

Dymax 500-E Activator

Activator 500-E is a solvent-free, environmentally friendly grade of Dymax Activator 535. It is used with Dymax activator cured adhesives wherever solvent free environments are required.

Since the product contains no solvent, there is no waiting period for solvent flash prior to assembly. Dymax activator cured products include the 600 and 800 series and developmental products formulated for interfacial bonding applications.

PHYSICAL PROPERTIES

Color	Amber to Light Brown
Viscosity	25 cps (nominal) (@ 20RPM; Brookfield)
Appearance	Leaves oily appearing residue when applied to bonding surface
Solvent Content	None
Flashpoint	245°F (closed cup)

CURE DATA

The following schedule of fixture times applies to Dymax and Multi-Cure adhesives. Full cures develop in 24 hours with all adhesives:

Fixture Time (seconds)	Adhesive	Handling Strengths	Adhesive	Handling Strengths
	810	15-35	602	10-25
	828	15-35	625	15-35
	832	15-35	628	15-35
	840	15-35		
	845	45-60		
	847	10-20		

These times are based on bond line gaps of 0 to 0.002". All applications should be evaluated for actual fixture times before repeated use or establishing automated assembly procedures.

Increasing bond line thickness may decrease tensile strength and will increase set time. With Activator 500-E applied to one surface, the maximum bond line gap through which Dymax or Multi-Cure adhesives can be cured through is 0.020".

When using Multi-Cure adhesives, activator 500-E can be used to cure adhesive to a depth of 0.020" under UV cured or areas where UV light cannot penetrate. Activator 500-E will not accelerate the UV cure itself.

USE AND APPLICATION

For most bonding applications activator is applied to one bonding surface and adhesive to the other. Spraying, brushing or swabbing are all acceptable techniques for activator application. Note that adhesives must be placed as a drop or a bead.

Assembly Procedure:

1. Determine the minimum amount of adhesive to completely fill the joint and result in minimum squeeze out.
2. Deposit that amount of adhesive as a bead on one surface (DO NOT SPREAD THE ADHESIVE).
3. Coat the mating surface with a thin film of activator (it may be sprayed or spread). Activator should not stand in pools. (A ratio by weight of activator to adhesive from 1:10 to 1:20 is recommended.)
4. Assemble parts and clamp for required fixture time.
Important: Parts must remain immobilized following assembly until fixtured to assure development of maximum bond strength.

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If adhesive is applied directly over activator, parts should be assembled as soon as possible since curing begins immediately. Care should be taken not to over-apply activator since this can reduce bond strength.

For optimum curing rates, it is recommended that bonding be accomplished within one hour after activator application. Fixture times may become longer if activator is applied more than 4 hours prior to bonding. Activator is easily applied with spray or dispensing equipment for automated assembly. Swabbing or transfer pad printing is also acceptable. Natural felt or open-cell solvent resistant polyurethane foams are suitable.

CLEAN UP

Excess activator and adhesive may be cleaned up with 1,1,1 Trichloroethane, alcohol or acetate solvents, or Freon. Acetone or Methyl Ethyl Ketone (MEK) is not recommended.

PACKAGING & SHELF LIFE

Activators are available in 7-mL glass vials or 1-quart, 1-gallon, and 5-gallon metal containers. Activator has a one-year shelf life when stored in original, unopened and undamaged containers. No shelf life is stipulated once opened. Activator is oxygen sensitive. Containers should be closed immediately following dispensing. Resealing container under nitrogen extends shelf life. If activator turns black run the fixture test (below) to determine potency.

RECOMMENDED "SPEED OF CURE" FIXTURE TEST

This test is recommended for inspection of incoming adhesive and activator and for in-line process control. Production parts are ideal for in-line inspection and QC. Alternatively, microscope slides or steel lamps may be as the test substrate. Recommend performing this test at the beginning of each shift and charting the results. This will ensure the adhesive and activator are in good working order.

Step 1: Apply a thin film of activator to one part. Cover about one-square inch.

Step 2: Apply a thin 1/16" **BEAD** of adhesive (do not spread) to the other part.

Step 3: With a 3/4" to 1" overlap, press two parts together and hold for 5 seconds. [Note—as the adhesive bead rolls across the activator, it picks up the activator—this is how they mix].

Step 4: Every 5 seconds, gently tap the end of one part while holding the other part still. Fixture time is when the parts resist movement with light finger pressure.

Step 5: Record the fixture time. Fixture time should be +/- 50% of the average for your combination of adhesive and activator. Outside these limits, repeat, check method and check with different lot of activator or adhesive.

CAUTION

For industrial use only. Avoid breathing vapors. Avoid contact with eyes and clothing. In case of contact, immediately flush with water for at least 15 minutes; for eyes, get medical attention. Wash clothing before reuse. Keep out of reach of children. Do not take internally. If swallowed, vomiting should be induced at once and a physician called.

Avoid skin and eye contact. Non-porous protective gloves or barrier hand cream should be used. Do not wear jewelry. Protective eye goggles should be worn when handling activator. See CAUTION below. Avoid breathing of vapor. Use positive ventilation to remove vapors.