

# Tenac™-C Z4513

Acetal (POM) Copolymer

Asahi Kasei Chemicals Corporation

## Message:

Tenac™-C Z4513 is an Acetal (POM) Copolymer product. It is available in Africa & Middle East, Asia Pacific, Europe, or North America. Applications of Tenac™-C Z4513 include automotive, engineering/industrial parts and housings.

Characteristics include:

Copolymer

Good UV Resistance

Good Weather Resistance

Medium Viscosity

| General Information                       |                         |                   |                      |
|-------------------------------------------|-------------------------|-------------------|----------------------|
| Features                                  | Copolymer               |                   |                      |
|                                           | Good UV Resistance      |                   |                      |
|                                           | Good Weather Resistance |                   |                      |
|                                           | Low VOC                 |                   |                      |
|                                           | Medium Viscosity        |                   |                      |
| Uses                                      | Automotive Applications |                   |                      |
|                                           | Engineering Parts       |                   |                      |
|                                           | Gears                   |                   |                      |
|                                           | Housings                |                   |                      |
| Physical                                  | Nominal Value           | Unit              | Test Method          |
| Specific Gravity                          | 1.41                    | g/cm <sup>3</sup> | ASTM D792, ISO 1183  |
| Melt Mass-Flow Rate (MFR) (190°C/2.16 kg) | 9.0                     | g/10 min          | ISO 1133             |
| Molding Shrinkage - Flow                  | 1.6 to 2.0              | %                 | Internal Method      |
| Water Absorption (23°C, 24 hr, 50% RH)    | 0.20                    | %                 | ASTM D570            |
| Hardness                                  | Nominal Value           | Unit              | Test Method          |
| Rockwell Hardness                         |                         |                   | ASTM D785            |
| M-Scale                                   | 80                      |                   |                      |
| R-Scale                                   | 115                     |                   |                      |
| Mechanical                                | Nominal Value           | Unit              | Test Method          |
| Tensile Modulus                           | 2550                    | MPa               | ISO 527-2            |
| Tensile Stress                            |                         |                   |                      |
| Yield                                     | 63.0                    | MPa               | ISO 527-2            |
| --                                        | 62.0                    | MPa               | ASTM D638            |
| Tensile Elongation (Break)                | 35                      | %                 | ASTM D638, ISO 527-2 |
| Flexural Modulus                          |                         |                   |                      |
| --                                        | 2500                    | MPa               | ASTM D790            |

|                                   |                    |                   |                        |
|-----------------------------------|--------------------|-------------------|------------------------|
| --                                | 2450               | MPa               | ISO 178                |
| Flexural Strength                 | 88.0               | MPa               | ASTM D790              |
| Taber Abrasion Resistance         | 14.0               | mg                | ASTM D1044             |
| Impact                            | Nominal Value      | Unit              | Test Method            |
| Charpy Notched Impact Strength    | 7.0                | kJ/m <sup>2</sup> | ISO 179                |
| Notched Izod Impact               | 60                 | J/m               | ASTM D256              |
| Thermal                           | Nominal Value      | Unit              | Test Method            |
| Deflection Temperature Under Load |                    |                   |                        |
| 0.45 MPa, Unannealed              | 158                | °C                | ASTM D648              |
| 0.45 MPa, Unannealed              | 154                | °C                | ISO 75-2/B             |
| 1.8 MPa, Unannealed               | 110                | °C                | ASTM D648              |
| 1.8 MPa, Unannealed               | 97.0               | °C                | ISO 75-2/A             |
| CLTE - Flow                       | 1.0E-4             | cm/cm/°C          | ASTM D696, ISO 11359-2 |
| Electrical                        | Nominal Value      | Unit              | Test Method            |
| Surface Resistivity               | 1.0E+16 to 1.0E+17 | ohms              | ASTM D257              |
| Volume Resistivity (23°C)         | 1.0E+15 to 1.0E+16 | ohms·cm           | ASTM D257              |
| Dielectric Strength               | 19                 | kV/mm             | ASTM D149              |
| Arc Resistance                    | 250                | sec               | ASTM D495              |

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