

RAPID FIRE : 100% SOLIDS EPOXY - FAST CURE

TECHNICAL DATA SHEET

DESCRIPTION

RAPID FIRE is a solvent-less, two component epoxy coating system, that was designed for fast cure applications. It exhibits a very good appearance and physical properties.

ADVANTAGES

- Dense surface resistant to bacteria and moisture and easy to clean.
- May apply several layers on itself with excellent adhesion.
- Contains no solvent with a very low VOC content (**VOC = 75.4 g/L**), allowing for interior application without harmful odors.
- Excellent adhesive properties, allowing application on other firm and hard coating, as well as a good bond to the substrate.

TECHNICAL DATA

PACKAGING	3 US gal (11.35 L)	
COLOR	PART A: Upon request PART B: Clear to amber MIX: Upon request	
RECOMMENDED THICKNESS	PRIMER (SINGLE SHOT)	FINISH COAT (SINGLE SHOT)
SOLID COLOR	10 mils (150 ft ² /gal)	16 mils (100 ft ² /gal)
FLAKES SYSTEM	10 mils (150 ft ² /gal)	13 mils (120 ft ² /gal)
METALLIC SYSTEM	10 mils (150 ft ² /gal)	40 mils (40 ft ² /gal)
SHELF LIFE	12 months in original unopened factory sealed containers. Keep away from extreme cold, heat, or moisture. Keep out of direct sunlight and away from fire hazards.	
MIX RATIO, BY VOLUME	A:B = 2:1	
MIX RATIO, BY WEIGHT	Clear: A:B = 100:41-48 Colors: A:B = 100:39-45 With quartz sand : A:B = 100:50 Mixture = 200	
POT LIFE 16 OZ (454 G)	10-15 minutes @ 77°F (25°C)	
OPEN TIME ON SUBSTRATE	15-20 minutes	
VOC	75.4 g/L	

PROPERTIES

@ 73°F (23°C) AND 50% R.H.

SOLIDS CONTENT, BY VOLUME	100%			
SOLIDS CONTENT, BY WEIGHT	100%			
DENSITY (KG/L)	PART A	PART B	MIX	
CLEAR	1.05 - 1.10	0.9 - 1.0	-	
COLOURS	1.10 - 1.15	0.9 - 1.0	-	
THINNER RECOMMENDED	Xylene			
WAITING TIME/ OVERCOATABILITY	SUBSTRATE TEMPERATURE	MINIMUM	MAXIMUM	
BEFORE APPLYING RAPID FIRE OVER PRIMER	> 50°F (10°C)	24 hours	3 days	
	> 68°F (20°C)	12 hours	2 days	
	> 86°F (30°C)	6 hours	1 day	
BEFORE APPLYING SECOND COAT OF RAPID FIRE	> 50°F (10°C)	30 hours	3 days	
	> 68°F (20°C)	24 hours	2 days	
	> 86°F (30°C)	16 hours	1 day	
CURING DETAILS	SUBSTRATE TEMPERATURE	FOOT TRAFFIC	LIGHT TRAFFIC	FULL CURE
	> 50°F (10°C)	30 hours	5 days	10 days
	> 68°F (20°C)	24 hours	3 days	7 days
	> 86°F (30°C)	16 hours	2 days	5 days
SERVICE TEMPERATURE	-4°F to 122°F (-20°C to 50°C)			

* Times are approximate and will be affected by changing ambient conditions, especially changes in temperature and relative humidity.

BOND RESISTANCE (PSI), ASTM D4541	> 300 (substrate ruptures)		
PERMEABILITY (%), ASTM D570	0.3%		
HARDNESS (SHORE D), ASTM D2240	85-90		
ABRASIVE RESISTANCE, ASTM D4060 (CS17 / 1000 CYCLES / 1000 G)	0.10 g		
VISCOSITY @ 77°F (25°C)	PART A	PART B	MIX
CLEAR	1200-1400	150-350	600-800
COLOURS	1400-1600	150-350	1200-1400
TRACTION RESISTANCE (PSI), ASTM D638	12200		
COMPRESSIVE STRENGTH (PSI), ASTM D695	1850		
FLAMMABILITY	Class I (Not considered Flammable, Flash Point > 199.4°F (93°C))		
ELONGATION (%), ASTM D638	2.5		
RESISTANCE TO MOLD GROWTH, ASTM D3273	Rated 10 (highest resistance)		
RESISTANCE TO FUNGI GROWTH, ASTM G21	Rated 0 (no growth)		

* The indicated mileage is calculated for flat surfaces. A porous or imperfect surface will require more material in order to cover the same mileage. *

SURFACE PREPARATION

Old concrete Concrete surface must be cleaned. BLASTRAC, sand blasting, diamond grinder w/30 grit or coarse, or water blasting is highly recommended to remove surface contaminants. Any oils and fats must be removed prior to product application. Acid etching may be required (followed by a thorough rinsing) to open the pores of the concrete to accept a primer. Do not apply to wet substrates. Chloride, moisture, and pH levels should be checked prior to application. In almost every application a primer is recommended prior to use of RAPID FIRE.

New concrete The concrete should be allowed to cure for a minimum of 30 days. Compression resistance of concrete must be at least 25 MPa (3625 lb/inch²) after 28 days and traction resistance must be at least 1,5 MPa (218 lb/in²). BLASTRAC, sand blasting, diamond grinder w/30 grit or coarser or acid etching (followed by a thorough rinsing) is required to remove the surface laitance that appeared during the curing process. A primer should be used to reduce out-gassing and promote adhesion.

MIXING

Thoroughly mix each component separately. Pour component B into component A using the proper mixing ratio of 2A:1 B by volume. Mix both components for maximum 1 minute using a drill at low revolution (300 to 450 rpm) to reduce trapping of air. While mixing, scrape bottom and walls of container at least once to ensure a homogeneous mix. Only prepare quantity that may be applied during pot life of mixture.

APPLICATION

Apply mixed product on the prepared surface tightly (thin film) using a rubber rake and pass a roller to obtain a uniform coating. Avoid creating puddles.

CLEANING

Clean all tools and materials with the cleaner/thinner for epoxies. Wash hands and skin carefully with warm soapy water. Once product has hardened, it may only be removed through mechanical means.

RESTRICTIONS

- Minimum/Maximum temperature of substrate: 50°F / 86°F (10°C / 30°C)
- Maximum relative humidity during application and curing: 85 %
- Substrate temperature must be 5.5°F (3°C) above dew point measured
- Humidity content of substrate must be < 4 % when coating is applied
- Do not apply on porous surfaces where a transfer of humidity may occur during application
- Avoid exterior use on substrates at ground level
- Protect from humidity, condensation and contact with water during the 24 hour initial curing period
- Surface may discolor in areas exposed to regular ultraviolet light

HEALTH AND SAFETY

In case of skin contact, wash with water and soap. In case of eye contact, immediately rinse with water for at least 15 minutes. Consult with a doctor. For respiratory problems, transport victim to fresh air. Remove contaminated clothes and clean before reuse. Components A and B contain toxic ingredients. Prolonged contact of this product with the skin is susceptible to provoke an irritation. Avoid eye contact. Contact with may cause serious burns. Avoid breathing vapors release from this product. This product is a strong sensitizer. Wear safety glasses and chemical resistant gloves. A breathing apparatus filtering organic vapors approved by the NIOSH/MSHA is recommended. Predict suitable ventilation.

Consult the material safety data sheet for further information.

IMPORTANT NOTICE

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