

## Technical Data Sheet

### TECHNIPOL® Bio 1120

#### DESCRIPTION

TECHNIPOL® Bio 1120 is an aliphatic co-polyester, characterized a low melting point. Due to its formulation, it can be used in biodegradable and compostable compounds. Furthermore, it exhibits a good compatibility with other biodegradable polymers as polylactic acid and starch. It can be used as support polymer for master-batches both in granules and in powder form. Usable for injection molding. TECHNIPOL® Bio 1120 is certified OK Compost INDUSTRIAL and OK Compost HOME by TÜV Austria.

#### THERMAL PROPERTIES

| PROPERTY                     | TEST METHOD | M.U. | TYPICAL VALUE |
|------------------------------|-------------|------|---------------|
| Melting temperature          | ISO 11357-3 | °C   | 114           |
| Crystallization temperature  | ISO 11357-3 | °C   | 66            |
| Glass transition temperature | ISO 11357-2 | °C   | -32           |
| Vicat A /50                  | ISO 306     | °C   | 99            |

#### RHEOLOGICAL PROPERTIES

| PROPERTY          | TEST METHOD | M.U.     | VALUE |
|-------------------|-------------|----------|-------|
| MFI 190°C, 2.16kg | ISO 1133    | g/10 min | 22    |
| MVR 190°C, 2.16kg | ISO 1133    | g/10 min | 17    |

#### MECHANICAL PROPERTIES

| PROPERTY                               | TEST METHOD  | M.U.            | TYPICAL VALUE |
|--|--------------|-----------------|---------------|
| Shore D hardness, instantaneous / 15 s | ISO 868      | -               | 61/59         |
| Stress at break                        | ISO 527      | MPa             | 50            |
| Elongation at break                    | ISO 527      | %               | 450           |
| Flexural modulus                       | ISO 178      | MPa             | 450           |
| Abrasion resistance (Vertical load 5N) | ISO 4649     | mm <sup>3</sup> | 64            |
| Izod impact resistance/notched (23°C)  | ISO 180      | J/m             | 46            |
| Izod impact resistance/notched (-40°C) | ISO 180      | J/m             | 32            |
| Compression set (23°C)                 | ISO 815:1991 | %               | 33            |
| Compression set (70°C)                 | ISO 815:1991 | %               | 46            |

#### OTHER PROPERTIES

| PROPERTY                                 | TEST METHOD | M.U.              | TYPICAL VALUE |
|--|-------------|-------------------|---------------|
| Density                                  | ISO 1183    | g/cm <sup>3</sup> | 1,26          |
| Water absorption (23°C x 24 h immersion) | MI 08       | %                 | 0,44          |

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#### PROCESSING CONDITIONS

Suggested temperature profile for injection molding

| MELTING TEMPERATURE | MOLD TEMPERATURE | NOZZLE | FRONT ZONE 3 | CENTER ZONE 2 | REAR ZONE 1 |
|---------------------|------------------|--------|--------------|---------------|-------------|
| °C                  | °C               | °C     | °C           | °C            | °C          |
| 114                 | 20 - 30          | 115    | 110          | 105           | 100         |

Suggested temperature profile for extrusion

| MELTING TEMPERATURE | MFI                 | FEEDING ZONE | COMPRESSION ZONE | METERING ZONE | HEAD/DIE  |
|---------------------|---------------------|--------------|------------------|---------------|-----------|
| °C                  | g/10 min.           | °C           | °C               | °C            | °C        |
| 114                 | 22 (190°C, 2.16 Kg) | 95 - 105     | 105 - 125        | 110 - 130     | 110 - 130 |

#### DRYING CONDITIONS

Drying recommended = Yes  
Drying temperature = 60 °C  
Drying time, dehumidifier dryer = 2-3 h  
Processing moisture content = 0,15%

#### PACKAGING

25 kg bags equipped with an aluminum film barrier against moisture action.  
500 kg cardboard octabins equipped with an inner PE liner.  
500 Kg and 1000 Kg big bags.

#### STORAGE

Product is stable for 6 months when stored unopened in its original packaging, kept in a cool and dry place and protected from light. When stocked around 5 – 10°C or below, it is recommended to keep it at 15 – 20°C for at least for 24 hours before using it.

#### CERTIFICATIONS

