**Preliminary Datasheet**

# Ultramid® Advanced

N3HC4

09/2025

**PA9T-CF20**

## Product description

- Preliminary Product - Ultramid Advanced N3HC4 is a 20% short carbon fiber reinforced grade of PA9T. This product is naturally black in color due to the carbon reinforcement.
Markets & applications
Automotive: Metal replacement, structural parts for body, chassis and powertrain, lightweight parts
Industry goods: Loaded industrial equipment, pumps, fans, gears and compressors
Consumer goods: Thin precision structures in consumer electronics

## Physical form and storage

The product is supplied in the form of granules with a bulk density of approx. 0.7 g/cm³. Standard packs are bag and bulk container (octagonal IBC=intermediate bulk container made from corrugated board with a liner bag). Other packaging materials and shipping in road or rail silo wagons are possible by agreement. The containers should only be opened immediately before processing or drying. To ensure that the delivered product absorbs as little moisture as possible, the containers should be stored in dry rooms and always carefully closed again after partial quantities have been withdrawn. In principle, the product can be stored for a long period of time. Containers stored in cold rooms should be equalized to ambient temperature before opening in order to avoid condensation on the granules. Regardless of the storage conditions, the product should be pre-dried according to our recommendations and the machine should preferably be loaded using a closed conveyor system.

## Product safety

In case processing is done under conditions as recommended (cf. processing data sheet) melts are thermally stable and do not generate hazards by molecular degradation or the evolution of gases and vapors. Like all thermoplastic polymers the product decomposes on exposure to excessive thermal load, e.g. when it is overheated or as a result of cleaning by burning off. Further information is available from the safety data sheet.

## Note

The data contained in this publication are based on our current knowledge and experience. In view of the many factors that may affect processing and application of our product, these data do not relieve processors from carrying out their own investigations and tests; neither do these data imply any guarantee of certain properties, nor the suitability of the product for a specific purpose. Any descriptions, drawings, photographs, data, proportions, weights etc. given herein may change without prior information and do not constitute the agreed contractual quality of the product. It is the responsibility of the recipient of our products to ensure that any proprietary rights and existing laws and legislation are observed.
In order to check the availability of products please contact us or our sales agency.

BASF Corporation
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# Ultramid® Advanced N3HC4

## Preliminary Datasheet [3)]

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| Typical values for uncoloured product at 23 °C[1)] | Test method | Unit | Values[2)] |
|---|---|---|---|
| **Properties** | | | |
| Polymer abbreviation | - | - | **PA9T-CF20** |
| Density | ISO 1183 | kg/m³ | **1225** |
| **Processing** | | | |
| Melting temperature, DSC | ISO 11357-1/-3 | °C | **300** |
| Melt temperature, injection moulding/extrusion | - | °C | **310 - 350** |
| Mould temperature, injection moulding | - | °C | **80 - 160** |
| Molding shrinkage (parallel) | ISO 294-4 | % | **0.26** |
| Molding shrinkage (normal) | ISO 294-4 | % | **0.70** |
| **Mechanical properties** | | | **dry / cond.** |
| Tensile modulus (23°C) | ISO 527-1/-2 | MPa | **19900 / 19700** |
| Stress at break (23°C) | ISO 527-1/-2 | MPa | **288 / 283** |
| Strain at break (23°C) | ISO 527-1/-2 | % | **2.1 / 2.2** |
| Flexural modulus (23°C) | ISO 178 | MPa | **18000 / 18100** |
| Flexural strength | ISO 178 | MPa | **404 / 396** |
| Charpy unnotched impact strength (23°C) | ISO 179/1eU | kJ/m² | **76 / -** |
| Charpy notched impact strength (-40°C) | ISO 179/1eA | kJ/m² | **8.6 / -** |
| Charpy notched impact strength (23°C) | ISO 179/1eA | kJ/m² | **9.3 / -** |
| **Thermal properties** | | | |
| Deflection temp. under load 1.8 MPa (HDT A) | ISO 75-1/-2 | °C | **287** |

Footnotes
1) If product name or properties don't state otherwise.
2) The asterisk symbol '*' signifies inapplicable properties.
3) The typical values of preliminary datasheets are not statistically firm.

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