

Data sheet

Durethan A 30 S 000000



PA 66 standard injection molding-grade, nonreinforced, good demolding, very rapid solidification, Automotive sector

ISO/ ASTM

ISO Shortname: ISO 1874-PA 66,MR,14-040

| Property | Test Condition | Unit | Standard | Value | | |
|---|--|-------------------|---------------|--------|-------|--|
| | | | | d.a.m. | cond. | |
| Rheological properties | | | | | | |
| Molding shrinkage, parallel | 150x105x3; 280 °C / MT 80 °C; 400 bar | % | acc. ISO 2577 | 0,75 | | |
| Molding shrinkage, normal | 150x105x3; 280 °C / MT 80 °C; 400 bar | % | acc. ISO 2577 | 1,65 | | |
| Post- shrinkage, parallel | 150x105x3; 120 °C; 4 h | % | acc. ISO 2577 | 0,1 | | |
| Post- shrinkage, normal | 150x105x3; 120 °C; 4 h | % | acc. ISO 2577 | 0,15 | | |
| Mechanical properties (23 °C/50 % r. h.) | | | | | | |
| C Tensile modulus | 1 mm/min | MPa | ISO 527-1,-2 | 3600 | 1600 | |
| C Yield stress | 50 mm/min | MPa | ISO 527-1,-2 | 95 | 60 | |
| C Yield strain | 50 mm/min | % | ISO 527-1,-2 | 4,5 | 18 | |
| C Charpy impact strength | 23 °C | kJ/m ² | ISO 179-1eU | 150 | N | |
| C Charpy impact strength | -30 °C | kJ/m ² | ISO 179-1eU | 100 | 150 | |
| C Charpy notched impact strength | 23 °C | kJ/m ² | ISO 179-1eA | < 10 | 12 | |
| C Charpy notched impact strength | -30 °C | kJ/m ² | ISO 179-1eA | < 10 | < 10 | |
| Charpy notched impact strength | -40 °C | kJ/m ² | ISO 179-1eA | < 10 | < 10 | |
| Izod impact strength | 23 °C | kJ/m ² | ISO 180-1U | 90 | N | |
| Izod impact strength | -30 °C | kJ/m ² | ISO 180-1U | 75 | 95 | |
| Izod notched impact | 23 °C | kJ/m ² | ISO 180-1A | < 10 | < 10 | |
| Izod notched impact | -30 °C | kJ/m ² | ISO 180-1A | < 10 | < 10 | |
| Flexural modulus | 2 mm/min | MPa | ISO 178 | 3200 | 1300 | |
| Flexural strength | 2 mm/min | MPa | ISO 178 | 135 | 60 | |
| Flexural strain at flexural strength | 2 mm/min | % | ISO 178 | 6.0 | 8.0 | |
| Flexural stress at 3.5 % strain | 2 mm/min | MPa | ISO 178 | 110 | 37 | |
| C Puncture maximum force | 23 °C | N | ISO 6603-2 | 5505 | 4620 | |
| C Puncture maximum force | -30 °C | N | ISO 6603-2 | 6143 | | |
| C Puncture energy | 23 °C | J | ISO 6603-2 | 30 | 27 | |

