



# Texin DP7-1050

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Developmental product<br>Polyether-based thermoplastic polyurethane with a Shore hardness of approximately 90A. It can be processed by injection molding or extrusion.

## ISO Shortname

| Property                                        | Test Condition                                    | Unit               | Standard    | Value |
|-------------------------------------------------|---------------------------------------------------|--------------------|-------------|-------|
| <b>Rheological properties</b>                   |                                                   |                    |             |       |
| Mold shrinkage, flow/cross to flow              | Value range based on general practical experience | in/in              | ASTM D955   | 0.008 |
| <b>Mechanical properties (23 °C/50 % r. h.)</b> |                                                   |                    |             |       |
| Flexural modulus                                | 73 °F                                             | lb/in <sup>2</sup> | ASTM D790   | 6000  |
| Tensile strength                                |                                                   | lb/in <sup>2</sup> | ASTM D412   | 5000  |
| Ultimate elongation                             |                                                   | %                  | ASTM D412   | 450   |
| Tensile stress at 50 % elongation               |                                                   | lb/in <sup>2</sup> | ASTM D412   | 1000  |
| Tensile stress at 100 % elongation              |                                                   | lb/in <sup>2</sup> | ASTM D412   | 1100  |
| Tensile stress at 300 % elongation              |                                                   | lb/in <sup>2</sup> | ASTM D412   | 2000  |
| Compression set, as molded                      | 22 h at 73 °F                                     | %                  | ASTM D395-B | 20    |
| Compression set, as molded                      | 22 h at 158 °F                                    | %                  | ASTM D395-B | 75    |
| Compression set, post-cured                     | 22 h at 73 °F; post-cured 16 h at 230 °F          | %                  | ASTM D395-B | 13    |
| Compression set, post-cured                     | 22 h at 158 °F; post-cured 16 h at 230 °F         | %                  | ASTM D395-B | 35    |
| Compressive load                                | 2% deflection                                     | lb/in <sup>2</sup> | ASTM D575   | 100   |
| Compressive load                                | 5% deflection                                     | lb/in <sup>2</sup> | ASTM D575   | 250   |
| Compressive load                                | 10% deflection                                    | lb/in <sup>2</sup> | ASTM D575   | 450   |
| Compressive load                                | 15% deflection                                    | lb/in <sup>2</sup> | ASTM D575   | 650   |
| Compressive load                                | 20% deflection                                    | lb/in <sup>2</sup> | ASTM D575   | 850   |
| Compressive load                                | 25% deflection                                    | lb/in <sup>2</sup> | ASTM D575   | 1050  |
| Compressive load                                | 50% deflection                                    | lb/in <sup>2</sup> | ASTM D575   | 2800  |
| Tear strength, Die C                            |                                                   | lb/fin             | ASTM D624   | 550   |
| <b>Thermal properties</b>                       |                                                   |                    |             |       |
| Glass transition temperature                    | DMA=Dynamic Mechanical Analysis                   | °F                 | DMA         | -47   |
| Low-temperature brittle point                   |                                                   | °F                 | ASTM D746   | < -90 |
| Vicat softening temperature                     | Rate A; 1 kg; 50 °C/h                             | °F                 | ASTM D1525  | 223   |
| <b>Other properties (23 °C)</b>                 |                                                   |                    |             |       |
| Specific gravity                                |                                                   | -                  | ASTM D792   | 1.13  |
| Shore hardness                                  |                                                   | A Scale            | ASTM D2240  | 90    |
| Taber abrasion                                  | H-18 wheel; 1,000-g; 1,000 cycles                 | mg Loss            | ASTM D3489  | 25    |
| Bayshore resilience                             |                                                   | %                  | ASTM D2632  | 40    |