

# Elastron

P.V101.D40.N

## TECHNICAL DATASHEET

### PRODUCT DESCRIPTION

A hard , colorable thermoplastic vulcanizate, TPV (EPDM/PP) in the thermoplastic elastomer family designed for use in medical applications. This grade is capable of sterilization with steam at 134°C, Gamma (25KGy/50KGy) and EtO.

### GENERAL PROPERTIES

|                            |           |              |
|----------------------------|-----------|--------------|
| <b>Color</b>               | Natural   |              |
| <b>Certifications</b>      | RoHS      | USP Class VI |
| <b>Processing Method</b>   | Injection | Extrusion    |
| <b>Available Standards</b> | ASTM      |              |

### Physical Properties

| Property                  | Unit              | Standard                     | Value  |
|---------------------------|-------------------|------------------------------|--------|
| Density                   | g/cm <sup>3</sup> | ASTM D 792                   | 0.91   |
| Durometer Hardness, 3 sec | Shore D           | ASTM D 2240                  | 40.00  |
| Tensile Strength at Break | MPa               | ASTM D412, Method A          | 15.00  |
| Mod.of Elasticity %100    | MPa               | ASTM D412, Method A          | 8.30   |
| Mod.of Elasticity %300    | MPa               | ASTM D412, Method A          | 9.40   |
| Elongation at break       | %                 | ASTM D412, Method A          | 600.00 |
| Compression Set           | % at 23°C, 22 h   | ASTM D 395, Type 2, Method B | 39.00  |
| Compression Set           | % at 70°C, 22 h   | ASTM D 395, Type 2, Method B | 56.00  |
| Compression Set           | % at 100°C, 22 h  | ASTM D 395, Type 2, Method B | 71.00  |
| Tear Resistance           | N/mm              | ASTM D624                    | 90.00  |

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| Ageing Tests     |          |             |           |
|------------------|----------|-------------|-----------|
| Property         | Unit     | Standard    | Value     |
| Ozone Resistance | Stressed | ASTM D 1149 | No cracks |

| Bondable to |  |  |  |
|-------------|--|--|--|
| PE-PP-EVA   |  |  |  |

| Processing            |       |              |
|-----------------------|-------|--------------|
| Injection             | Unit  | Value        |
| Drying temperatures   | °C    | 90           |
| Drying time           | hours | 2            |
| Rear Zone temp.       | °C    | 155- 175     |
| Middle Zone temp.     | °C    | 165- 185     |
| Front Zone temp.      | °C    | 170- 190     |
| Nozzle Temperature    | °C    | 180- 210     |
| Injection Speed       | -     | Moderate     |
| Injection Time        | sec.  | 2- 4         |
| Injection Pressure    | bar   | 10- 40       |
| Hold Pressure         | bar   | 5- 20        |
| Back Pressure         | bar   | 5- 40        |
| Screw Speed           | rpm   | 50- 200      |
| Mold Temperature      | °C    | 25- 50       |
| Screw Comp. ratio     | -     | 1.5:1- 2.0:1 |
| Screw L/D ratio       | -     | 18- 24       |
| Residence time        | -     | 1-2 shot     |
| Cushion size          | mm    | 8            |
| Suggested Max Regrind | %     | 20           |

| Extrusion             |       |              |
|-----------------------|-------|--------------|
| Unit                  | Value |              |
| Drying temperatures   | °C    | 90           |
| Drying time           | hours | 2            |
| Screw Comp. Ratio     | -     | 1.5:1- 2.0:1 |
| Screw L/D             | -     | 18- 30       |
| Feed Zone temp.       | °C    | 155- 165     |
| Rear Zone temp.       | °C    | 160- 180     |
| Center Zone temp.     | °C    | 165- 185     |
| Front Zone temp.      | °C    | 170- 190     |
| Head temp.            | °C    | 180- 210     |
| Die temp.             | °C    | 185- 215     |
| Suggested Max Regrind | %     | 20           |

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### Additional Information

Elastron products are not compatible with PVC and Acetal.

Regrinding level up to %20 is recommended with minimum property loss.

| Shrinkage   | Unit | Standard  | Value |
|-------------|------|-----------|-------|
| Flow        | %    | ASTM D955 | 1.72  |
| Across Flow | %    | ASTM D955 | 1.38  |

### Notes

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

