

DISPENSING EQUIPMENT SELECTION AND SETUP CONSIDERATIONS FOR DUAL-CURE™ MATERIALS

DYMAX Dual-Cure™ systems are single component, nonreactive solvent-free adhesives and coatings that cure with UV/Visible light and moisture over time. Dual-Cure™ materials have a one year shelf life when stored at room temperature in the sealed original container. Storage instructions for opened packages are on the original package. In addition, the following guidelines will help ensure a stable, consistent dispensing process.

UTILIZE OPAQUE DISPENSING NEEDLES AND FLUID LINES

It is important that 100% light blocking (not just UV blocking) dispensing needles and fluid lines are used when dispensing.

ENSURE COMPATIBLE WETTED COMPONENTS

DYMAX materials are readily dispensed through a wide variety of commercially available valves and pressure pots. When selecting a dispensing system, make sure that wetted components are compatible with DYMAX materials. Incompatible wetted components can be attacked by DYMAX materials or cause them to cure prematurely in dispensing equipment.

KNOWN COMPATIBLE MATERIALS	KNOWN INCOMPATIBLE MATERIALS
Acetels	Aluminum
Stainless Steel (300 series)	Brass
Hard Chrome	Bronze
HDPE, HDPP* (opaque)	Cast Iron
Nylon (pure)	Copper
Silicone (opaque)	Magnetic Stainless Steel (400 series)
Teflon® (opaque)	Mild Steel
	N-Butyl "O" Rings
	Polyurethane
	Polycarbonate
	PVC
	Zinc

AVOID HIGH SHEAR VALVES AND PUMPS

Some DYMAX materials are shear sensitive, meaning that high shear can initiate polymerization (curing). Shear occurs when material is caught between two tightly fitting moving metal parts. DYMAX therefore does not recommend the use of pumps that cause high shear such as gear pumps (simple pressure pot, pneumatic systems, or ram-style pail pumps are typically adequate). DYMAX does not recommend positive displacement dispensing valves unless testing shows they are compatible with the specific DYMAX material involved. Contact DYMAX Applications Engineering for further guidance in selecting an appropriate dispensing system.

UTILIZE "YELLOW LIGHTS" (IF NECESSARY)

Some application techniques (i.e. roll coating and stencil/screen printing) require prolonged exposure to ambient lighting. Given enough time, standard fluorescent and incandescent lighting can initiate polymerization (curing) of some DYMAX Dual-Cure™ materials. Special "yellow lighting" is available that will prevent this premature polymerization.

RETROFIT LAMPS AVAILABLE FOR EXISTING FLUORESCENT AND INCANDESCENT FIXTURES:

LAMP TYPE	MFG.	MODEL #	CONFIGURATION
Fluorescent	Philips	F40GO	T-12 Bi Pin, 4'
Fluorescent	Philips	F48T12GO	T-12 Single Pin 4'
Fluorescent	Philips	F96T12GO	T-12 Single Pin 8'
Fluorescent	Philips	F96T12GO/HO	T-12 Dual Pin Raised Oval 8'
Fluorescent	GE	F32T8GO/CVG	T-8 Bi Pin, 4'
Incandescent	Sylvania	Bug Foiler, 60 watt	Medium base

THE FOLLOWING COMPLETE LIGHT FIXTURE IS RECOMMENDED FOR NEW OR RETROFIT INSTALLATIONS:

Holophane Model # EN250HPXXP7; Type: High pressure sodium, high bay

HOLOPHANE FIXTURE NOTES:

1. XX denotes voltage (to be specified by customer).
2. Because the main fixture normally takes up to 5 minutes to restart, an available quartz restrike option allows instant "walk around" lighting in the event of a temporary power failure. For this option, add suffix "EM".
3. Substitute LHP for HP in model number if energy saving ballast is desired.
4. For hook, cord and plug option, add Suffix #CDP-LX-15-3-PF121. No suffix denotes standard hard-wire configuration.
5. Lamp Type: General Electric # GLU250/D (Maximum wattage for this application is 250. Higher wattages have not been tested).
6. Holophane Factory Contact: Tom Quigley - Phone (860) 621-9136.

