## **Premix Thermoplastics PREPERM**

Category : Polymer , Thermoplastic

### Material Notes:

PREPERM product family offers tailored dielectric properties for specific application. This will give new design possibilities to manufacturing of high frequency appliances with low loss materials or small footprint antenna designs with high dielectric constant. Compared to commonly used antenna frame materials PREPERM offers ten times lower dissipation factor. Maximizing antenna gain. Achieving High speeds through excellent dielectric properties: Today's high speed connectors demands high performance materials. PREPERM is the solution for high speed connectors which require low dissipation factor materials with low dielectric constant. PREPERM exhibits also excellent thermal and dimensional stability.PREPERM for high speed applications: Very Low dissipation factorLow dielectric constantVery low mold shrinkageHDT 195 °CVery low water absorptionHalogen free RoHS complianceExcellent impact strengthMiniaturization through controlled dielectric constant: Today's mobile phones can contain more than 10 different antennas. The challenge to fit all these into a small compartment without loosing their effect is immense. When choosing PREPERM compound instead of normal antenna frame plastic, the antennas can be miniaturized without loosing the antennas' performance. Due to excellent combination of high dielectric constant and very low tan d the performance of a similar sized antenna could be remarkably improved compared to a traditional antenna.Design and Processing:Standard thermoplastic processing methods such as injection moulding and extrusion can be usedComplex shapes and sizes are easily producedMass-production friendlyRecyclable and RoHS compliantPREPERM controlled dielectric grades are optimized according to customer request:PREPERM technology offers design possibilities according to desired dielectric constant from 2.55 to 36 without increasing dissipation factor.Information from Premix OY

#### Order this product through the following link:

#### http://www.lookpolymers.com/polymer\_Premix-Thermoplastics-PREPERM.php

| Physical Properties   | Metric       | English      | Comments |
|-----------------------|--------------|--------------|----------|
| Water Absorption      | 0.20 %       | 0.20 %       |          |
| Linear Mold Shrinkage | 0.0060 cm/cm | 0.0060 in/in |          |

| Electrical Properties | Metric                              | English                             | Comments |
|-----------------------|-------------------------------------|-------------------------------------|----------|
| Dielectric Constant   | 2.55                                | 2.55                                |          |
|                       | @Frequency 1.00e+9 -<br>1.00e+10 Hz | @Frequency 1.00e+9 -<br>1.00e+10 Hz |          |
| Dissipation Factor    | 0.00050                             | 0.00050                             |          |
|                       | @Frequency 1.00e+9 -<br>1.00e+10 Hz | @Frequency 1.00e+9 -<br>1.00e+10 Hz |          |

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