

PRODUCT DESCRIPTION

A soft , black thermoplastic vulcanizate, TPV (EPDM/PP) in the thermoplastic elastomer (TPE) family which offers higher temperature resistance and very good compression set with very good UV resistance.

GENERAL PROPERTIES

|                          |   |
|--------------------------|---|
| <b>Material Status</b>   | Active  |
| <b>Availability</b>      | Europe<br>North America<br>Asia- Pasific<br>Africa & Middle East                                      |
| <b>Features</b>          | Ozone Resistance<br>Adhesion to Polyolefins<br>Recyclable<br>Compliant with RoHS Directive 2011/65/EU |
| <b>Certification</b>     | RoHS  |
| <b>Appearance</b>        | Black   |
| <b>Form</b>              | Pellets   |
| <b>Processing Method</b> | Injection,Extrusion   |

Automotive Specifications

GM/GMW 15812P (TYPE 5)

Physical Properties

| Property                                   | Typical Value (English) | Typical Value (SI)     | Test Method                  |
|--|-------------------------|------------------------|------------------------------|
| <b>Density</b>                             | 0.96 g/cm <sup>3</sup>  | 0,96 g/cm <sup>3</sup> | ASTM D 792                   |
| <b>Durometer Hardness, 3 sec (Shore A)</b> | 68.00                   | 68,00                  | ASTM D 2240                  |
| <b>Tensile Strength at Break</b>           | 943 Psi                 | 6,50 MPa               | ASTM D412, Method A          |
| <b>Mod.of Elasticity %100</b>              | 319 Psi                 | 2,20 MPa               | ASTM D412, Method A          |
| <b>Mod.of Elasticity %300</b>              | 522 Psi                 | 3,60 MPa               | ASTM D412, Method A          |
| <b>Elongation at break</b>                 | 550.00 %                | 550,00 %               | ASTM D412, Method A          |
| <b>Compression Set (at 73 °F, 22 h)</b>    | 17.00 %                 | 17,00 %                | ASTM D 395, Type 2, Method B |
| <b>Compression Set (at 158 °F, 22 h)</b>   | 31.00 %                 | 31,00 %                | ASTM D 395, Type 2, Method B |
| <b>Compression Set (at 212 °F, 22 h)</b>   | 40.00 %                 | 40,00 %                | ASTM D 395, Type 2, Method B |
| <b>Tear Resistance</b>                     | 177.01 lbf/in           | 31,00 N/mm             | ASTM D624                    |

Shrinkage

| Property           | Typical Value (English) | Typical Value (SI) | Test Method |
|--------------------|-------------------------|--------------------|-------------|
| <b>Flow</b>        | 2.18%                   | 2.18%              | ASTM D955   |
| <b>Across Flow</b> | 1.33%                   | 1.33%              | ASTM D955   |

Ageing Tests

| Additional Information    | Typical Value (English) | Typical Value (SI) | Test Method |
|---------------------------|-------------------------|--------------------|-------------|
| Ozone Resistance-Stressed | No cracks               | No cracks          | ASTM D 1149 |

Bondable to

PE-PP-EVA

Additional Information

Elastron products are not compatible with PVC and Acetal.  
Regrinding level up to %20 is recommended with minimum property loss.

| Injection Molding     | Typical Value (English) |       | Typical Value (SI) |       |
|-----------------------|-------------------------|-------|--------------------|-------|
| Drying temperatures   | 194                     | °F    | 90                 | °C    |
| Drying time           | 2                       | hours | 2                  | hours |
| Rear Zone temp.       | 311-347                 | °F    | 155- 175           | °C    |
| Middle Zone temp.     | 329-365                 | °F    | 165- 185           | °C    |
| Front Zone temp.      | 338-374                 | °F    | 170- 190           | °C    |
| Nozzle Temperature    | 356-410                 | °F    | 180- 210           | °C    |
| Injection Speed       | High                    | -     | High               | -     |
| Injection Time        | 1- 3                    | sec.  | 1- 3               | sec.  |
| Injection Pressure    | 10-40                   | bar   | 10-40              | bar   |
| Hold Pressure         | 5- 20                   | bar   | 5- 20              | bar   |
| Back Pressure         | 5- 40                   | bar   | 5- 40              | bar   |
| Screw Speed           | 50- 200                 | rpm   | 50- 200            | rpm   |
| Mold Temperature      | 77-122                  | °F    | 25- 50             | °C    |
| Screw Comp. ratio     | 2.0:1- 4.0:1            | -     | 2.0:1- 4.0:1       | -     |
| Screw L/D ratio       | 18- 24                  | -     | 18- 24             | -     |
| Residence time        | 1-2 shot                | -     | 1-2 shot           | -     |
| Cushion size          | 0.3120                  | inc   | 8                  | mm    |
| Suggested Max Regrind | 20                      | %     | 20                 | %     |

| Extrusion Molding     | Typical Value (English) |       | Typical Value (SI) |       |
|-----------------------|-------------------------|-------|--------------------|-------|
| Drying temperatures   | 194                     | °F    | 90                 | °C    |
| Drying time           | 2                       | hours | 2                  | hours |
| Screw Comp. Ratio     | 2.0:1- 4.0:1            | -     | 2.0:1- 4.0:1       | -     |
| Screw L/D             | 18- 30                  | -     | 18- 30             | -     |
| Feed Zone temp.       | 311-329                 | °F    | 155- 165           | °C    |
| Rear Zone temp.       | 320-356                 | °F    | 160- 180           | °C    |
| Center Zone temp.     | 329-365                 | °F    | 165- 185           | °C    |
| Front Zone temp.      | 338-374                 | °F    | 170- 190           | °C    |
| Head temp.            | 356-410                 | °F    | 180- 210           | °C    |
| Die temp.             | 365-419                 | °F    | 185- 215           | °C    |
| Suggested Max Regrind | 20                      | %     | 20                 | %     |

Notes

The company name, the brand, the logo and all kinds of visuals and writings in this document are the property of Elastron. It cannot be copied, distributed, modified or reproduced without the express written permission of Elastron. Independently, these documents can only be printed for personal use. However, in any case, the visuals and writings contained here cannot be used in another document or web page.

All the visuals, texts, information and explanations and the like in this document are for promotional purposes, giving information and providing convenience to the user. The values presented in this document apply only to the product mentioned above and cannot be extended to other products in general. Elastron is not responsible for the results that may arise from tests outside the control of Elastron. Although Elastron bases the information and suggestions contained herein on reliable data, it does not guarantee that such information and suggestions are correct and that the product is suitable for its intended use.

The user should know that Elastron must obtain the final information before taking any action by referring to the information and suggestions contained in this document.

Elastron reserves the right, at its discretion, to change or terminate the content of the document at any time and in any way.

**ISO 9001: 2015 & IATF16949: 2016 & ISO 14001: 2015 REGISTERED QUALITY SYSTEMS**