BLANKET MOISTURE SENSITIVE MATERIALS WITH INERT GAS

DYMAX Dual-Cure™ systems are sensitive to moisture in the uncured state. Prolonged exposure to moisture can cause DYMAX Dual-Cure™ systems to polymerize. To avoid these effects, the materials should be stored in their original packaging or metal containers and blanketed with inert gas (i.e. nitrogen or argon) when re-sealed. Also, pressure pots containing these materials should be pressurized with an inert gas or dry air.

ENSURE SOLVENTS USED FOR CLEAN UP AND PURGING FLUID LINES DO NOT CONTAIN MOISTURE:

Cleaning DYMAX Dual-Cure™ systems in the uncured state is relatively simple as the material will dissolve in non-alcoholic solvents. Alcoholic solvents that contain moisture activate the curing process. Therefore, it is recommended that non-alcohols be used to clean up uncured material and purging wetted dispensing lines.

COMMON NON-ALCOHOLIC SOLVENTS	COMMON ALCOHOLIC SOLVENTS
Butyl Acetate	Propylene Glycol Monomethyl Ether (PM)
Acetone	2-Butoxyethanol
Methyl Ethyl Ketone (MEK)	Isopropyl Alcohol (IPA)
PM Acetate	Ethanol
2-Butoxyethyl Acetate	Methanol

For further assistance with adhesive and equipment selection, contact our DYMAX Application Engineering Group.

In the U.S. Call: 877.396.2988
 In North and South America Call: 860.482.1010
 In Europe Call: 0049.69.7165.3568
 In Asia Call: 852.2460.7038

www.dymax.com

© 2005, 2008 DYMAX Corporation

The data contained in this bulletin is of a general nature and is based on laboratory test conditions. DYMAX does not warrant the data contained in this bulletin. Any warranty applicable to the product, its application and use is strictly limited to that contained in DYMAX's standard Conditions of Sale. DYMAX does not assume responsibility for test or performance results obtained by users. It is the user's responsibility to determine the suitability for the product application and purposes and the suitability for use in the user's intended manufacturing apparatus and methods. The user should adopt such precautions and use guidelines as may be reasonably advisable or necessary for the protection of property and persons. Nothing in this bulletin shall act as a representation that the product use or application will not infringe a patent owned by someone other than DYMAX or act as a grant of license under any DYMAX Corporation Patent. DYMAX recommends that each user adequately test its proposed use and application before actual repetitive use, using the data contained in this bulletin as a general guide. LIT136 Rev. 3/28/2008

DYMAX Corporation - 318 Industrial Lane - Torrington, CT 06790 - Phone: 860.482.1010 - Fax: 860.496.0608 - E-mail: info@dymax.com - www.dymax.com

DYMAX Europe GmbH - Trakehner Strasse 3 - D-60487 Frankfurt am Main - Germany - Phone: 0049.69.7165.3568 - Fax: 0049.69.7165.3830 - E-mail: dymaxinfo@dymax.de - www.dymax.de

DYMAX UV Adhesives & Equipment (Shenzhen) Ltd - Unit 807, Talfook Building, No. 9 Shi Hua Road, Futian Free Trade Zone, Shenzhen, China 518038
 Phone: 86.755.83485759 - Fax: 86.755.83485760 - E-mail: dymaxasia@dymax.com - www.dymax.com.cn

DYMAX Asia (HK) - Unit 1006, 10/F., Carnarvon Plaza, No. 20, Carnarvon Road, T.S.T., Kowloon, Hong Kong - Phone: 852.2460.7038 - Fax: 852.2460.7017 - E-mail: dymaxasia@dymax.com - www.dymax.com.cn

DYMAX®, Light-Weld®, Light-Welder®, Multi-Cure®, Ultra Light-Weld®, MEDI-CURE®, MD® and SPEEDMASK® are registered trademarks of DYMAX Corporation

