



ABATRON, INC.

5501 - 95th Ave., Kenosha, WI 53144 U.S.A.
(262) 653-2000 Fax (262) 653-2019
www.abatron.com e-mail: info@abatron.com

ABOWELD/ABOCURE 48-33

TDS 820130



HIGH PERFORMANCE, STRUCTURAL AND DIELECTRIC EPOXY ADHESIVE PASTE WITH THE WIDEST RANGE OF INDUSTRIAL, ARCHITECTURAL, MARINE AND MAINTENANCE USES.

Based on Government, Military and Industrial Requirements.

SUGGESTED USES.

High-strength patching and resurfacing structures, tools, walls, furniture, sculptures, artifacts, floors, tanks, pipes, basins, silos, bridges, decks, bulkheads. Water and chemical-proofing in sewage systems. Permanent bonding and installation of posts, railing, pre-cast concrete slabs or equipment to virtually any support. Coating and protection of metal and other surfaces. Bonding granite, marble and other slabs to floors and walls in buildings and structures. Sealing underground structures against water seepage.

SPECIFICATIONS:

ABOWELD 48-33:	Resin	White	Thixotropic Paste	13 Lbs/Gallons approx.
ABOCURE 48-33:	Converter	Black	Thixotropic Paste	12 Lbs/Gallons approx.

CHARACTERISTICS:

- Typical tests, cured 10/4 ratio: Tensile Strength: 600 psi; Flexural: 8000 psi; Compressive: 12000 psi; Hardness: Shore D 85; Water Absorption, 120 days:

0.95%; Deflection Temperature: 110° C; Weight Loss, 100 hrs. @ 160° C: 0.36%.

- It adheres tenaciously to metal, ceramics, masonry, fiberglass, wood and most materials to form permanent structural and dielectric bonds.
- Thixotropic: easy to spread and yet it does not sag when used to repair and fill on vertical surfaces.

Proportioning: Variable ratios. 100 pbw (parts by weight) ABOWELD can be mixed with 40-200 pbw ABOCURE 48-33. **The 2/1 ratio is standard.**

Pot Life: About 1 hour (100 gms @ 25° C).

Hardening Time: 2-12 hours @ 25° C; faster with heating, which can reduce the process to minutes or seconds. Thick sections harden faster than thin layers. Cold weather slows hardening (too slow under 10° C).

Cure: Full strength is reached after 1-3 weeks at room temperature, or in 1-4 hrs. @ 80-120° C. Heat cure optimizes properties.

- Unaffected by atmospheric conditions, soft and salt water, alkalis and diluted acids, several solvents, detergents, oils and greases.
- **Control of final properties by changing the ABOWELD/ABOCURE RATIOS:** The highest hardness, rigidity, chemical and heat resistance are offered by a 100/40 ratio. Higher **ABOCURE** ratios (up to 100/200 **ABOWELD/ABOCURE**) yield increasing flexibility, shock and thermocycling resistance and adhesion to wet surfaces.
- **Visual Inspection:** The **ABOWELD/ABOCURE** blend has a uniform gray color. Streaks indicate insufficient mixing. Further the shade of gray indicates the ratio actually used by the operator. This renders quality control foolproof.
- **Available in several colors:** WHITE, RED, GREEN, YELLOW, BROWN, BLACK, BLUE.

VARIANTS:

For special applications, the variations listed on the following page were developed to satisfy most requirements.

When the **ABOWELD 48-33/ABOCURE 48-33** System needs higher heat or chemical resistance, when it is too slow, or too thick, **ABOCURE 48-33** can be replaced with any of the following converters, or the whole system modified with the here described **ABOCAST** or **ABOSOLV**. For requirements not covered in this data sheet, or for any advise, please call our technical service.

ALTERNATIVE CONVERTERS AND MODIFIER:

ABOCURE 50-12 (Liquid or Paste):

Faster, Room-Temperature, Higher Grade Converter.

Ratios: 100 pbw **ABOWELD 48-33/5-6 pbw ABOCURE 50-12.**

Pot life: 40-50 minutes. Hard in 1-8 hrs. @ room temperature or faster with heat. Full cure: 3-7 days @ room temperature or 1-2 hours @ 80-120° C. It offers the **highest heat, chemical and physical properties possible with room temperature cure.** Deflection Temperature: 120° C; Tensile Strength: 9000 psi; Flexural Strength: 11000 psi; Compressive Strength: 15000 psi; Hardness: Shore D 90. It resists stronger solvents and chemicals than the standard **48-33 System.**

ABOCURE 50-17: Heat-Cure Liquid Converter for the highest requirements.

Ratios: **100 pbw ABOWELD 48-33/10-11 pbw ABOCURE 50-17.**

Pot life: 5-8 hrs. Hard in 30-90 minutes @ 70-120° C. Full cure: 1-3 hours @ 60-80° C + 1-3 hours @ 90-110° C + 1-3 hours @ 120-160° C (thin sections can be cured faster). Necessary when **still higher physical and chemical properties** must be reached. **Deflection Temperature: 160° C.** Optimum resistance to stronger solvents and chemicals. Physical strength about 20% higher than with **ABOCURE 50-12.**

ABOCURE 8101-5: "5 Minute Cure" Converter Paste for fast hardening.

Ratios: 100 pbw **ABOWELD 48-33/40 pbw ABOCURE 8101-5.**

Pot life: 5-10 minutes. Hard in 5-20 minutes. Used in cold environment (where other hardeners would be too slow) or when very fast hardening is required. The physical, chemical and heat properties of this system are not quite as good as those of the standard 48-33 System.

ABOCAST 50-16/ ABOCURE 50-12: Low-Viscosity (100 cps) Epoxy System.

Ratios: **100 pbw ABOCAST 50-16/14 pbw ABOCURE 50-12.**

Pot Life: 40-50 minutes.

By itself, this is the lowest viscosity Epoxy System offering high structural properties. In fact, it is a standard for restoring cracked walls by injection, or to make casting requiring the lowest viscosity. Added to the **48-33 System**, it renders it as fluid as wished.

ABOSOLV 1: Solvent and Thinner for cleanup and thinning. Generally used for clean-up. However, it is also extremely useful to thin the 48-33 System (or any of its variations) as much as needed to form a primer-coat to promote adhesion of the 48-3 paste to difficult-to-wet surfaces.

The above information is the results of accurate laboratory and field tests. However, no guarantee, expressed or implied, is given, as uses and applications are beyond our control. Specifications subject to state-of-the-art changes. (Rev. 031217)