



WBE-2.1

## Two-Component Water Base Epoxy



### TECHNICAL DATA SHEET

#### PRODUCT DESCRIPTION

WBE-2.1 is a clear or pigmented, 2-component, water based aliphatic epoxy formulation with excellent chemical and UV resistance. WBE-2.1 has great adhesion to most substrates such as concrete, metals and asphalt. There is no odor or VOC's allowing for inside applications. It is available with 50% nano-size glass filler, anti-static, anti-microbial and anti-corrosive additives. WBE-2.1 can be used as a primer and can be diluted with water of up to 25% to help penetrate porous concrete. WBE-2.1 dries to a high gloss top coat finish. The glass filled dries to a matte, non-skid finish. WBE-2.1 dries very fast depending on temperature, humidity and thickness. Typical drying times are 15 minutes with up to 8-hour pot life.

#### WBE-2.1 PHYSICAL PROPERTIES

		REGULAR	GLASS-FILLED
Flex Modulus	ASTM D624	500 kpsi	800 kpsi
Tensile Strength	ASTM D412	9200 psi	9500 psi
Elongation	ASTM D412	18%	18%
Heat Deflection Temp.	ASTM D648	175°F	190°F
Relative Humidity	ASTM F2170	85%	85%
Taber Abrasion CS18	ASTM D4060	75 mg	75 mg
Pot Life	Time	8 hours max	6-8 hours max

#### MIX RATIO

Read product labels and application instructions prior to use. Mix WBE-2.1 Hardener (A-Side) and Resin (B-Side) at a ratio of 1A – 1B by volume. Mix with a variable speed drill utilizing a Jiffy Mixer to suspend any settled pigment and attain a uniform color. For glass-filled WBE-2.1, mix in the nano-glass filler AFTER combining the Hardener and Resin. Glass filler can be added up to 100% of the combined liquids.

#### HEALTH AND SAFETY

Read the Safety Data Sheet (SDS) and container labels for detailed health and safety information. This product is intended for industrial use by properly trained professional applicators only.

#### WBE-2.1 VARIABLE RATIO ADJUSTMENTS (INCREASE OR DECREASE UP TO 20%)

	EXCESS HARDENER (A-Side)	EXCESS RESIN (B-Side)
Pot Life	Increase	Decrease
Flexibility	Increase	Decrease
Hardness	Decrease	Increase
Better Solvent	Increase	Decrease
Resistance	Decrease	Increase
Acid Resistance	Increase	Decrease
Adhesion	Increase	Decrease
Water Resistance	Decrease	Increase
Corrosion	Decrease	Increase

#### TECHNICAL APPLICATION DATA

Substrates must be fully cured and cleaned prior to any coating operation. The cleaning operation must not leave any residual detergents, acids or alkali cleaners. Concrete flooring should be prepared with shot blasting (SPCC min. 2), diamond grinding and/or machine sanding depending on severity of concrete surface condition. When using WBE-2.1 for coating steel, the substrate should be shot blasted to an sspc 4-6 mils profile. After shot blasting, the substrate should be clean and dry. There should be no visible rust prior to coating. After substrate is properly prepared, WBE-2.1 self-priming material should be applied within 45°F to 100°F. It is recommended that WBE-2.1 be applied as a primer coat to the bare substrate which will actively penetrate any porous surface. This primer coat should also be slightly A-Side rich to promote excellent chemical bonding for the sequentially applied base coat. This is accomplished by increasing the A-Side ratio by 10-12% by volume. Primer coat should be applied at 4-6 mil thickness. After the prime coat is dry to the touch, apply the WBE-2.1 base coat. For non-skid flooring, use Glass-Filled WBE-2.1. Apply 8-10 mils of coating. Glass-Filled WBE-2.1 will dry to matte finish; for gloss finish, top coat with clear WBE-2. To reduce viscosity 5% water may be added. WBE-2.1 may be applied using rollers, brush or air-less spray. Pot life of the mixture is up to 8 hours. There is no end point on gel like conventional epoxy, so do not use the



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mixture after 8 hours. Coverage at 8 mils is 300 sq. ft. / mixed gal.

### CHEMICAL RESISTANCE CHART

#### 21 Day Immersion Test ASTM D3912

Chemical Name	Results @ 25°C
Acetic Acid	R
Acetone	R
Ammonium Hydroxide (14%)	R
Brake Fluid	R
Brine-Saturated Water (310g/l)	R
Clorox (10%) Water	R
Diesel Fuel	R
Gasoline	R
Gasoline 5% MTBE	R
Gasoline 5% Methanol	R
Hydrochloric Acid (25%)	R
Hydrochloric Acid (10%)	R
Hydraulic Fluid	R
Isopropyl Alcohol	R
Lactic Acid	R
MEK	R
Methanol	R
Methylene Chloride	C
Mineral Spirits	R
Motor Oil	R
MTBE	C
Muriatic Acid (10%)	R
NaCl Water (10%)	R
Nitric Acid (20%)	RC
Phosphoric Acid (10%)	R
Phosphoric Acid (50%)	R
Potassium Hydroxide (10%)	R
Potassium Hydroxide (20%)	R. Dis
Skydrol	R
Sodium Hydroxide (25%)	R. Dis
Sodium Hypochlorite (10%)	R
Sodium Bicarbonate	R
Stearic Acid	R
Sugar Water	R
Sulfuric Acid (10%)	RC
Sulfuric Acid (30%)	NR
Toluene	R
Trisodium Phosphate	R
Vinegar Water (5%)	R
Water	R
Water (14 days @ 82°C)	R

#### 72 Hour Spot Test Chemical Resistance Data

##### WBE-2.1

Chemical	Rating
NHO <sub>3</sub> 50%	8
HCL 37.5%	9
NaOH 50%	8
H <sub>2</sub> SO <sub>4</sub> 50%	8
HI 57%	8
H <sub>3</sub> PO <sub>4</sub> 50%	8
Brake Fluid	10
Anti-Freeze	10
Motor Oil	10

#### Rating Guidelines

0-1	75-100% Film Dissolved
1-2	50-75% Film Dissolved
2-3	25-50% Film Dissolved
3-4	1-25% Film Dissolved
4-5	Film damage severe, cracking, pinholes
5-6	Film moderate to heavy damage, swollen, dulled
6-7	Film moderately damaged, haze, residue
7-8	Film with slight or no damage, slight haze, residue
8-9	Film in very good condition
10	Film unchanged, excellent condition

#### \*NOTES:

- All samples using 57% HI had purple iodine discoloration due to the nature of the acid in the air
- Samples were placed at room temperature for 72 hours after application of 1 ml of solvent on 16 mil film of product

#### CHART KEY

- R – Recommended (little or no visible damage)
- RC – Recommended Condition (swelling or discoloration)
- C- Conditional (cracking – wash down within 1 hour)
- NR – Not Recommended
- Dis. – Discoloration



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Xylene	RC
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