| | | | | | | |
|---|---|----------------|-------------------|--------------------|-------------------------|------|
| C | Puncture energy | -30 °C | J | ISO 6603-2 | 26 | |
| | Ball indentation hardness | | N/mm ² | ISO 2039-1 | 140 | 70 |
| Thermal properties | | | | | | |
| C | Melting temperature | 10 °C/min | °C | ISO 11357-1,- 2 | 263 | |
| C | Temperature of deflection under load | 1.80 MPa | °C | ISO 75-1,-2 | 75 | |
| C | Temperature of deflection under load | 0.45 MPa | °C | ISO 75-1,-2 | 214 | |
| C | Temperature of deflection under load | 8.00 MPa | °C | ISO 75-1,-2 | 55 | |
| | Vicat softening temperature | 50 N; 120 °C/h | °C | ISO 306 | > 230 | |
| C | Coefficient of linear thermal expansion, parallel | 23 to 55 °C | 10-4/K | ISO 11359-1,- 2 | 0.7 | |
| C | Coefficient of linear thermal expansion, transverse | 23 to 55 °C | 10-4/K | ISO 11359-1,- 2 | 0.8 | |
| C | Burning behavior UL 94 (1.6 mm) | 1.6 mm | Class | UL 94 | V-2 | |
| C | Burning behavior UL 94 | 3.2 mm | Class | UL 94 | V-2 | |
| C | Oxygen index | Method A | % | ISO 4589-2 | 26 | |
| | Resistance to heat (ball pressure test) | | °C | IEC 60695-10- 2 | 240 | |
| | Glow wire test (GWFI) | 2.0 mm | °C | IEC 60695-2- 12 | 700 | |
| | Burning rate (US-FMVSS) | >=1.0 mm | mm/min | ISO 3795 | passed | |
| C | Vicat softening temperature | 50 N; 50 °C/h | °C | ISO 306 | > 230 | |
| Electrical properties (23 °C/50 % r. h.) | | | | | | |
| C | Relative permittivity | 100 Hz | - | IEC 60250 | 3.8 | 10 |
| C | Relative permittivity | 1 MHz | - | IEC 60250 | 3.4 | 4.0 |
| C | Dissipation factor | 100 Hz | 10-4 | IEC 60250 | 60 | 1400 |
| C | Dissipation factor | 1 MHz | 10-4 | IEC 60250 | 180 | 700 |
| C | Volume resistivity | | Ohm·m | IEC 60093 | 1E13 | 1E10 |
| C | Surface resistivity | | Ohm | IEC 60093 | 1E15 | 1E14 |
| C | Electric strength | 1 mm | kV/mm | IEC 60243-1 | 30 | 30 |
| C | Comparative tracking index CTI | Solution A | Rating | IEC 60112 | 575 - 1,3 | |
| | Comparative tracking index CTI M | Solution B | Rating | IEC 60112 | 575 (450) M - 1.9 | |
| Other properties (23 °C) | | | | | | |
| C | Water absorption (Saturation value) | Water at 23 °C | % | ISO 62 | ~8,5 | |
| C | Water absorption (Equilibrium value) | 23 °C; 50 % RH | % | ISO 62 | ~2,8 | |

| | | | | | |
|---|---|-------------------|----------|------|--|
| C | Density | kg/m ³ | ISO 1183 | 1136 | |
| | Bulk density | kg/m ³ | ISO 60 | ~700 | |
| Processing conditions for test specimens | | | | | |
| C | Injection molding-Melt temperature | °C | ISO 294 | 280 | |
| C | Injection molding-Mold temperature | °C | ISO 294 | 80 | |
| C | These property characteristics are taken from the CAMPUS plastics data bank and are based on the international catalogue of basic data for plastics according to ISO 10350. | | | | |

Disclaimer

Disclaimer for sales products

This information and our technical advice - whether verbal, in writing or by way of trials - are given in good faith but without warranty, and this also applies where proprietary rights of third parties are involved. Our advice does not release you from the obligation to verify the information currently provided - especially that contained in our safety data and technical information sheets - and to test our products as to their suitability for the intended processes and uses. The application, use and processing of our products and the products manufactured by you on the basis of our technical advice are beyond our control and, therefore, entirely your own responsibility. Our products are sold and our advisory service is given in accordance with the current version of our General Conditions of Sale and Delivery.

Test values

Unless specified to the contrary, the values given have been established on standardized test specimens at room temperature. The figures should be regarded as guide values only and not as binding minimum values. Kindly note that, under certain conditions, the properties can be affected to a considerable extent by the design of the mould/die, the processing conditions and the colouring.

Processing note

Under the recommended processing conditions small quantities of decomposition product may be given off during processing. To preclude any risk to the health and well-being of the machine operatives, tolerance limits for the work environment must be ensured by the provision of efficient exhaust ventilation and fresh air at the workplace in accordance with the Safety Data Sheet. In order to prevent the partial decomposition of the polymer and the generation of volatile decomposition products, the prescribed processing temperatures should not be substantially exceeded. Since excessively high temperatures are generally the result of operator error or defects in the heating system, special care and controls are essential in these areas.

Conditioning

Conditioning in accordance with ISO 1110 (70°C; 62% r.H.)

Công ty TNHH TMDV Toàn Đại Hưng

9 Đường số 7, Cư xá Bình Thới P.8 Q.11

ĐT: (08) 39622857 – 39623270 – 39627761

Fax: (08) 39620989

Email: sales.toandaihung@hcm.fpt.vn

