

# Comco PA 6 oil

Polyamide 6  
Comco-Plastic GmbH

Message:

Comco PA 6 oil is a Polyamide 6 (Nylon 6) material. It is available in Europe.  
Important attributes of Comco PA 6 oil are:  
Flame Rated  
Stabilized

| General Information                          |                |             |                   |             |
|----------------------------------------------|----------------|-------------|-------------------|-------------|
| Additive                                     | Oil Stabilizer |             |                   |             |
| Appearance                                   | Black          |             |                   |             |
|                                              | Green          |             |                   |             |
|                                              | Yellow         |             |                   |             |
| Physical                                     | Dry            | Conditioned | Unit              | Test Method |
| Density                                      | 1.14           | --          | g/cm <sup>3</sup> | ISO 1183    |
| Water Absorption                             |                |             |                   |             |
| Saturation, 23°C                             | 6.3            | --          | %                 |             |
| Equilibrium, 23°C, 50% RH                    | 1.8            | --          | %                 |             |
| Water Absorption                             |                |             |                   | ISO 62      |
| after 24 h immersion in water : 23°C         | 44.0           | --          | mg                |             |
| after 96 h immersion in water : 23°C         | 83.0           | --          | mg                |             |
| Maximum Service Temperature                  |                |             |                   |             |
| in air continuously                          | 105            | --          | °C                |             |
| in air for short periods                     | 170            | --          | °C                |             |
| Service Temperature - Minimum                | -20            | --          | °C                |             |
| Hardness                                     | Dry            | Conditioned | Unit              | Test Method |
| Rockwell Hardness (M-Scale)                  | 83             | --          |                   | ISO 2039-2  |
| Shore Hardness (Shore D)                     | 80             | --          |                   | ISO 868     |
| Ball Indentation Hardness                    | 145            | --          | MPa               | ISO 2039-1  |
| Mechanical                                   | Dry            | Conditioned | Unit              | Test Method |
| Tensile Modulus (23°C)                       | 3000           | 1450        | MPa               | ISO 527-2   |
| Tensile Stress (Yield, 23°C)                 | 70.0           | 45.0        | MPa               | ISO 527-2   |
| Tensile Strain (Break, 23°C)                 | 25             | > 50        | %                 | ISO 527-2   |
| Tensile Creep Modulus <sup>1</sup> (1000 hr) | 19.0           | 9.00        | MPa               | ISO 899-1   |

|                                                   |           |             |                   |             |
|---------------------------------------------------|-----------|-------------|-------------------|-------------|
| Compressive Stress                                |           |             |                   | ISO 604     |
| 5% Strain                                         | 81.0      | --          | MPa               |             |
| 2% Strain                                         | 45.0      | --          | MPa               |             |
| 1% Strain                                         | 22.0      | --          | MPa               |             |
| Impact                                            | Dry       | Conditioned | Unit              | Test Method |
| Charpy Notched Impact Strength                    | 4.0       | --          | kJ/m <sup>2</sup> | ISO 179/1eA |
| Charpy Unnotched Impact Strength                  | No Break  | --          |                   | ISO 179/1eU |
| Notched Izod Impact Strength                      | 4.0       | 7.0         | kJ/m <sup>2</sup> | ISO 180/2A  |
| Thermal                                           | Dry       | Conditioned | Unit              | Test Method |
| Heat Deflection Temperature (1.8 MPa, Unannealed) | 75.0      | --          | °C                | ISO 75-2/A  |
| Melting Temperature                               | 220       | --          | °C                |             |
| CLTE - Flow                                       |           |             |                   |             |
| 23 to 60°C                                        | 8.0E-5    | --          | cm/cm/°C          |             |
| 23 to 100°C                                       | 9.0E-5    | --          | cm/cm/°C          |             |
| Thermal Conductivity                              | 0.29      | --          | 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                                 | 22        | 14          | kV/mm             | IEC 60243-1 |
| Relative Permittivity                             |           |             |                   | IEC 60250   |
| 100 Hz                                            | 3.50      | 6.50        |                   |             |
| 1 MHz                                             | 3.10      | 3.60        |                   |             |
| Dissipation Factor                                |           |             |                   | IEC 60250   |
| 100 Hz                                            | 0.015     | 0.15        |                   |             |
| 1 MHz                                             | 0.016     | 0.050       |                   |             |
| 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        | --          |                   |             |
| NOTE                                              |           |             |                   |             |
| 1.                                                | 1% Strain |             |                   |             |

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