grommet & Plug

Various plugs, bumpers and grommets can be produced with Elastron V and Elastron G. Elastron products provides long term ageing and heat resistivity.



Mechanism Cable Cover & Brake Conduit

Mechanism Cable Cover and Brake Conduit made from Elastron V provides impact resistance, flexibility, corrosion resistance and superior dampening properties for cable cover application.





Exterior

Key Benefits of Elastron V, Elastron G for Automotive Exterior Applications

- Long term UV and ozone resistance
- Colorable
- Tear and abrasion resistance
- Impact resistance at low and high temperatures
- Low weight
- Flexible at low temperatures
- Easy processing and good flow property
- Bondability to various plastics [PP, ABS, PA, PC, PE]
- Low labor cost
- Recyclable

Wiper Spoiler

Long term UV resistance, scratch resistance and non staining properties make Elastron V the best choice for Wiper Spoiler application.



Side & Front Spoiler

Spoilers made with Elastron V and G are flexible and have resistance to impact at low and high temperatures.



Fuel Entrance Cover Seal

Elastron V grades are used at fuel entrance cover with the advantages of splash resistance to gasoline and long-term sealing performance.

Wheel Housing Part

Injection molded Elastron V and Elastron G remain flexible at low temperatures and dampen the noise and vibration.



Mud Flap

Mud flaps made with Elastron V and Elastron G remain flexible at low temperatures and have excellent UV stability.



ANTENNA BEZEL
FUEL ENTRANCE COVER SEAL
MUD FLAP
WHEEL HOUSING PART
WIPER SPOILER
SIDE & FRONT SPOILER



Key Benefits of Elastron V, Elastron G for Automotive Interior Applications Part 1

- UV Resistance
- Colorable
- Soft touch, antislip
- Scratch and abrasion resistance
- Low emission
- Low weight
- Low odour behavior
- Easy process and good flow property
- Recyclable



Handbrake Mechanism Seal

Various gaskets made with Elastron V and Elastron G based products offer improved insulation and high surface quality which meets low emission standards.

Pad & Cup Holder

Pads and cup holders made with Elastron G and Elastron V provide light weight, perfect appearance and meet the low emission requirements for automotive interior applications.



Mat

Mats made with Elastron G compounds provide fast production lower weight as well as long term abrasion and UV resistance when compared to Rubber.



GEARSHIFT & HANDBRAKE BELLOW
HVAC DOOR SEAL
HANDBRAKE MECHANISM SEAL
GLOWBOX COVER & HOUSING
MAT
HORN COVER
PAD & CUP HOLDER
PAD HEEL
PEDAL



Key Benefits of Elastron V, Elastron G for Automotive Interior Applications Part 2

- UV Resistance
- Colorable
- Soft touch, anti-slip
- Scratch and abrasion resistance
- Low emission
- Low weight
- Low odour behavior
- Easy process and good flow property
- Recyclable

Gearshift & Handbrake Bellow

Gearshift and Handbrake Bellows made with Elastron V and Elastron G offer long time UV durability, as well as good low and surface properties.



Pad Heel

Pad heels made with Elastron G are bondable to polypropylene mat with special hot melt and provide antislip effect for driver comfort.

Glowbox Cover & Housing

Glowbox covers made with colourable Elastron G meet the low emission standards required for interior parts. Elastron G also provide good impact long term UV and abrasion resistance.



HVAC Seal

Elastron G and V grades provide long term dimensional stability and sealing advantage in flapper door seals. They meet the low emission standards.



Pedal Cover

Pedals made with Elastron V provide long term abrasion resistance and meet low emission standards required for interior parts.



GEARSHIFT & HANDBRAKE BELLOW
HVAC DOOR SEAL
HANDBRAKE MECHANISM SEAL
GLOWBOX COVER & HOUSING
MAT
HORN COVER
PAD & CUP HOLDER
PAD HEEL
PEDAL





Find out more about your
TPE solutions partner now.

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