

# Desmopan® DP 1490A

Thermoplastic Polyurethane Elastomer (Polyester)

Covestro - PUR

## Message:

Extrusion- and injection molding grade; suitable for extrusion blow molding; high melt stability; very large processing window; Application; Bellows; Injection molded engineering parts; O-strings; Hoses, non-reinforced

| General Information                       |                        |                   |                       |
|-------------------------------------------|------------------------|-------------------|-----------------------|
| Features                                  | Good Processability    |                   |                       |
|                                           | High Melt Stability    |                   |                       |
| Uses                                      | Engineering Parts      |                   |                       |
|                                           | Hose                   |                   |                       |
| RoHS Compliance                           | RoHS Compliant         |                   |                       |
| Processing Method                         | Extrusion              |                   |                       |
|                                           | Extrusion Blow Molding |                   |                       |
|                                           | Injection Molding      |                   |                       |
| Physical                                  | Nominal Value          | Unit              | Test Method           |
| Density                                   | 1220                   | kg/m <sup>3</sup> | ISO 1183 <sup>1</sup> |
| Hardness                                  | Nominal Value          | Unit              | Test Method           |
| Shore Hardness                            |                        |                   | ISO 868 <sup>2</sup>  |
| Shore A, 3 sec                            | 92                     |                   |                       |
| Shore D, 15 sec                           | 40                     |                   |                       |
| Mechanical                                | Nominal Value          | Unit              | Test Method           |
| Tensile Stress <sup>3</sup>               |                        |                   | DIN 53504             |
| Break, 23°C                               | 53.0                   | MPa               |                       |
| 10% Strain, 23°C                          | 3.30                   | MPa               |                       |
| 50% Strain, 23°C                          | 7.20                   | MPa               |                       |
| 100% Strain, 23°C                         | 8.80                   | MPa               |                       |
| 300% Strain, 23°C                         | 16.4                   | MPa               |                       |
| Tensile Strain <sup>4</sup> (Break, 23°C) | 570                    | %                 | DIN 53504             |
| Abrasion Resistance (23°C)                | 35.0                   | mm <sup>3</sup>   | ISO 4649-A            |
| Tensile Storage Modulus                   |                        |                   | ISO 6721-1,-4         |
| -20°C                                     | 1.10                   | GPa               |                       |
| 20°C                                      | 0.0640                 | GPa               |                       |
| 60°C                                      | 0.0350                 | GPa               |                       |
| Impact Resilience (23°C)                  | 30                     | %                 | ISO 4662              |
| Elastomers                                | Nominal Value          | Unit              | Test Method           |

|                                   |               |      |          |
|-----------------------------------|---------------|------|----------|
| Tear Strength <sup>5</sup> (23°C) | 93            | kN/m | ISO 34-1 |
| Compression Set                   |               |      | ISO 815  |
| 23°C, 72 hr                       | 24            | %    |          |
| 70°C, 24 hr                       | 47            | %    |          |
| Injection                         | Nominal Value | Unit |          |
| Drying Temperature                | < 80.0        | °C   |          |
| Processing (Melt) Temp            | 200 to 220    | °C   |          |
| Mold Temperature                  | 20.0          | °C   |          |
| Extrusion                         | Nominal Value | Unit |          |
| Drying Temperature                | < 80.0        | °C   |          |
| Melt Temperature                  | 185 to 210    | °C   |          |
| NOTE                              |               |      |          |

- |    |                                                                           |
|----|---------------------------------------------------------------------------|
| 1. | Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted. |
| 2. | Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted. |
| 3. | 200 mm/min                                                                |
| 4. | 200 mm/min                                                                |
| 5. | 500 mm/min                                                                |

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