

## Quality of material used by Automotive-connectors sp. z o.o.

Automotive-connectors sp. z o.o. company offers automotive connectors made of two types of plastics:

- Polyamide (PA66) with glass fibre admixture (GF)
- Polybutylene (PBT)

**Regarding nylon (PA66) - our connectors are made of materials with glass fibre (GF) admixture at the level of from 15% to 30% depending on connector type.**

**Material quality (especially PA66+GF) is the main feature which marks our company out on the market.**

Nylon (PA66) strengthened by 30% glass fibre admixture has increased tensile and compressing strength, better mechanical features and rigidity. Slight capability of absorbing moisture assure high creep resistance and dimensions stability and all this keeping excellent abrasion resistance. It can work in higher temperatures.

Connectors of the biggest quality requirements are made of Du Pont materials, Zytel series - PA66+GF30% or PA66-I (Ultramid by BASF Plastics)

### DuPont™ Zytel®

nylon resin

#### Zytel® 70G30HSLR BK099

Zytel® 70G30HSLR BK099 is a 30% glass fiber reinforced, heat stabilized, hydrolysis resistant polyamide 66 resin for injection molding.

Property	Test Method	Units	Value	
			DAM	50%RH
<b>Identification</b>				
Resin Identification	ISO 1043		PA66-GF30	
Part Marking Code	ISO 11469		>PA66-GF30<	
<b>Mechanical</b>				
Stress at Break	ISO 527	MPa (kpsi)	195 (28.3)	130 (18.9)
Strain at Break	ISO 527	%	3	5
Tensile Modulus	ISO 527	MPa (kpsi)	10000 (1450)	7200 (1045)
Notched Charpy Impact Strength	ISO 179/1eA	kJ/m <sup>2</sup>	12	14
Unnotched Charpy Impact Strength	ISO 179/1eU	kJ/m <sup>2</sup>	75	90
<b>Thermal</b>				
Deflection Temperature 1.80MPa	ISO 75f	°C (°F)	253 (487)	
Melting Temperature 10°C/min	ISO 11357-1/-3	°C (°F)	262 (504)	
<b>Electrical</b>				
CTI 3.0mm	UL 746A	V	400	

Source: <http://plastics.dupont.com/>

**To cost down many producers reduce content of glass fibre (GF) added to the nylon (PA66). Commonly on the market there are connectors with GF admixture at the level of 8,5%. Information about that are put on the data sheets on polish distributors' websites.**

### DuPont™ Zytel®

nylon resin

#### Zytel® MT409AHS BK010

Zytel® MT409AHS BK010 is a Medium Toughened, high performance, heat stabilized, black polyamide 66 resin having good stiffness and improved knit line strength with superior toughness and processability.

Property	Test Method	Units	Value	
			DAM	50%RH
<b>Identification</b>				
Resin Identification	ISO 1043		PA66-I	
Part Marking Code	ISO 11469		>PA66-I<	
<b>Mechanical</b>				
Yield Stress	ISO 527	MPa (kpsi)	60 (8.7)	42 (6.1)
Yield Strain	ISO 527	%	6	27
Nominal Strain at Break	ISO 527	%	29	>50
Tensile Modulus	ISO 527	MPa (kpsi)	2400 (348)	1075 (156)
Tensile Stress @ 50% Strain	ISO 527	MPa (kpsi)	61 (8.8)	43 (6.2)
Flexural Modulus	ISO 178	MPa (kpsi)	2200 (319)	1075 (156)
Notched Charpy Impact Strength -40°C (-40°F) 23°C (73°F)	ISO 179/1eA	kJ/m <sup>2</sup>	12	19

AUTOMOTIVE  
CONNECTORS