

# Elastollan® C 59 D

Thermoplastic Polyurethane Elastomer (Polyester)

BASF Polyurethanes GmbH

Message:

Thermoplastic Polyester Polyurethane Elastomers with excellent mechanical properties. Outstanding tensile strength and high elongation at break, good damping characteristics, a high resilience performance and very good wear resistance.

Typical applications

Spiral tubing, pneumatic tubing, round belting, technical mouldings e.g. bushes, dust caps, seals, joints, blow moulded bellows, fan belts.

| General Information             |                       |                   |             |
|---------------------------------|-----------------------|-------------------|-------------|
| UL YellowCard                   | E140250-222875        |                   |             |
| Features                        | Good Wear Resistance  |                   |             |
|                                 | High Elongation       |                   |             |
|                                 | High Tensile Strength |                   |             |
|                                 | Resilient             |                   |             |
| Uses                            | Belts/Belt Repair     |                   |             |
|                                 | Bushings              |                   |             |
|                                 | Caps                  |                   |             |
|                                 | Seals                 |                   |             |
|                                 | Tubing                |                   |             |
| Processing Method               | Blow Molding          |                   |             |
|                                 | Extrusion             |                   |             |
|                                 | Injection Molding     |                   |             |
| Physical                        | Nominal Value         | Unit              | Test Method |
| Density                         | 1.23                  | g/cm <sup>3</sup> | ISO 1183/A  |
| Hardness                        | Nominal Value         | Unit              | Test Method |
| Shore Hardness (Shore D, 3 sec) | 57                    |                   | ISO 7619    |
| Mechanical                      | Nominal Value         | Unit              | Test Method |
| Tensile Modulus                 | 250                   | MPa               | ISO 527-2   |
| Abrasion Loss                   | 20.0                  | mm <sup>3</sup>   | ISO 4649-A  |
| Elastomers                      | Nominal Value         | Unit              | Test Method |
| Tensile Stress                  |                       |                   | DIN 53504   |
| 20% Strain                      | 12.0                  | MPa               |             |
| 100% Strain                     | 17.0                  | MPa               |             |
| 300% Strain                     | 30.0                  | MPa               |             |
| Tensile Stress                  |                       |                   | DIN 53504   |
| Yield <sup>1</sup>              | 43.0                  | MPa               |             |
| Yield                           | 50.0                  | MPa               |             |

|                                |  |                   |             |
|--------------------------------|--|-------------------|-------------|
| Tensile Elongation             |  |                   | DIN 53504   |
| Break <sup>2</sup>             | 480  | %                 |             |
| Break                          | 500  | %                 |             |
| Tear Strength <sup>3</sup>     | 160  | kN/m              | ISO 34-1    |
| Compression Set                |  |                   | ISO 815     |
| 23°C, 72 hr                    | 30   | %                 |             |
| 70°C, 24 hr                    | 50   | %                 |             |
| Impact                         | Nominal Value                              | Unit              | Test Method |
| Charpy Notched Impact Strength |  |                   | ISO 179     |
| -30°C                          | 12   | kJ/m <sup>2</sup> |             |
| 23°C                           | No Break                                   |                   |             |
| Flammability                   | Nominal Value                              |                   | Test Method |
| Flame Rating                   | HB   |                   | UL 94       |
| Injection                      | Nominal Value                              | Unit              |             |
| Processing (Melt) Temp         | 170 to 240                                 | °C                |             |
| Mold Temperature               | 20.0 to 70.0                               | °C                |             |
| Extrusion                      | Nominal Value                              | Unit              |             |
| Melt Temperature               | 150 to 230                                 | °C                |             |
| NOTE                           |  |                   |             |
| 1.                             | after storage in water for 21 days at 80°C |                   |             |
| 2.                             | after storage in water for 21 days at 80°C |                   |             |
| 3.                             | Method Bb, Angle (Nicked)                  |                   |             |

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