

# Comco PA 6 extruded

Polyamide 6  
Comco-Plastic GmbH

Message:

Comco PA 6 extruded is a Polyamide 6 (Nylon 6) material. It is available in Europe for extrusion. Primary attribute of Comco PA 6 extruded: Flame Rated.

| General Information                          |       |               |                   |             |
|----------------------------------------------|-------|---------------|-------------------|-------------|
| Appearance                                   |       | Black         |                   |             |
|                                              |       | Natural Color |                   |             |
| Processing Method                            |       | Extrusion     |                   |             |
| Physical                                     | Dry   | Conditioned   | Unit              | Test Method |
| Density                                      | 1.15  | --            | g/cm <sup>3</sup> | ISO 1183    |
| Water Absorption                             |       |               |                   |             |
| Saturation, 23°C                             | 9.0   | --            | %                 |             |
| Equilibrium, 23°C, 50% RH                    | 2.6   | --            | %                 |             |
| Water Absorption                             |       |               |                   | ISO 62      |
| after 24 h immersion in water : 23°C         | 86.0  | --            | mg                |             |
| after 96 h immersion in water : 23°C         | 168.0 | --            | mg                |             |
| Maximum Service Temperature                  |       |               |                   |             |
| in air continuously                          | 85    | --            | °C                |             |
| in air for short periods                     | 160   | --            | °C                |             |
| Service Temperature - Minimum                | -40   | --            | °C                |             |
| Hardness                                     | Dry   | Conditioned   | Unit              | Test Method |
| Rockwell Hardness (M-Scale)                  | 85    | --            |                   | ISO 2039-2  |
| Ball Indentation Hardness                    | 150   | --            | MPa               | ISO 2039-1  |
| Mechanical                                   | Dry   | Conditioned   | Unit              | Test Method |
| Tensile Modulus (23°C)                       | 3250  | 1400          | MPa               | ISO 527-2   |
| Tensile Stress (Yield, 23°C)                 | 76.0  | 45.0          | MPa               | ISO 527-2   |
| Tensile Strain (Break, 23°C)                 | > 50  | > 100         | %                 | ISO 527-2   |
| Tensile Creep Modulus <sup>1</sup> (1000 hr) | 18.0  | 7.00          | MPa               | ISO 899-1   |
| Compressive Stress                           |       |               |                   | ISO 604     |
| 5% Strain                                    | 80.0  | --            | MPa               |             |
| 2% Strain                                    | 46.0  | --            | MPa               |             |
| 1% Strain                                    | 24.0  | --            | MPa               |             |

| Impact                                            | Dry       | Conditioned | Unit              | Test Method |
|---------------------------------------------------|-----------|-------------|-------------------|-------------|
| Charpy Notched Impact Strength                    | 5.5       | --          | kJ/m <sup>2</sup> | ISO 179/1eA |
| Charpy Unnotched Impact Strength                  | No Break  | --          |                   | ISO 179/1eU |
| Notched Izod Impact Strength                      | 5.5       | 15          | kJ/m <sup>2</sup> | ISO 180/2A  |
| Thermal                                           | Dry       | Conditioned | Unit              | Test Method |
| Heat Deflection Temperature (1.8 MPa, Unannealed) | 70.0      | --          | °C                | ISO 75-2/A  |
| Melting Temperature                               | 220       | --          | °C                |             |
| CLTE - Flow                                       |           |             |                   |             |
| 23 to 60°C                                        | 9.0E-5    | --          | cm/cm/°C          |             |
| 23 to 100°C                                       | 1.1E-4    | --          | cm/cm/°C          |             |
| Thermal Conductivity                              | 0.28      | --          | W/m/K             |             |
| Electrical                                        | Dry       | Conditioned | Unit              | Test Method |
| Surface Resistivity                               | > 1.0E+13 | > 1.0E+12   | ohms              | IEC 60093   |
| Volume Resistivity                                | > 1.0E+14 | > 1.0E+12   | ohms·cm           | IEC 60093   |
| Electric Strength                                 | 25        | 16          | kV/mm             | IEC 60243-1 |
| Relative Permittivity                             |           |             |                   | IEC 60250   |
| 100 Hz                                            | 3.90      | 7.40        |                   |             |
| 1 MHz                                             | 3.30      | 3.80        |                   |             |
| Dissipation Factor                                |           |             |                   | IEC 60250   |
| 100 Hz                                            | 0.019     | 0.13        |                   |             |
| 1 MHz                                             | 0.021     | 0.060       |                   |             |
| Comparative Tracking Index                        | 600       | 600         | V                 | IEC 60112   |
| Flammability                                      | Dry       | Conditioned | Unit              | Test Method |
| Flame Rating                                      |           |             |                   | UL 94       |
| 3.00 mm                                           | HB        | --          |                   |             |
| 6.00 mm                                           | HB        | --          |                   |             |
| Oxygen Index                                      | 25        | --          | %                 | ISO 4589-2  |
| NOTE                                              |           |             |                   |             |
| 1.                                                | 1% Strain |             |                   |             |

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