

Product Information

# VESTAMID® L-CF15 BK E70461

## CARBON FIBER-REINFORCED, ELECTRICALLY CONDUCTIVE POLYAMIDE 12 COMPOUND



**VESTAMID® L-CF15 BK E70461** is a semi-crystalline UV-stabilised compound based on PA12 from which quick-connectors are produced by injection molding. The Polyamid compound is especially suitable for

Automotive and Mobility. Further advantages of VESTAMID® L-CF15 BK E70461 are the characteristic properties of PA12, e.g., low water absorption, good dimensional stability and nearly constant mechanical properties

at changing ambient humidity. Because of its semi-crystalline morphology VESTAMID® L-CF15 BK E70461 provides an excellent chemical resistance.

VESTAMID® L-CF15 BK E70461 is supplied as cylindrical granules, ready for processing, in moisture-proof bags.

Pigmentation may affect values.

The results shown have been generated from a low number of production lots. Therefore, they are preliminary and not yet the result of a statistical evaluation. Therefore they must not be used to establish specifications.

### Key Features

**Industrial Sector**

Automotive and Mobility

**Processing**

Injection molding

**Delivery form**

Pellets, Granules

**Optics**

Laser absorbing

**Resistance to**

Heat (thermal stability), UV / light / weathering

**Electrical**

Conductive

**Conformity**

Automotive

**Additives**

Carbon fibers

Mechanical properties ISO	dry	Unit	Test Standard
Tensile modulus	<b>1.27E6</b>	psi	ISO 527
Tensile strength	<b>18900</b>	psi	ISO 527
Yield stress	<b>18900</b>	psi	ISO 527
Yield strain	<b>3.5</b>	%	ISO 527
Stress at break	<b>18900</b>	psi	ISO 527
Strain at break, B	<b>3.7</b>	%	ISO 527
Nominal strain at break, tB	<b>3.7</b>	%	ISO 527
Charpy impact strength, +23°C	<b>26.2</b>	ftlb/in <sup>2</sup>	ISO 179/1eU
Charpy impact strength, -30°C	<b>25.2</b>	ftlb/in <sup>2</sup>	ISO 179/1eU
Charpy impact strength, -40°C	<b>24.3</b>	ftlb/in <sup>2</sup>	ISO 179/1eU
Charpy notched impact strength, +23°C	<b>5.23</b>	ftlb/in <sup>2</sup>	ISO 179/1eA
Type of failure	<b>C</b>	-	-
Charpy notched impact strength, -30°C	<b>3.33</b>	ftlb/in <sup>2</sup>	ISO 179/1eA
Charpy notched impact strength, -40°C	<b>3.33</b>	ftlb/in <sup>2</sup>	ISO 179/1eA

Thermal properties	dry	Unit	Test Standard
Melting temperature	<b>352</b>	°F	ISO 11357-1/-3
Glass transition temperature, DSC	<b>100</b>	°F	ISO 11357-1/-2
Temp. of deflection under load A, 1.80 MPa	<b>336</b>	°F	ISO 75-1/-2
Temp. of deflection under load B, 0.45 MPa	<b>354</b>	°F	ISO 75-1/-2
Vicat softening temperature A, 10 N, 50 K/h	<b>349</b>	°F	ISO 306
Vicat softening temperature B, 50 N, 50 K/h	<b>378</b>	°F	ISO 306

Physical properties	dry	Unit	Test Standard
Density	<b>1.1</b>	g/cm <sup>3</sup>	ISO 1183
Water absorption	<b>1.27</b>	%	Sim. to ISO 62
Moisture content	<b>0.015</b>	wt.-%	ISO 15512

## VESTAMID®

Density	<b>1.1</b>	g/cm <sup>3</sup>	ASTM D 792
Shore D Hardness	<b>79</b>	-	ASTM D 2240

Electrical properties	dry	Unit	Test Standard
Volume resistivity, V	<b>0.184</b>	Ohm*m	IEC 62631-3-1

### Characteristics

#### Applications

Quick-connectors

#### Processing

Casting

#### Special Characteristics

Halogen-free, Semi-crystalline, Light-stabilized, Medium viscosity

#### Color

Black

#### Additives

Conductive agent, Processing aids

#### Delivery form

Cylindrical pellets

#### Chemical Resistance

General chemical resistance