

Enerdyne UV-23

UV Permanent Pressure Sensitive Adhesive

Enerdyne 23 is a humidity resistant UV curable pressure sensitive adhesive. It has been formulated to cure into a permanent pressure sensitive adhesive film when exposed to ultra violet light. This is a solvent-free product, which exhibits excellent adhesion to paper, film and foil substrates. This product offers the converter fast cure and strong bonds between substrates. Enerdyne 23 cures extremely well using standard medium pressure mercury lamps (H bulbs).

Typical Properties

Total Solids	100.0%
Viscosity, LVF #4 @ 30 RPM @ 23°C	1000 ± 100 cps.
Density	8.72 lb./gal.
Appearance	Clear yellow liquid, which dries clear
Line Speed	40 ft/min with 1 x 300 watt/in lamps
Recommended energy dosage for cure	UVA 170 mJ/cm ² , UVB 139 mJ/cm ² , UVC 22 mJ/cm ² , UVV 113 mJ/cm ²
Web/Cure Speed	2 mil Mylar®, direct coated, cured at 40 fpm
Coatweight; dry mils:	1.0
180° Peel, lb./in (1)	
0' dwell	2.0
24 hr. dwell	2.0
Loop tack, lb./in ² (2)	2.1
Shear, 1" x 1" x 1000 gm. (3)	15.9 hr.

Application Suggestions

A coating thickness of approximately 1.0 mil is recommended. The coating may be applied by a variety of coating methods including flexo or roll coaters. In order to obtain optimum results, we would suggest applying the adhesive to films which have been surface treated. A film surface treatment to 45 dynes is recommended to obtain good adhesion. UV laminated labels should only be used on packages where a functional barrier between the label and food products exist. It should be noted that polyethylene may not have adequate barrier properties under non-refrigerated conditions. It is essential that the end users determine suitability of this product by testing under their own process, storage and shipping conditions. It should also be noted that adhesive properties would vary depending on the extent of cure, which is related to linespeed and UV lamp output. Faster linespeeds are possible with additional bulbs and/or higher intensity bulbs.

Storage and Handling

It is recommended that the product be stirred prior to use. Shelf life is excellent when stored away from heat and protected from UV light exposure. This material is combustible and must not be used near an open flame. Maintain at least a two (2) inch headspace of air over the liquid in closed containers. Store below 90°F. Storage longer than six (6) months is not recommend. Chemical gloves and safety goggles must be worn when handling this product. Wash thoroughly after handling. This product contains acrylate monomer and proper handling procedures must be followed. Please consult MSDS prior to use.

- (1) PSTC-101
- (2) TLMI Loop tack, 1 in² contact area, 12 ipm separation
- (3) PSTC-107

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Note: Statements and methods described herein are based upon the best information and practices know to Dyna-Tech Adhesives, Inc. However, procedures for applications mentioned are suggestions only and are not to be construed as representation for warranties as to performance r results. Nor does Dyna-Tech Adhesives, Inc. warrant freedom from patent infringement in the use of any formula or process set forth herein. The user must test performance and acceptability using their conditions.