Technical Data Sheet

Product: PU Resin 75

Product Identification:

PLASTICIZING POLYURETHANE (ALIPHATIC PLASTICIZING PU RESIN IS USED AS A CO-RESIN IN PRINTING INKS)

Overview: Composition of inks for rotogravure and flexography printing on plastic films (to be employed as flexible food packaging material) present several compounded challenges that are generally not experienced during the printing of other packaging and decorative materials. Here an ink technician is mandated to formulate products that obtain satisfactory adhesion between the ink and the impenetrable smooth films. Additionally, the ink formulator needs to take care to prevent film swelling, crazing, loss of mechanical properties or prevent too much "after-tack" after the ink dries. Further constraints on the ink formulator are imposed by increasingly strict health and environment-related legislations, prevailing in some countries, where the use of solvents like Toluene, Ketones, and N. Butanol, etc. are totally banned. Ink must exhibit both adhesive and cohesive properties so as to present long life on the substrate which is likely to be folded and creased repeatedly during the concerned package life-cycle. Moreover, it is often required that the ink (on the packaging material) is glossy, fast to dry, resistant to heat, long duration water immersion, deep freeze storage, and most of all, it does not contain chemicals that would migrate. through the film and affect the food contents inside the package - in terms of taste and/or flavor. The ink formulation constraints are further manifested by the employment of different printing (Flexo or Rotogravure) and the packaging processes (Surface, Lamination, Heat Sealing requirements, etc.)

PU Resin is specially designed, taking into consideration all the above requirements, and has been successfully field-tested under varying application connotations for quality print jobs giving vivid print results with a perfect reproduction of fine dots. We recommend the use of our Phosphate-based **Ti-Chelate ADP 10** along with these NC-PU inks to obtain the desired level of ink performance.

Physical & Chemical Properties:

Ape Specification/Property	Value
FORM	VISCOUS LIQUID
COLOUR	COLOURLESS TO LIGHT YELLOW
SOLID CONTENT	72% - 73%
ODOUR	ACETATE/ALCOHOL
FREE NCO	0-<0.5%
FLASH POINT	12°C by CC
SPECIFIC GRAVITY @ 30°C	1.03 - 1.05
VISCOSITY @ 30°C in Poise	16-17 Poise

Advantages of using PU Resins:

PU Resin is designed especially for NC-PU and Ti-Chelate-based inks for printing of:

- Flexible Food Packaging material - Surface printed and Lamination work.
- Flexo & Rotogravure applications.
- Used on very high-speed modern printing machines - solvent blend and pigment loading needs to be adjusted to machine parameters.
- A certain degree of heat, water resistance, and deep freeze resistance properties.
- Carry bags.
- Being Aliphatic, this PU resin provides an improvement in non-yellowing properties.
- Superior cohesive (Film-Plasticization) properties.
- Improved adhesion of the inks to the selected substrate.
- Faster curing / cross-linking (with Ti-Chelate) of the resin/polymer.
- Suitable for the use of alcohol and acetate blend as the solvent component.

SHELF LIFE:

- when kept in unopened cans and under normal conditions (temperature/humidity etc), has a shelf life of at least 6 months.

Normal Conditions Mean:

- Storage in tightly closed containers.
- No admixtures.
- Temperature not exceeding 25 degrees C for weeks or 30 degrees C for days. Short-time excess temperatures for e.g., at transport are not harmful. The products are not sensitive to frost.

** If you require any further information, please do not hesitate to contact us, or visit our website.