

## LATISTAT 45/7-02

Dissipative product based on High density polyethylene (HD-PE).  
Unfilled.

| PHYSICAL PROPERTIES                  | STANDARD    | VALUE MEASURE UNITS         |
|--------------------------------------|-------------|-----------------------------|
| Density                              | ISO 1183    | 1.10 g/cm <sup>3</sup>      |
| Linear shrinkage at moulding         |             |                             |
| Longitudinal (0.078in/8,700psi)      | ISO 294-4   | 0.015 ÷ 0.018 in/in         |
| Transversal (0.078in/8,700psi)       | ISO 294-4   | 0.015 ÷ 0.018 in/in         |
| MECHANICAL PROPERTIES                | STANDARD    | VALUE MEASURE UNITS         |
| CHARPY impact strength               |             |                             |
| Unnotched, at +73°F                  | ISO 179-1eU | 11.68 ft.lb/in <sup>2</sup> |
| Notched, at +73°F                    | ISO 179-1eA | 0.56 ft.lb/in <sup>2</sup>  |
| Tensile elongation                   |             |                             |
| At yield (0.196 in/min), 73°F        | ISO 527 (1) | 5.0 %                       |
| At break (0.196 in/min), 73°F        | ISO 527 (1) | 6.0 %                       |
| Tensile strength                     |             |                             |
| At break (0.196 in/min), 73°F        | ISO 527 (1) | 3600 psi                    |
| Elastic modulus                      |             |                             |
| Tensile (speed 0.04 in/min), at 73°F | ISO 527 (1) | 230 kpsi                    |

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| THERMAL PROPERTIES                                | STANDARD   | VALUE MEASURE UNITS |
|---------------------------------------------------|------------|---------------------|
| <a href="#">VICAT - Softening point</a>           |            |                     |
| 11 lb (heating rate 122°F/h)                      | ISO 306    | 194 °F              |
| <a href="#">HDT - Heat Deflection Temperature</a> |            |                     |
| 66 psi                                            | ISO 75     | 194 °F              |
| 264 psi                                           | ISO 75     | 140 °F              |
| ELECTRICAL PROPERTIES                             | STANDARD   | VALUE MEASURE UNITS |
| <a href="#">Electrical resistivity</a>            |            |                     |
| Surface                                           | ASTM D 257 | 1E2 ohm             |

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### **MATERIAL - STORAGE**

Sealed, undamaged packages has to be kept in dry storage facilities, providing they are also able to protect them from weather and accidental damages.

### **HANDLING AND SAFETY**

Detailed information about a safe treatment of the material are indicated in the "Material Safety Data Sheet" (MSDS) furnished with the first material supply. The MSDS may be also sent again in case of loss.

### **PREDRYING CONDITIONS**

At least 3 hours at  $176 \div 194^{\circ}\text{F}$

These are the suggested conditions to reduce the moisture content to adequate levels. Temperature and drying time can be reduced by using vacuum ovens

### **ACTUAL MELT TEMPERATURE**

$356 \div 446^{\circ}\text{F}$

The injection molding machine settings needed to obtain the suggested melt temperature will depend greatly on shot size and machine capacity, as well as other molding parameters such as: injection speed, screw RPM, back pressure, etc. On small machines, running short cycles, it is possible to use higher melt temperatures to improve plastification, fluidity and surface appearance, paying attention to any indication of material degradation.

### **MOLD TEMPERATURE**

$68 \div 104^{\circ}\text{F}$

The mold temperature suggested above is the actual tool steel temperature. This can be significantly different from the tool settings, due to the cooling system efficiency and the accuracy of the temperature control on the tool.

### **INJECTION SPEED**

Medium

The advisable injection speed greatly depends on cavity geometry and injection molding machine size. The use of high injection speed can improve the surface appearance, but it can also cause outgassing and burn marks due to overheating through shear stress.

### **REGRIND USAGE**

The use of regrind is possible, but should be assessed on the basis of the project, moulding parameters, and type of grinding used. The effect of using regrind on material properties must be evaluated by the customer on its specific project and process. High percentages of regrind may cause a reduction in viscosity, reducing mechanical properties, first resilience.

### **HOT RUNNER MOLDS**

Hot runner moulds may be used when a very tight temperature control is assured.

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### TO AVOID

In order to prevent any material degradation, over-dimensioned machines should be avoided.

### NOTES

**The products mentioned herein are not suitable for applications in contact with foodstuff or for potable water transportation, or for toy manufacturing. The products mentioned herein are not suitable for applications in the pharmaceutical, medical or dental sector.**