

LTD (Long Term Decal) is a UV curable ink system specifically formulated for flat, cast and calendared, pressure sensitive decal applications, requiring exterior exposure for five years. Extensive weathering tests have proven LTD yields durable decals, which will not edge curl due to ink/vinyl shrinkage or diminish in color intensity. LTD has been formulated with lead free pigments producing an extremely opaque, remarkably high gloss, lightfast ink with minimal chalking characteristics.

Performance Properties

- Exceptional opacity and high gloss
- Extremely flexible for multi-layer applications and die-cutting
- Low shrinkage which diminishes edge curl
- Non-blocking, low tack finish for easy handling
- Solvent and abrasion resistant
- Suitable for five (5) year exterior exposure
- Suitable with pre-mask films for easy application

Recommended Substrates

- Coated paper
- Many coated metals
- Pressure Sensitive Vinyl
- Print Treated Polyester
- Vinyl coated magnets

Curing/Processing Guidelines

Ink will cure well when printed through 355 (140cm) plain weave polyester mesh or finer. LTD's optimal cure window of 175 - 200 mJ/ cm² 550 - 650 mW/ cm² is generally achieved with one 200 watt per inch mercury vapor lamp at a belt speed of 50 - 60 feet per minute (20 - 30 m / min). Cure speeds may vary as thicker material and dark surface colors require more energy. Adhesion should be a minimum of 95% from curing unit with final adhesion developing within four hours of initial polymerization. Coarser fabrics can be utilized; however, cure parameters may need to be adjusted for increased ink film.

If a loss of gloss or adhesion due to insufficient cure is noticed, the use of 5 - 10% DF Mixing Clear will increase light penetration and improve cure.

Pre-Mask

A medium to high tack adhesive is recommended for good adhesion.

Light Fastness

At full strength and cured properly, LTD colors are formulated to withstand up to five years of exterior exposure. Factors that will alter the outdoor durability of the ink include but are not limited to: substrate grade/age, poor cure of the ink film, formulas, directional positioning, ink film deposit, exposure to excessive abrasives and air pollutants. Some resin systems may chalk after a given time period and require a clear for extended outdoor durability.

Care should be taken when reducing the mass tone* colors with clear or tinting white as this could negatively affect the exterior durability of the color. Colors that should not be used for outdoor applications are: CMS 164 BS Red, CMS 114 Orange, 180 Warm Red and 131 Brilliant Orange. Automotive grade color alternative recommendations are available by calling our Technical Services Department. *Mass tone: the full product color without dilution.

ROLLER COATING

- 23505 SP RC Solarshield Clear

SCREEN

- 6918+ Solarshield Overprint Clear

Printing

MIX WELL PRIOR TO USE. While supplied in press ready condition, LTD may be reduced up to 10% with LTD Thinner for special viscosity adjustments. Care should be taken to print the ink at optimal temperature 70 - 90° F (21 - 27° C). Cool ink will heavier viscosity and will not flow properly. Hot ink will be lower in viscosity resulting in poor definition and decreased opacity.

Coverage

3,200 to 3,600 square feet per gallon based on ink deposit .40 - .60 mil dependent on color and printing conditions.

Storage

Care should be taken to store ink in tightly closed containers located in a cool (60-80°F/15-27°C) dark place. With suitable conditions, unopened ink is expected to have a shelf life of approximately twelve (12) months from date of manufacture.

Metallics

Use the Metallic Mixing Clear to prepare metallic ink as its increased viscosity helps insure a good particle suspension.

Recommended mixing ratios, by weight are:

- 28% gold paste
- 12% silver paste

For optimum coverage and opacity, 280-305 (110 - 120cm) plain weave mesh. Use DF Overprint Clear for extended weatherability and to improve the non-tarnishing properties of the product.

Additives

- 15081 LTD Thinner - Use up to 10% as needed
- 1534 Adhesion Promoter up to 3% as needed

Precautions

Read the safety data sheet prior to processing. It contains instructions for precautions to be taken when handling inks. If ink comes in contact with skin wipe off with a clean, dry cloth (do not use solvent). Wash and rinse the affected areas with soap and water.

Process Printing

For superior halftone reproduction, halftones are available in a range of density levels. Additional control of density may be achieved with use of DF HT Base. For best results, use 380 (150cm) or finer and a smooth, thin stencil coating should be utilized with process printing.

	Press Ready	High Density	Backlit Density
LTD Halftone Yellow 0.90	1.10	1.35	
LTD Halftone Magenta	1.40	1.75	2.05
LTD Halftone Cyan	1.40	1.80	2.20
LTD Halftone Black	1.60	2.00	2.25

Color Availability

LTD is available in twenty opaque standard colors. Custom matches, metallic, fluorescent and transparent colors are obtainable upon request.

LTD-101 Primrose Yellow	LTD-210 Ultra Blue
LTD-111 Lemon Yellow	LTD-220 Emerald Green
LTD-123 Medium Yellow	LTD-225 Forest Green
LTD-131 Brilliant Orange	LTD-226 Lime Green
LTD-135 Vivid Orange	LTD-235 Teal
LTD-141 Fire Red	LTD-240 Purple
LTD-151 Scarlet Red	LTD-260 Brown
LTD-155 Rubine Red	LTD-301 Opaque Black
LTD-160 Rhodamine Red	LTD-311 Opaque White
LTD-180 Warm Red	LTD-312 Jet Black
LTD-190 Process Blue	LTD-026 Brilliant White
LTD-200 Peacock Blue	LTD Mixing/Overprint Clear
LTD-205 Reflex Blue	LTD Metallic Mixing Clear

Pantone Matching System® Colors

The nine PANTONE® approved Color Matching System (CMS) shades are used to simulate the PANTONE® Color Specifier colors. Formulas were designed for maximum opacity and are available in book or Imaging Color source Software formats

LTD-064 CMS GS Yellow	LTD-066 CMS RS Yellow
LTD-114 CMS Orange	LTD-121 CMS YS Red
LTD-164 CMS BS Red	LTD-165 CMS Magenta
LTD-127 CMS Violet	LTD-230 CMS Blue
LTD-325 CMS Green	LTD Tinting White
LTD Shading Black	LTD Mixing/Overprint Clear

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We strongly recommend testing complete construction as per shop conditions prior to full production. MIX WELL BEFORE USE. Follow the directions on the package, ask for the safety data sheets and always follow the directions contained therein.

Important – Only the correct use of the product will allow satisfactory results. For this reason, closely related to the product supplied, Polymeric must decline all direct and indirect responsibility for the proper or improper use of the product. Make certain that product is right for the desired use, work according to the instructions given in our technical data sheets. Before use contact our Technical Service in case of doubt.

A. Warranty Liability Limited to Purchase and Installation Costs

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C. A Pretest Prior to Production is Recommended to Ensure Proper Suitability for the Intended Application.