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4 EPOXY COMPOUNDS FOR MAGNETS AND ELECTRIC COMPONENTS

TDS 850131

4 EPOXY COMPOUNDS FOR MAGNETS AND ELECTRONIC COMPONENTS

- ABOCAST 22-30/ABOCURE 50-4:** Filled, Black, Medium-viscosity Epoxy System. Slow.
- ABOCAST 22-30/ABOCURE 50-12:** Filled, Black, Lower-viscosity Epoxy System. Faster.
- ABOCAST 50-11/ABOCURE 50-4:** Clear, Low-viscosity Epoxy System. Slow.
- ABOCAST 50-11/ABOCURE 50-12:** Clear, Lowest-viscosity Epoxy System. Faster.

SUGGESTED USES:

ENCAPSULATION, POTTING AND ASSEMBLY OF ELECTRONIC AND MAGNETIC COMPONENTS, such as capacitors, transformers, terminals, industrial magnets, small and large magnetic assemblies, metal detectors, metal separators, magnetic printing cylinders, magnetic holders, insulators, junction boxes, switches, circuit boards.

General-purpose casting and bonding for structural and dielectric applications.

The above are **2-component STRUCTURAL/DIELECTRIC CASTING AND ADHESIVE SYSTEMS** obtained from blends of any of the following ABOCAST and ABOCURE:

- ABOCAST 22-30:** Black filled resin. High viscosity. 12.4 Lbs/Gallon.
- ABOCAST 50-11:** Clear unfilled resin. Low viscosity. 9.5 Lbs/Gal.
- ABOCURE 50-4:** Clear, variable ratio, low viscosity, slow converter. 8 Lbs/Gal.
- ABOCURE 50-12:** Clear, lowest viscosity, faster converter. 8.2 Lbs/Gal.

CHARACTERISTICS of 4 basic combinations (pbw = parts by weight) are:

	pbw	pbw	pbw	pbw
ABOCAST 22-30	100.....	100.....		
ABOCAST 50-11			100.....	100.....
ABOCURE 50-4	25.....		50.....	
ABOCURE 50-12		6.....		14.....

COLOR	black.....	black.....	clear amber.....	clear amber
VISCOSITY poises ...	186.....	95.....	19.....	7.....
POT LIFE @ 25°C	2-3 hrs.....	20-30 min.....	2-3 hrs.....	30-40 min...
DEFLECTION TEMP	100°C.....	115°C.....	91°C.....	98°C.....
7-day WATER Absptn.	0.19%.....	0.25%.....	0.22.....	0.33.....
V.RESISTIVITY C."A"	8.1x10 ¹⁵	1.0x10 ¹⁶	6.3x10 ¹⁴	1.2x10 ¹⁴
COMPRESSV.STR.psi	13400.....	17100.....	11200.....	14200.....

MAIN ADVANTAGES	slow, thick.....	fast, thick.....	slow, thin.....	slow, thin
	var. ratios.....	hard, tough.....	var. ratios.....	hi. temp.
	r.t. cure.....	r.t. cure.....	r.t. cure.....	oven cure
	low exotherm....	hi.chem.res.....	low exotherm....	hi.chem.res.
	opaque.....	opaque.....	transparent.....	transparent

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CHARACTERISTICS <continued>

ABOCAST 22-30/ABOCURE 50-4 is the preferred system for most casting applications. It offers good thermo conductivity, minimum shrinkage and low exotherm (heat of reaction). ABOCURE 50-4 can be mixed in ratios variable from 16 to 50 pbw with 100 pbw ABOCAST 22-30 (or ABOCAST 50-11) for different cured properties: higher rigidity, chemical and heat resistance with the lower ABOCURE ratios (16-20 pbw), or higher flexibility with higher ratios. A converter with the same properties and ratios as 50-4, but with much lower viscosity, is **ABOCURE 50-3**. Many prefer it as a standard. Both converters offer the lower exotherm that permits unusually heat-sensitive or large castings.

ABOCAST 22-30/ABOCURE 50-12 offers high chemical and heat resistance, ceramic-like hardness, faster hardening and faster curing. ABOCURE 50-12, however, requires a precise ratio.

ABOCAST 50-11/ABOCURE 50-4 is characterized by the low viscosity and transparency of the ABOCAST component, and the variable-ratio possibilities of ABOCURE 50-4. This system also offers the very low exotherm that is ideal for rigid and transparent encapsulation of heat sensitive components.

ABOCAST 50-11/ABOCURE 50-12 is the lowest-viscosity system available which offers the high dielectric and structural performance of more viscous premium epoxies.

The above products are also available in custom colors.

INSTRUCTIONS FOR USE

Surfaces must be clean and dry. Sandblasting, sanding or roughening is also recommended.

ABOCAST/ABOCURE mixing must be thorough, or "soft spots" may result.

Application is simple. Brushes, rollers, spray guns or squeeze-bottles are all adequate if properly used.

Hardening, temperature. Hardening starts when ABOCAST & ABOCURE are mixed. **POT LIFE** is the time the mix remains workable (before hardening) in the mixing container. The reaction is exothermic (heat generating) and is accelerated by heat. **Thick masses harden much faster** than thin layers.

Heating greatly accelerates the reaction. An adhesive layer or film that would need 10 hours to harden at 25°C could harden in just minutes at 100°C.

Curing is the complete reaction that continues beyond hardening. It may need 1-3 weeks at room temperature, or just hours (or even minutes) with heating. Heat cure or post-cure is not necessary with any of the above products, but it can be used to optimize the rigidity, chemical and heat resistance.

Further instructions will be sent upon request.

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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.