



PNT - CHEM

TECHNICAL DATA SHEET (TDS)
UV LETTERPRESS PRINTING INKS

1. PRODUCT IDENTIFICATION

High-performance UV letterpress ink series developed for pressure-sensitive label applications and optimized for curing under UV LED systems.

Product Name	PNT UV Letterpress Series
Product Type	UV Curable Letterpress Printing Ink
Application	Pressure Sensitive Labels
Printing Method	Narrow Web UV Letterpress
Available Colors	CMYK Colors
Recommended Substrates	Paper, Coated Paper, Selected Synthetic Materials (PP, PE, PET, PVC)

2. PRODUCT DESCRIPTION

PNT UV LED Letterpress Ink Series is specially developed for pressure-sensitive label applications using letterpress printing systems. The inks are formulated for curing under UV LED lamp systems and provide stable print performance with high optical density.

3. MAIN FEATURES

- Designed exclusively for UV LED curing systems
- Optimized for UV letterpress printing applications
- High color strength and excellent print sharpness
- Stable ink transfer and consistent image reproduction
- Fast curing response under suitable UV energy systems
- Suitable for narrow web and high-speed press operations
- Excellent rub and scratch resistance
- Low odor formulation
- Good press stability and consistent rheological performance
- Reliable adhesion on properly treated substrates
- Solvent-free formulation

4. TECHNICAL PROPERTIES

Property	Specification
Appearance	Pigmented High Viscosity Liquid
Printing System	UV Letterpress
Curing System	UV Radical Polymerization
Print Sharpness	High definition / sharp image transfer
Gloss	High
Adhesion	Excellent on treated substrates
Abrasion Resistance	Good
Chemical Resistance	Application dependent
Lightfastness	Medium – High
Recommended Roller System	Optimized for letterpress ink transfer
Curing Performance	Fast curing under UV LED systems
Shelf Life	12 Months
Storage Temperature	5°C – 25°C

5. PRINTING RECOMMENDATIONS

- Roller settings and ink transfer balance should be optimized for letterpress printing units
- UV LED curing systems must provide sufficient energy output for full polymerization
- Printing speed and curing performance should be adjusted according to substrate type and press conditions
- Excessive ink film thickness and plate pressure should be avoided for optimal print quality and curing performance
- Regular monitoring of viscosity, curing efficiency, and print sharpness is recommended during production
- Pre-tests are strongly recommended for new substrates and printing conditions

6. RECOMMENDED SUBSTRATES

- Self-adhesive label papers
- Coated and uncoated papers
- Thermal papers
- PE films
- PP films
- PET films
- Synthetic label materials
- Metallized label stocks
- Pressure-sensitive label substrates
- Corona treated film materials

7. PACKAGING

Standard Packaging: 5 KG buckets

8. STORAGE & SHELF LIFE

- Optimal Storage Conditions: Between 5°C and 25°C.
- Store in original, tightly closed packaging
- Keep in a cool, dry and dark environment
- Protect from direct sunlight, heat sources and frost
- Ink should be thoroughly stirred before application to ensure homogeneity
- Containers must be closed immediately after use

9. CLEANING / HANDLING

- Printing units, rollers, plates, and ink circulation components should be cleaned immediately after use with suitable UV ink cleaning agents
- Dried ink residues should be removed using compatible industrial cleaning solutions
- Prolonged exposure to UV light and heat during handling should be avoided
- Direct skin contact should be avoided
- Appropriate PPE (gloves, protective eyewear) must be used
- Adequate ventilation should be ensured during handling and printing operations
- Cross-contamination with other ink systems or conventional inks must be avoided

10. REMARKS / DISCLAIMER

- Before commencing production, preliminary printing trials are strongly recommended to ensure suitability for the intended label application and desired end-use properties
- Substrate compatibility, plate suitability, curing conditions, and post-processing operations (e.g. varnishing, lamination, foil stamping) should be verified prior to full production
- Performance results may vary depending on substrate type, press configuration, UV curing performance, and printing conditions
- It is the user's responsibility to ensure that the product is suitable for the specific application requirements
- Recommendations provided are based on our current knowledge and practical experience and do not constitute a guarantee of final product performance

PNT CHEM | Printing and Packaging Inks
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