



## TECHNICAL DATA SHEET

### TD-642 Thermal Dry Dielectric

TD-642 is a thermal dry dielectric designed to have **outstanding adhesion** to print treated polyester films, conductive inks and copper used in flexible circuits and membrane switches.

#### DESCRIPTION

- Thermal dry
- High strength and toughness
- Outstanding flexibility
- Low odor
- For screen printed dielectric layers in membrane switch crossover and tail coat applications.
- Available in clear translucent, blue or green colors

Compatible with our silver filled conductive inks, carbon resistive screen printable inks, silver conductive epoxies and UV curable encapsulants and conformal coatings.

#### TYPICAL PROPERTIES

Appearance	Clear to opaque Newtonian liquid
Viscosity- Brookfield SC4-14, 20 shear @ 25°C	6,425 -7,850 cps
Weight per Gallon @ 25°C	8.4 lbs.
Shelf Life @ 25°C	6 months in unopened container
Drying Schedule	3-8 minutes @140°C
Percent Solids	35 % +/- 1%
Dielectric Constant @ 25°C	3.65

# TD-642 Thermal Dry Dielectric

Guidelines are intended to provide a starting point for evaluation. Applied Ink Solutions recognizes that each customer's manufacturing process is unique, and we are available to provide technical assistance to resolve your processing issues. Call us to discuss your application in more detail.

The properties are accurate to the best of our knowledge and Applied Ink Solutions makes no guarantees for customer specifications established in applications where this product is used. Customer assumes responsibility for determining fitness of use in their particular application.

## Application Guidelines

Some settling may occur. Mix well before use. TD-642 should be kept in sealed container in ambient conditions until ready for use. If material is stored for long periods, or container is left open repeatedly for long periods, the percent solids of the binder should be tested before use.

## Screening

Use a monofilament polyester screens from 240 to 380 mesh, with emulsion thickness from .001" to .003". For thicker coatings, use smaller mesh sizes and thicker emulsions.

A polyurethane squeegee with a Shore 'A' durometer between 60 and 70 is recommended.

When printing TD-642 it is essential to make a uniform film without pinholes or voids. Sometimes it is necessary to use a wet-wet print sequence.

## Drying

It is essential that TD-642 be dried completely after printing. TD-642 can be dried completely in 3 to 8 minutes at 140°C depending upon air flow, dryness of air and heat sources in oven. Lower temperatures will require more time to complete drying.

## Health & Safety

Products manufactured by Applied Ink Solutions are intended for use in an industrial environment by trained personnel. Please follow proper health/safety processes regarding storage, handling and processing of the products.