

## LATILUB 45/7-20T F3

LATI INDUSTRIA TERMOPLASTICI SPA - *High Density Polyethylene*

### General Information

#### Product Description

Self-lubricating product based on High density polyethylene (HDPE). PTFE. Potentially suitable for medical contact application.

#### General

|                 |                                          |                             |                 |
|-----------------|------------------------------------------|-----------------------------|-----------------|
| Material Status | • Commercial: Active                     |                             |                 |
| Availability    | • Africa & Middle East<br>• Asia Pacific | • Europe<br>• Latin America | • North America |
| Additive        | • PTFE Lubricant                         |                             |                 |
| Features        | • Lubricated                             | • Self Lubricating          |                 |
| Uses            | • Medical/Healthcare Applications        |                             |                 |

### Properties <sup>1</sup>

| Physical                                               | Nominal Value | Unit                                               | Test Method     |
|--------------------------------------------------------|---------------|----------------------------------------------------|-----------------|
| Density (73°F)                                         | 1.07          | g/cm <sup>3</sup>                                  | ISO 1183        |
| Molding Shrinkage <sup>2</sup>                         |               |                                                    | ISO 294-4       |
| Across Flow : 0.0787 in                                | 1.3 to 1.6    | %                                                  |                 |
| Flow : 0.0787 in                                       | 1.5 to 1.8    | %                                                  |                 |
| Water Absorption <sup>3</sup> (Saturation, 73°F)       | 0.030         | %                                                  | ISO 62          |
| Mechanical                                             | Nominal Value | Unit                                               | Test Method     |
| Tensile Modulus                                        |               |                                                    | ISO 527-1/1     |
| 73°F                                                   | 145000        | psi                                                |                 |
| 140°F                                                  | 52200         | psi                                                |                 |
| 194°F                                                  | 14500         | psi                                                |                 |
| Tensile Stress                                         |               |                                                    | ISO 527-2/5     |
| Yield, 73°F                                            | 2900          | psi                                                |                 |
| Yield, 140°F                                           | 1160          | psi                                                |                 |
| Yield, 194°F                                           | 870           | psi                                                |                 |
| Tensile Stress                                         |               |                                                    | ISO 527-2/5     |
| Break, 73°F                                            | 2180          | psi                                                |                 |
| Break, 140°F                                           | 1450          | psi                                                |                 |
| Break, 194°F                                           | 1160          | psi                                                |                 |
| Tensile Strain                                         |               |                                                    | ISO 527-2/5     |
| Yield, 73°F                                            | 8.5           | %                                                  |                 |
| Yield, 140°F                                           | > 10          | %                                                  |                 |
| Yield, 194°F                                           | > 10          | %                                                  |                 |
| Tensile Strain                                         |               |                                                    | ISO 527-2/5     |
| Break, 73°F                                            | 15            | %                                                  |                 |
| Break, 140°F                                           | 20            | %                                                  |                 |
| Break, 194°F                                           | 20            | %                                                  |                 |
| Coefficient of Friction <sup>4</sup>                   |               |                                                    | Internal Method |
| Dynamic                                                | 0.26          |                                                    |                 |
| Static                                                 | 0.23          |                                                    |                 |
| Wear Factor <sup>5</sup>                               | 400           | 10 <sup>-4</sup> -10 in <sup>3</sup> ·min/ft·lb·hr | Internal Method |
| Impact                                                 | Nominal Value | Unit                                               | Test Method     |
| Charpy Notched Impact Strength (73°F)                  | 1.2           | ft·lb/in <sup>2</sup>                              | ISO 179/1eA     |
| Charpy Unnotched Impact Strength (73°F)                | No Break      |                                                    | ISO 179/1eU     |
| Thermal                                                | Nominal Value | Unit                                               | Test Method     |
| Deflection Temperature Under Load (66 psi, Unannealed) | 167           | °F                                                 | ISO 75-2/B      |



|                                                              |                           |                    |
|--------------------------------------------------------------|---------------------------|--------------------|
| Deflection Temperature Under Load (264 psi, Unannealed)      | 113 °F                    | ISO 75-2/A         |
| Vicat Softening Temperature                                  | 167 °F                    | ISO 306/B120       |
| CLTE - Flow (86 to 212°F)                                    | 8.3E-5 in/in/°F           | ISO 11359-2        |
| CLTE - Transverse (86 to 212°F)                              | 8.3E-5 in/in/°F           | ISO 11359-2        |
| <b>Electrical</b>                                            | <b>Nominal Value Unit</b> | <b>Test Method</b> |
| Surface Resistivity                                          | 1.0E+12 ohms              | ASTM D257          |
| Dielectric Strength (73°F, 0.0787 in, Method A (Short-Time)) | 740 V/mil                 | ASTM D149          |

Notes

|                                                                                   |
|-----------------------------------------------------------------------------------|
| <sup>1</sup> Typical properties: these are not to be construed as specifications. |
| <sup>2</sup> 60 MPa                                                               |
| <sup>3</sup> in air                                                               |
| <sup>4</sup> ISO 7148-2 (speed 0.126 m/s, load 10N)                               |
| <sup>5</sup> ISO 7148-2 (speed 0.126 m/s, load 10N, path length 13.6km)           |

