

## EnduraCoat UltraFlex Technical Data Sheet

EnduraCoat UltraFlex is a super flexible, low VOC aqueous clear coat specially formulated for use on digitally printed materials used for fleet graphics and other applications requiring maximum outdoor durability for up to 5 years. UltraFlex is recognized in both Avery's ICS and Drytac's Graphics Protection System warranties for Durability Standards. The unique blend of non-yellowing urethane and acrylic polymers renders a coating that is extremely durable and resistant to most industrial cleaners used in the cleaning of commercial fleet vehicles, road salts and other contaminants. The addition of UVA absorbers and hindered amine light stabilizers (HALS) ensures that the prints you coat will be protected from harsh UV radiation typically known to degrade color in prints.

### Typical Applications

Typical applications include coating of digitally printed PSV and Flex vinyl using traditional solvent based ink jet technology used for highly durable fleet applications, long term front and back lit signage, general signage, kiosks, etc.

EnduraCoat UltraFlex is compatible with most commercially available flood coaters using a mayer bar.

### Recommended Substrates

- PSV (Cast and Calendered)
- Flex PVC
- Wet Strength Papers

### Recommended Printer/Ink Systems:

- Traditional True Solvent based Inks
- Durst Rho UV inks
- HP Latex Inks/Prints

### Performance Properties

- Excellent intercoat adhesion (layer to layer)
- Weld able (Hot Air & RF)
- Superb water and moisture resistance
- Superior conformability (elongation) properties
- Excellent resistance to blocking
- Excellent chemical resistance to aromatic cleaners
- Excellent mar and scratch resistance after full cure
- Wide thermal dynamic range for increased flexibility in production (can use higher heat range)
- Non Yellowing formulation
- Gloss level of 88 to 90 units at 60°

### Coating & Equipment Compatibility

Viscosity Target	Mayer based Flood Coater	Manual Applicator
Using #2 Zahn	18 to 22 sec	undiluted

**(Dilute with distilled water only)**

### Instructions for Use:

EnduraCoat UltraFlex comes pre-mixed for use in automated flood coaters with a viscosity between 18 and 22 seconds in a #2 Zahn. Depending on the application method used, **dilution may be required**. This product may be sprayed, applied using a wax applicator or applied through a conventional flood coater such as the AFC series from Drytac.

While this coating is supplied in coater ready condition it should be mixed well prior to use each time.

Optimal temperature for this coating is 65-90°F (18-32°C). At lower temperatures the coating will have heavier viscosity and will not flow properly. Allow at least a 10 to 15 minute warm up period (with coating flowing) prior to use.

If coating freezes, allow to warm to room temperature before use. Alternatively, container may be placed in warm bath of 80°F / 27°C for 30 minutes and then mixed thoroughly with drill and paddle or spindle paint mixer until clumps dissolve

**For use on Automated Flood Coaters:** For use on graphics requiring extended outdoor durability to 3 years, the #26 bar is recommended for outdoor durability to 5 years, the #36 bar is recommended. All bars to be used in static mode.

**For use in HVLP Sprayers:** Adjust to proper viscosity and filter prior to adding to tank. Start out with a pressure of 50 psi and adjust fan so that an even mist is produced that is heavy enough to stick to the print, but not run. Practice using broad sweeping (horizontal) strokes, overlapping slightly. Be sure to wear protective eye wear and an appropriate respirator.

**For use with manual applicator:** Use undiluted for best results. We recommend the use of a rubber based squeegee or a wool wax applicator. Pour the coating onto the graphic being coated into one corner. Work the coating across and down the substrate using an "M" or figure 8 motion, being careful not to raise and lower the applicator too often, causing bubbles. If a rubber squeegee is used, simply work from side to side, with slight overlaps between draw downs.

**Curing Properties**

When fully cured, final film properties (scratch and chemical resistance) are available 24 hours after polymerization

Cure Times	Roll Coater	HVLP gun	Manual Applicator
before stacking	immediate	45-60min	45-60min

**Typical Coverage**

Coverage Rates per gallon	Flood Coater	HVLP gun	Manual Applicator
Manual Coating	N/A	400 sq/ft	460sq/ft
Smooth Bar	2254 sq/ft		
#12 Mayer Bar	1315 sq/ft		
#18 Mayer Bar	877 sq/ft		
#26 Mayer Bar	607 sq/ft		

**Light Fastness**

High quality UV absorbers and HALS have been added to this product. While we are confident the use of this coating will extend print life, we recommend that you contact the ink manufacturer to obtain base durability information and conditions affecting the long term durability for the inks you are using.

Use of this product will help protect the ink from exposure to many elements that tend to degrade inks faster, such as water, moisture, air and dust contaminants, abrasion and scratching.

**IMPORTANT MESSAGE**

We strongly recommend a preliminary test of printing and curing on the substrates intended for use, in order to ascertain the exact procedure, the working times and the obtained affect. Follow the indications on the package, ask for the safety data sheets and always follow the indications contained therein.

Only the correct use of the product will allow satisfactory results. For this reason, Drytac is not responsible for the improper use of the product, either by the substrate applied to or application. Make certain that product is right for the desired use, work according to the instructions given in our technical data sheets. If in doubt of the appropriate application methods or use, contact Drytac at one of the phone numbers listed below.

\*Note: 25 microns equal 1 mil

**Storage**

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

**Clean Up**

Use clean hot water with a solution of 5 to 10% IPA to clean lines, rollers, tank, etc off coating. Do not let coating dry on painted surfaces.

Please consult Drytac Technical Service for further information 1-800-280-6013

**Recommended Cleaners for use on coated graphics: (only after 48 hour cure time)**

Soap & Water	De-Solv-It	Formula 409
Turpentine	Mineral Sprits	Fantastic
WD 40	MEK**	99% IPA*
Goof Off	Acetone **	

\* Prolonged contact may soften coating

\*\* Not recommended

**Precautions**

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

**Availability:** EnduraCoat UltraFlex is available in Gloss and Matte (ECWBUFG, ECWBUFM).