The dielectric constant (Dk) of the human body is high. Therefore, imaging devices need to be adaptive in high Dk. With PREPERM™ thermoplastics, you can easily produce complex and large high-precision parts that have tight tolerances in material characteristics.

- Low dielectric losses enable accurate imaging
- Good temperature resistance and minimal water absorption
- Non-brittle material and chipping resistance
- Batch-to batch-stability
- Allows large size and complex designs
- Size reduction of components, thanks to high Dk

PREPERM materials are a perfect fit in imaging lenses or as a radome (protecting cover) or as a combination of these two.
PREPERM DIELECTRIC MATERIAL FAMILY
Optimized material properties for each RF application

PREPERM™ Radome
- for reflow soldering, temperature resistance

PREPERM™ High-temp
- for films and cables

PREPERM™ Standard Grades

PREPERM™ Flexible
- for reflow soldering, temperature resistance

PREPERM™ H
- for ceramic replacement

PREPERM™ Standard Grades

Dielectric constant

GAME-CHANGING PREPERM SOLUTIONS
Tissue-mimicking phantom materials
PREPERM material permittivity can be adapted to the Dk of the human body at various frequencies. Materials can be used as tissue-mimicking phantom materials for calibration of various mmWave and microwave frequency-based imaging devices, like computed tomography (CT) devices.

For more information visit avient.com.

PREPERM materials are used in these applications:
- Mechanical phase shifters in base station antennas
- Radiator disks in base station antennas
- Radomes for automotive radars
- Lenses in SatCom devices

1.844.4AVIENT
www.avient.com

Copyright © 2022, Avient Corporation. Avient makes no representations, guarantees, or warranties of any kind with respect to the information contained in this document about its accuracy, suitability for particular applications, or the results obtained or obtainable using the information. Some of the information arises from laboratory work with small-scale equipment which may not provide a reliable indication of performance or properties obtained or obtainable on larger-scale equipment. Values reported as “typical” or stated without a range do not state minimum or maximum properties; consult your sales representative for property ranges and min/max specifications. Processing conditions can cause material properties to shift from the values stated in the information. Avient makes no warranties or guarantees respecting suitability of either Avient’s products or the information for your process or end-use application. You have the responsibility to conduct full-scale end-product performance testing to determine suitability in your application, and you assume all risk and liability arising from your use of the information and/or use or handling of any product. AVIENT MAKES NO WARRANTIES, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, either with respect to the information or products reflected by the information. This literature shall NOT operate as permission, recommendation, or inducement to practice any patented invention without permission of the patent owner.