ENGI-NEERING LIFE



## Elastron

### V101.A47.N

## **TECHNICAL DATASHEET**

PRODUCT DESCRIPTION

A soft , colorable thermoplastic vulcanizate, TPV (EPDM/PP) in the thermoplastic elastomer family that offers good physical properties and chemical resistance

| GENERAL PROPERTIES  |           |           |  |
|---------------------|-----------|-----------|--|
| Color               | Natural   |           |  |
| Certifications      | RoHS      |           |  |
| Processing Method   | Injection | Extrusion |  |
| Available Standards | ASTM      |           |  |

| Physical Properties       |                  |                              |                      |  |  |
|---------------------------|------------------|------------------------------|----------------------|--|--|
| Property                  | Unit             | Standard                     | Value                |  |  |
| Density                   | g/cm³            | ASTM D 792                   | 0.97                 |  |  |
| Durometer Hardness, 3 sec | Shore A          | ASTM D 2240                  | 47.00                |  |  |
| Tensile Strength at Break | MPa              | ASTM D412, Method A          | 4.00                 |  |  |
| Mod.of Elasticity %100    | MPa              | ASTM D412, Method A          | 1.10                 |  |  |
| Mod.of Elasticity %300    | MPa              | ASTM D412, Method A          | 2.20                 |  |  |
| Elongation at break       | %                | ASTM D412, Method A          | 550.00               |  |  |
| Compression Set           | % at 23°C, 22 h  | ASTM D 395, Type 2, Method B | 17.00                |  |  |
| Compression Set           | % at 70°C, 22 h  | ASTM D 395, Type 2, Method B | 30.00                |  |  |
| Compression Set           | % at 100°C, 22 h | ASTM D 395, Type 2, Method B | 48.00                |  |  |
| Flammability Rating       | HB, V0, V1, V2   | UL 94                        | HB                   |  |  |
| Tear Resistance           | N/mm             | ASTM D624                    | 20.00                |  |  |
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| Ageing Tests          |          |              |                    |  |  |
|-----------------------|----------|--------------|--------------------|--|--|
| Property              | Unit     | Standard     | Value              |  |  |
| Ozone Resistance      | Stressed | ASTM D 1149  | No cracks          |  |  |
|                       | Во       | ndable to    |                    |  |  |
|                       | PI       | E-PP-EVA     |                    |  |  |
| Processing            |          |              |                    |  |  |
| Injection             | Unit     | Value        |                    |  |  |
| Drying temperatures   | S°       | 90           |                    |  |  |
| Drying time           | hours    | 2            |                    |  |  |
| Rear Zone temp.       | °C       | 155- 175     | 5                  |  |  |
| Middle Zone temp.     | °C       | 165- 18      | 5                  |  |  |
| Front Zone temp.      | °C       | 170- 190     | )                  |  |  |
| Nozzle Temperature    | C°       | 180- 210     | )                  |  |  |
| Injection Speed       | -        | Moderat      | e                  |  |  |
| 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- 16      | 5                  |  |  |
| 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.<br>Regrinding level up to %20 is recommended with minimum property loss. |  |

| Shrinkage   | Unit | Standard  | Value |  |  |
|-------------|------|-----------|-------|--|--|
| Flow        | %    | ASTM D955 | 3.00  |  |  |
| Across Flow | %    | ASTM D955 | 0.60  |  |  |
| Notes       |      |           |       |  |  |

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



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