Susceptor Film
What is a Susceptor Film

Susceptor Film is a Polyester Film which is vacuum metallized with a very thin layer of Aluminium.

Polyester Film thickness typically 12 Micron
Roll of Metallized Pet Susceptor Film
Difference between 0.19 - 0.28 Optical Density = 0.002 Micron

Aluminium Susceptor Layer Thickness nm

- Od 0.19: 3.5 nm
- Od 0.21: 4.8 nm
- Od 0.28: 5.5 nm
Difference between 0.19 - 0.28 Optical Density = 0.002 Micron
Paper or paperboard

Polyester film typically 12 Micron.

Aluminum layer about 60A thick.
Typical Susceptor Laminate Structure

- Aluminum
- Adhesive
- Paperboard
- Metallised Polyester Film
Eliminate overlap of two or more Susceptor layers back to back

Maximize contact of susceptor on surface with food to be cooked

Avoid creasing of susceptor layers side by side - consider susceptor inlays that sit inside carton

Provide areas of less Aluminium density on areas of susceptor tray or pack where no food product coverage is provided
Stripe Metallised Susceptor laminated to board

No overlap of Susceptor Film on Carton edges - No Burning. Raised pack allows moisture to escape assisting crisping.
Flow packs made out of Stripe Metallised Susceptor Film. Product has good contact with susceptor surface to provide crisping.

Stripe Metallised Susceptor laminated in register to printed paper. Fins seals made in non susceptor coated areas to prevent burning.
Printed Carton for Product

Susceptor Pad sits in bottom of carton – no overlap of Susceptor Layers
Susceptor laminated to board and corrugated. Good contact with food for crisping, moisture escapes from ends to enhance crisping, no overlap of susceptor layers.
Good contact of food on susceptor tray to promote browning. No overlap of Susceptor Layers to prevent burning. Good contact of food to act as heat sink.
Good contact of food on susceptor tray to promote browning. No overlap of Susceptor Layers to prevent burning. Good contact of food to act as heat sink. Vents/cut-outs in bottom of to release moisture to aid browning and crisping.
Reduced density of susceptor due to reduced product area contact to act as heat sink.

On edges of pack, aluminium density reduced where food product does not act as heat sink. Reduces burning of the edges due to board igniting above 233oC.
Creases or folds made in Susceptor area
Susceptor surface not in contact with food
Overlap of two or more Susceptor layers back to back
Overlap of two or more Susceptor layers back to back

Excess microwave absorption where 4 susceptor layers are back to back result in localised burning and ignition
Creases or folds made in Susceptor area back to back

Excess microwave absorption in crease area results in localised burning and ignition
Good contact of Susceptor with food, however fin seal made with 2 layers of susceptor back to back resulting in burning.
Causes of Burning

Poor Susceptor Pack Design
Poor Distribution of product on Susceptor Pack
Variation in Product Moisture levels
Variation in converted board/paper Moisture levels
Large variations in Susceptor Optical Density