



# Ultraform® W 2320 003 AT

## BASF Corporation - Acetal (POM) Copolymer

Saturday, November 2, 2019

### General Information

#### Product Description

Ultraform W 2320 003 AT is a very easy flowing and rapidly solidifying injection molding POM grade for use where processing is extremely difficult but mechanical properties are lower. Contains a mold release agent.

Typical applications include thin walled parts.

#### General

|                   |                                             |
|-------------------|---------------------------------------------|
| Material Status   | • Commercial: Active                        |
| Availability      | • North America                             |
| Additive          | • Mold Release                              |
| Features          | • Copolymer • Good Flow • Good Mold Release |
| Uses              | • Thin-walled Parts                         |
| Agency Ratings    | • EC 1907/2006 (REACH)                      |
| RoHS Compliance   | • RoHS Compliant                            |
| Forms             | • Granules                                  |
| Processing Method | • Injection Molding                         |

### ASTM & ISO Properties <sup>1</sup>

| Physical                                          | Nominal Value | Unit                   | Test Method |
|---------------------------------------------------|---------------|------------------------|-------------|
| Density                                           | 1.41          | g/cm <sup>3</sup>      | ISO 1183    |
| Melt Volume-Flow Rate (MVR) (190°C/2.16 kg)       | 25            | cm <sup>3</sup> /10min | ISO 1133    |
| Molding Shrinkage                                 |               |                        | ISO 294-4   |
| Across Flow                                       | 2.1           | %                      |             |
| Flow                                              | 2.0           | %                      |             |
| Water Absorption (Saturation, 73°F)               | 0.80          | %                      | ISO 62      |
| Water Absorption (Equilibrium, 73°F, 50% RH)      | 0.20          | %                      | ISO 62      |
| Mechanical                                        | Nominal Value | Unit                   | Test Method |
| Tensile Modulus (73°F)                            | 413000        | psi                    | ISO 527-2   |
| Tensile Stress (Yield, 73°F)                      | 9430          | psi                    | ISO 527-2   |
| Tensile Strain (Yield, 73°F)                      | 8.0           | %                      | ISO 527-2   |
| Nominal Tensile Strain at Break (73°F)            | 24            | %                      | ISO 527-2   |
| Impact                                            | Nominal Value | Unit                   | Test Method |
| Charpy Notched Impact Strength                    |               |                        | ISO 179     |
| -22°F                                             | 1.9           | ft·lb/in <sup>2</sup>  |             |
| 73°F                                              | 2.1           | ft·lb/in <sup>2</sup>  |             |
| Charpy Unnotched Impact Strength                  |               |                        | ISO 179     |
| -22°F                                             | 90            | ft·lb/in <sup>2</sup>  |             |
| 73°F                                              | 90            | ft·lb/in <sup>2</sup>  |             |
| Notched Izod Impact Strength                      |               |                        | ISO 180     |
| -22°F                                             | 2.4           | ft·lb/in <sup>2</sup>  |             |
| 73°F                                              | 2.4           | ft·lb/in <sup>2</sup>  |             |
| Thermal                                           | Nominal Value | Unit                   | Test Method |
| Heat Deflection Temperature (264 psi, Unannealed) | 212           | °F                     | ISO 75-2/A  |
| Melting Temperature (DSC)                         | 331           | °F                     | ISO 3146    |

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| Thermal                                 | Nominal Value | Unit     | Test Method          |
|-----------------------------------------|---------------|----------|----------------------|
| CLTE - Flow (73 to 131°F)               | 6.1E-5        | in/in/°F | ISO 11359-2          |
| RTI Elec                                |               |          | UL 746               |
| 0.030 in                                | 221           | °F       |                      |
| 0.06 in                                 | 221           | °F       |                      |
| 0.12 in                                 | 221           | °F       |                      |
| RTI Imp                                 |               |          | UL 746               |
| 0.06 in                                 | 194           | °F       |                      |
| 0.12 in                                 | 194           | °F       |                      |
| RTI Str                                 |               |          | UL 746               |
| 0.06 in                                 | 194           | °F       |                      |
| 0.12 in                                 | 221           | °F       |                      |
| Electrical                              | Nominal Value | Unit     | Test Method          |
| Surface Resistivity                     | 1.0E+13       | ohms     | IEC 60093            |
| Volume Resistivity                      | 1.0E+13       | ohms·cm  | IEC 60093            |
| Dielectric Constant (1 MHz)             | 3.80          |          | IEC 60250            |
| Dissipation Factor (1 MHz)              | 5.0E-3        |          | IEC 60250            |
| Comparative Tracking Index (Solution A) | 600           | V        | IEC 60112            |
| Flammability                            | Nominal Value | Unit     | Test Method          |
| Flammability Classification             |               |          | IEC 60695-11-10, -20 |
| 0.030 in                                | HB            |          |                      |
| 0.06 in                                 | HB            |          |                      |
| 0.12 in                                 | HB            |          |                      |

### Processing Information

| Injection              | Nominal Value | Unit |
|------------------------|---------------|------|
| Drying Temperature     | 176 to 230    | °F   |
| Drying Time            | 2.0 to 4.0    | hr   |
| Suggested Max Moisture | 0.15          | %    |
| Processing (Melt) Temp | 374 to 446    | °F   |
| Mold Temperature       | 140 to 248    | °F   |
| Injection Pressure     | 508 to 1020   | psi  |

### Notes

<sup>1</sup> Typical properties: these are not to be construed as specifications.