

**ABABOND FRP-H25****TWO-COMPONENT EPOXY ADHESIVE FOR FRP STRENGTHENING SYSTEMS****DESCRIPTION**

A two-component, solvent free epoxy based structural adhesive for strengthening with FRP laminates. ABABOND FRP-H25 has been designed for use in hot weather between 25 to 45 °C. It has excellent mechanical and chemical resistance. Also, due to its special rheology, the surface of the fibers will completely be saturated and the fibers will attach to the surface without slipping.

**ADVANTAGES**

- High strength
- Excellent Chemical resistance
- Excellent adhesion to concrete
- Good wetting and self-leveling properties
- Easy to use
- Hardening without shrinkage
- High mechanical strengths

**FIELD OF APPLICATION**

- Bonding and Strengthening of concrete elements and natural stone
- Bonding FRP laminates to concrete elements
- Suitable for use with all types of FRP such as CFRP, GFRP and AFRP

**DOSAGE**

To achieve the best performance of the adhesive, the fibers must be completely impregnated and saturated. For this purpose, the amount of consumption is at least 960 g/m<sup>2</sup>, which depends on the type and weight of the fibers, the pores and voids in the substrate surface, the application conditions and the desired cross-section.

**SURFACE PREPARATION**

All surfaces should be clean, dry and free from curing compounds, release agents, troweling compounds, standing water, grease, oil, dirt, bitumen coatings, all loosely adhered aggregates and cement particles, etc. Concrete must be cured for 28 days and its minimum compressive strength must be 20 N/mm<sup>2</sup> and its minimum bond strength must be 2.5 N/mm<sup>2</sup>. All surfaces should be prepared with a sandblast or special tools and remove loose and unstable parts of concrete. A minimum surface profile of 50 to 70 µm is recommended.

**MIXING**

Mix component A and B separately with a mixing paddle attached to a slow speed electric drill (max. 400 rpm). Add component B to component A and mix with the mixing paddle until the color of mixture changed into uniform gray.

Note1: Always mix an appropriate amount of material so that can be used before 30 minutes .

Note2: It is mandatory to follow mixing ratio of two components.



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استاندارد ملی ایران



واحد تولیدی نمونه ملی

## APPLICATION

ABABOND FRP-H25 can be applied by means of a roller or brush or machine method. It is recommended to use a brush in order to obtain better coating and filling all the pores. The movement of the brush should be in the opposite direction of the fiber texture (unidirectional fibers) and in a reciprocating manner.

## TECHNICAL PROPERTIES

Appearance	Viscous liquid
Color	Gray
Mixing Ratio (A:B)	4:1 (by weight)
Density (A+B)	1.40 ± 0.10 g/cm3
Volume solid content	100%
Mixture viscosity at 35 °C (cp)	~3000
Pull off (N/mm <sup>2</sup> )	2.5 - 3
Compressive strength at 25 °C (MPa) [after 7 days]	~75
Flexural strength at 25 °C (MPa) [after 7 days]	~26
Slant Shear at 25 °C (MPa) [after 7 days]	~16

## DRYING TIME

Temperature (°C)	Touch-dry (hrs)	Full cure (days)
+25	7	7
+35	4	5
+45	3	3

## POT LIFE

Material temperature (°C)	+25	+35	+45
Pot life (min)	60	45	30



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**PACKAGING**

4 kg sets.

**STORAGE & SHELF LIFE**

The shelf life is 6 months if unopened, stored free from frost, moisture and direct sunlight.

**HEALTH AND SAFETY**

This product is Flammable. Keep away from heat and open flame. Keep container closed. Use with adequate ventilation. Avoid prolonged and repeated contact with skin. If used in confined areas, observe the following precautions to prevent hazards of fire or explosion or damage to the health:

1- Circulate adequate fresh air continuously during application and drying.

2- Use fresh air masks and explosion proof equipment.

3- Prohibit all flames, sparks, welding and smoking.

MSDS is available at ABADGARAN website.

**TECHNICAL SERVICE**

The ABADGARAN INTERNATIONAL GROUP Technical Department is available to assist you in the correct use of our products and its resources are at your disposal entirely without obligation.

All data presented in this technical datasheet are based on our last researches in ABADGARAN CONSTRUCTION CHEMICALS laboratories and are just as a guide for choosing appropriate material. Therefore users should conduct a sufficient investigation to establish the suitability and conformity of any product for intended uses.

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