

COMMERCIAL / NON CORE

TECHNYL A 216HR V25 BK

(Previously DOMAMID 66G25HR1 BK)

Polyamide 66, 25% glass fiber reinforced, hydrolysis stabilized, for injection moulding

General

| | | |
|-----------------------|-----------------------|----------------------|
| Feature | Hydrolysis stabilized | |
| Polymer type | PA66 (Polyamide 66) | |
| Processing technology | Injection molding | |
| Certification | RoHS | EC 1907/2006 (REACH) |
| Colors available | Black | Natural |
| Forms | Pellets | |

Product identification

| | |
|-----------------------|-----------------------|
| ISO 1043 abbreviation | PA66-GF25 |
| ISO 16396 designation | PA66,GF25,M1W,S14-080 |

| | Condition | Standard | Unit | Value |
|------------------------------|----------------|-----------------|--------------------|-----------|
| Physical properties | | | | |
| Density | | ISO 1183 | g/cm ³ | 1.32 |
| Humidity absorption | T=23°C, 50% RH | ISO 62 | % | 2.3 - 2.4 |
| Water absorption | 24 hr, 23°C | ISO 62 | % | 0.8 - 0.9 |
| Water absorption, saturation | | | % | 5.6 |
| Molding shrinkage, parallel | | ISO 294-4, 2577 | % | 0.2 - 0.4 |
| Molding shrinkage, normal | | ISO 294-4, 2577 | % | 0.9 - 1.1 |
| Viscosity number | 96% H2SO4 | ISO 307 | cm ³ /g | 145 |

| | Condition | Standard | Unit | Value |
|---------------------------------------|-----------|--------------|-------------------|---------------------|
| Mechanical properties | | | | dam / cond.* |
| Tensile modulus | 1 mm/min | ISO 527-1/-2 | MPa | 8000 / - |
| Stress at break | 5 mm/min | ISO 527-1/-2 | MPa | 150 / - |
| Strain at break | 5 mm/min | ISO 527-1/-2 | % | 2.7 / - |
| Flexural modulus, ISO 178 | 2 mm/min | ISO 178 | MPa | 7000 / - |
| Flexural strength, ISO 178 | 2 mm/min | ISO 178 | MPa | 230 / - |
| Charpy impact strength, +23°C | +23°C | ISO 179/1eU | kJ/m ² | 50 / - |
| Charpy notched impact strength, +23°C | +23°C | ISO 179/1eA | kJ/m ² | 7 / - |
| Izod impact strength, +23°C | +23°C | ISO 180/1U | kJ/m ² | 40 / - |
| Izod notched impact strength, +23°C | +23°C | ISO 180/1A | kJ/m ² | 6.5 / - |

Thermal properties

| | | | | |
|--|--------------|-------------|----|-----|
| Melting temperature, 10°C/min | | ISO 11357-1 | °C | 262 |
| Temp. of deflection under load, 0.45 MPa | 0.45 MPa | ISO 75 | °C | 259 |
| Temp. of deflection under load, 1.80 MPa | 1.80 MPa | ISO 75 | °C | 245 |
| Vicat softening temperature | 50°C/h - 50N | ISO 306 | °C | 250 |

Electrical properties

| | | | | |
|---------------------|--|---------------|-------|--------|
| Volume resistivity | | IEC 62631-3-1 | ohm.m | 1E+013 |
| Surface resistivity | | IEC 62631-3-1 | ohm | 1E+013 |

Burning behaviour

| | | | | |
|-------------------------------------|---------|-----------|--|--------------|
| Flammability, 0.75 mm | 0.75 mm | UL 94 | | HB |
| Burning rate, FMVSS, Thickness 1 mm | | FMVSS 302 | | < 100 mm/min |

*Test run at 23°C if not differently specified, DAM state (dry as moulded), valid for natural colored products.
: conditioned according to ISO 1110

Processing conditions

| | |
|-------------------------------|---|
| Drying temperature/time | 75-85°C / 2-4h (with dew point of dried air < -30 °C) |
| Rear temperature | 270 - 280 °C |
| Middle temperature | 275 - 285 °C |
| Front temperature | 280 - 290 °C |
| Recommended melt temperature | 270 - 290 °C |
| Recommended mould temperature | 90 - 110 °C |

These parameters are typical of the product but should be related to the type of machinery used and to the type of moulded part.

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Injection notes

The material is supplied in airtight bags, ready for use. In case that the virgin material has absorbed moisture, it must be dried with a dehumidified air drying equipment, dew point minimum -20°C. Recommended time 2-4h.

Injection advice

For reinforced polyamides, Domo recommends the use of steel with a high content of carbon, and purified for polishing, to avoid or limit the abrasion. For example: X38CrMoV5-1 (EN Norm) - 1.2367 /1.2343 (DIN Norm) or X160CrMoV12 (EN Norm) - 1.2601 /1.2379 (DIN Norm). In the case of high requirements on surface quality a mould temperature of up to 120°C can be considered. The processing parameters like processing temperatures are a recommendation and can be adjusted in function of injection machine size, part geometry / design.