

## Technical Data Sheet

### Product Identification: ADP-2500 (Adhesion Promoter)

#### Overview:-

ADP-2500 is a titanium chelate of acetylacetonate Based Titanate is most widely used as an adhesion promoter in solvent base printing ink with Nitrocellulose/polyurethane or Nitrocellulose/polyamide resin system for fast cross link. employed for surface printing and lamination based printing and packaging requirements. Special attention has been provided to the long term stability, in terms of discoloration and viscosity of the printing inks, - a problem faced with other organic titanates of this class.

It also initiates cross-linking of certain resin components, thereby enhancing, to a certain extent, the water and heat resistance characteristics, of appropriately formulated solvent-based printing inks. Due to these properties ADP-2500 becomes an essential additive for certain grades of Flexo and Gravure solvent-based inks.

Flexible packaging, where the solvent-based inks employing organic titanates as the adhesion / lamination bond promoter and water- and heat resistance enhancing "additive" is a fast expanding enabler for preservation / transportation and use of various raw / semi cooked and fully processed food items as well as for packaging of clothes / sports goods / electronic goods / pharmaceuticals etc. The packaging itself not only helps in the above functions, but is also critical in terms of product marketing, decorative enhancement, which provides product and regulations related information and documentation medium.

Paper and several non-absorbing filmic substrates are employed in the flexible packaging, namely- Polyolefins (Polyethylene, Polypropylene or Co-extruded Polypropylene), Polyester, Polyamide or Nylon, Cellophane, PVC, Metalized Plastics and Aluminum Foil.

#### The use of organo-titanates provide benefits, such as:

- Improved immediately adhesion of the inks.
- Faster curing / cross-linking of the resin / polymer.
- Improved water resistance and to a certain extent chemical resistance.
- Higher lamination bond strength.

**End Use:** ADP-2500 is designed especially for printing of carry bags, bread bags, shopping bags, snack food and frozen food packaging etc.

**Advantages of ADP-2500:**

NC/PU or NC/PA film forming resins normally provide acceptable film strength after the solvent is evaporated. Titanates will upgrade the solvent resistance or heat resistance to the next level, along with the improved adhesion to the substrate and superior bond strength. Therefore, graphical print can last longer under difficult conditions such as frozen environment. The substrate has to be corona treated till 38 dyne or above before printing.

**Physical Chemical Properties of ADP-2500:**

Specification/Property	Value
FORM	LIQUID
COLOUR	LIGHT YELLOWISH
TiO2 CONTENT	-
ODOUR	SWEET
POUR POINT	< - 50° C
BOILING RANGE	80° C
FLASH POINT	12° C
SPECIFIC GRAVITY	1 - @ 25° C
VISCOSITY IN B-4 FORD CUP	15 - 20 Sec 30° C
SOLUBILITY IN WATER	Hydrolyses