SIMONA

TPO SOLUTIONS
FOR RADOME COVERS FROM SIMONA PMC

SIMONA PMC provides the highest quality TPO performance plastic for use in radome coverings.

The material you chose in designing a structural enclosure that protects a radar antenna is an important decision based on the quality, longevity, and minimal drag you are looking to achieve. Surface protection against the effects of environmental exposure, signal loss prevention, and electrical properties are all important characteristics to evaluate.

It is important to understand your technical requirements when evaluating the options available for radome coverings. Make sure to consider: life-span expectancy, impact resistance needs, drag/signal loss requirements, expected temperature ranges and weatherability demands, and aesthetic specifications.

Available Materials from SIMONA PMC

SIMONA TPO

- All TPO compounds provide a weatherable, low-loss moisture and impact-resistant material option for radome applications.

SIMONA PremierCap®

- This grade of TPO is available in high and low gloss surface finish and provides greater mar resistance and improved aesthetics.

SIMONA ONTEX®

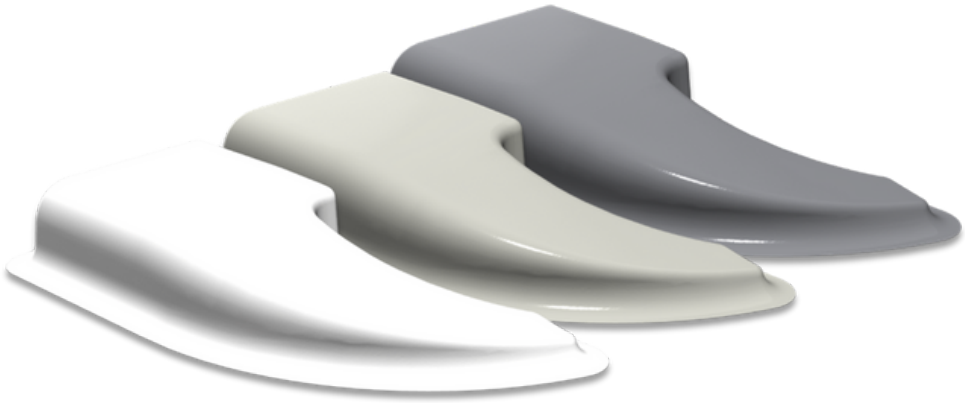
- TPO for direct bondability to other materials or for directly paintable surfaces.

What is TPO?

TPO (thermoplastic polyolefin) is a compounded alloy of polypropylene, elastomers, and mineral fillers offering a unique balance of stiffness and thermal expansion. TPO has superior weather-ability so it does not require a cap and it ranks extremely high on impact and chemical resistance.

SIMONA PMC offers a wide range of different types and combinations of TPO, which make us the leading supplier in the industry. Not only does PMC produce recyclable TPO in custom colors, finishes, and decorations but we also make specialized grades to satisfy a range of radome needs.

Not all TPO's are created equal. Discover the advantages of SIMONA PMC's extruded TPO today.



PMC® 750 High Gloss TPO
PERFORMANCE DETAILS

Characteristics

High Gloss	60° Gardner 85 – 90%
Low CLTE	3.3 x 10^-5 in/in/°F (5.9 x 10^-5 mm/mm/°C) @ -30°C to 80°C
High Impact	Gardner Impact 320 in-lbs. @ 32°F, 280 in-lbs. @ -22°F
High HDT	212°F @ 66 psi, 134°F @ 264 psi

Electrical Properties

Frequency (GHz)	Dielectric Constant (K)	Dissipation Factor (Df)
2.5	2.55	0.006
5.0	2.59	0.002
6.0	2.59	0.004
10.0	2.60	0.001
18.0	2.59	0.004
24.0	2.58	0.002
28.0	2.58	0.001
30.0	2.57	0.001
39.0	2.58	0.003
Electrical properties tested on co-extruded sheet, 0.125" thickness, 10% cap		

Prevents Low Signal Loss
PMC® 750 High Gloss TPO has a dielectric constant of 2.57–2.60 over than frequency range of 2.5 – 39 GHz.

Weatherable
All TPO grades are all UV resistant and weatherable.

Moisture Resistant
TPO is naturally hydrophobic, so moisture absorption will not affect signal performance.

Impact Resistant
Excellent cold temperature impact performance leads to less stress or environmental cracking in the field.

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