



# ABATRON, INC.

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## ABOCAST/ABOCURE 7606-1

TDS 850109

Clear Dielectric CASTING, ADHESIVE and ENCAPSULATION COMPOUND  
2-Component, Dielectric, Variable-ratio Low-viscosity Plasticized Epoxy System.

### SUGGESTED USES:

Dielectric encapsulation and potting of electronic components, especially where toughness, transparency, mild reactivity and non critical proportioning are required. Shrink-free embedments and preparations of specimens for display or analytical purposes.

General purpose adhesion, casting and impregnation.

Bonding or laminating substrates, plates, radiation screens and other components in radioactive equipment.

### SPECIFICATIONS:

<b>ABOCAST</b>	<b>7606-1:</b>	Resin:	Light Amber,	Transparent	9.5	Lbs/Gallon
			(1.14 Kg/Liter)	Viscosity:	2100 cps approx.	@ 25°C
<b>ABOCURE</b>	<b>7606-1:</b>	Converter;	Light Amber,	Transparent	7.9	Lbs/Gallon
			(0.95 Kg/Liter)	Viscosity:	500 cps approx.	@ 25°C

**Mixing Ratios:** 100pbw (parts by weight) ABOCAST can be mixed with 40-100pbw ABOCURE. The higher ABOCAST ratios (e.g.: 100/43pbw ABOCAST/ABOCURE, or 2/1 by volume) offer higher hardness, rigidity, chemical and heat resistance.

The higher ABOCURE ratios (e.g. 100/86pbw ABOCAST/ABOCURE, or 1/1 by volume) is often used for increased flexibility.

**Pot life:** 2.5-3 hrs approx. @ 20-25°C.; 16-24 minutes approx 60-80°C.

**Hardening Time:** 3-8 hours @ 25°C; faster with heating, which can reduce the process to a few minutes. Thick sections harden faster than thin layers. Low temperatures retard the hardening (too slow under 10°C).

**Cure:** Full strength is reached after 3-8 days at room temperature, or in 1-3 hrs @ 80-110°C. Heat cure is not needed, but it can be used to optimize properties in a short time.

### CHARACTERISTICS:

Typical tests cured 2/1 ABOCAST/ABOCURE

volumetric ratio:

Tensile strength: 7400 psi

Ult. Elongation: 9%

Flexural: 12000

Compressive: 14,600

Izod Impact Strength. (lb/in notch): .49

% Weight Change after 24 hrs. immersion:

Water: 0.2; 50%

NaOH: 0.09; 30%

Sulfuric Acid: 1.3; 5%

Acetic Acid: 1.5; 1/1

Xylene/Alcohol: 2.3

JP 4 Fuel: 0.1

Weight loss after 24 hours @ 150°C: 0.55.

Shore Hardness of various ABOCAST/ABOCURE ratios:

100/40pbw: 70D

100/80: 64D, 62D after 10 seconds

100/100: 64D, 55D after 10 sec.

Virtually unaffected by atmospheric conditions, soft and salt water, alkalis and diluted acids, several solvents, detergents, oils and greases.

<continued>

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**CHARACTERISTICS (continued):**

Control of final properties by changing the **ABOCAST/ABOCURE** ratios: the highest rigidity, hardness, chemical and heat resistance are offered by a 100/40 ratio. Higher **ABOCURE** ratios (up to 100/100 **ABOWELD/ABOCURE**) yield increasing flexibility, shock and thermocycling resistance, adhesion to problem surfaces.

Tenacious adhesion to metals, ceramics, wood, fiberglass, masonry and most materials, to form permanent structural and dielectric bonds.

Radiation resistance recommends the 7606-1 System in X-ray and other radioactive environments.

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**INSTRUCTIONS FOR USE:**

Surfaces Must Be Thoroughly clean and dry for good adhesion. Sandblasting, sanding or roughening after washing and degreasing is recommended.

**ABOCAST/ABOCURE** Mixing must be thorough, or "soft spots" result. A rod, spatula, paddle, or power mixer are all adequate if properly used.

Pot Life is the time the **ABOCAST/ABOCURE** blend remains workable, before hardening, in the mixing container. Application is simple. Disposable cans, squeeze-bottles, brushes, rollers, spray-guns are all adequate for different purposes.

An Induction Period (waiting period in the mixing container, after mixing) of at least 10 minutes may be necessary to avoid "tacky hardening" of thin surface layers exposed to ambient moisture during application.

Hardening, Cure, Temperature. Since the 8006-11 System contains no solvent, it hardens by chemical reaction rather than by drying. Therefore it can be also cast in any thickness and without shrinkage. The hardening reaction generates heat and is accelerated by mass and heat. Large masses harden much faster (as their bulk retains the reaction heat) than small masses or thin layers. The same quantity that hardens in 2 hours, in a full pint can, at room temperature, may need 10 or more hours if spread in a thin layer. Heating greatly accelerates the process. For instance, the 10-hour hardening at room temp. may be reduced to 5-8 minutes @ 80°C. Cure completes the reaction. It occurs spontaneously and continues for 1-3 weeks at room temperature, or in just hours (or even minutes) with heating.

Viscosity is also greatly decreased by heating and increased by cold. Thus, better flow, wetting and adhesion, as well as faster hardening, are obtained on a warm surface, or with a warm resin.

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The above information is the result of accurate laboratory and field tests. However, no guarantee is offered, as uses and applications are beyond our control. Specifications are subject to state-of-the-art changes.