7780/7781

Two-Component High Performance Epoxy

Product Data Sheet

PRODUCT DESCRIPTION

7780/7781 primer is a two-component water-borne epoxy primer designed to penetrate and seal porous wood and concrete substrates prior to the application of high performance surface-applied coating systems.

PRODUCT NUMBERS AND COLORS

Standard colors are:

7780.....Transparent Red
7781.....Neutral

TYPICAL PROPERTIES

Description	Test Method	Results
Weight/Gal (mixed)	ASTM D1475	8.92 lbs/gal
Weight Solids (mixed)	ASTM D4209	33.4%
Volume Solids (mixed)	Calculated	28%
Viscosity (mixed)	ASTM D562	25 sec Z2
VOC (mixed)	EPA Method 24	85 g/L
MVT @ 7 Mils	ASTM E96	0.42 Perms
Adhesion to Concrete	ASTM D4541	400 psi
Flash Point	ASTM D3278	None
Mix Ratio 7780:7781		4:1 by volume

APPLICATION & ENVIRONMENTAL LIMITATIONS

- Measure air temperature near concrete surface. Recommended air temperature for application is between 59 - 122°F (15 - 50°C).
- Recommended range of Relative Humidity for application is between 45 - 75%.
- Minimum concrete (substrate) temperature is 60°F (15°C).
- Temperature of concrete must be at least 5°F (3°C) above the air dew point during coating application and cure time.
- Avoid primer application when air temperature is decreasing, especially in cold weather.
- Avoid application on a damp surface.

RECOAT TIME

- 1.5 hours under normal conditions of temperature and relative humidity.
- Up to 3 hours at low temperature and high relative humidity.

MIX-RATIO SENSITIVITY

- 7780/7781 mix ratio by volume is 4:1 and must not be changed.
- Poor mixing or incorrect proportioning when mixing a smaller volume may affect cured film properties.
- Off-mix ratio can result in film water sensitivity and/or intercoat adhesion issues.
- Induction time is not required.
- Mix 7780/7781 thoroughly before application.
- Avoid cross-contamination by mixing equipment when preparing small volumes.

FILM THICKNESS LIMITATIONS

- Recommended application rate is 300 ft² per gallon.
- Cure time will increase if applied at high wet film thickness, especially at low temperature and high relative humidity.
- Thick film application on a hot concrete surface may cause blistering and mud cracking.

USUABLE POT LIFE OF 7780/7781 AFTER MIXING

- Neither viscosity nor temperature change will indicate end of 7780/7781 pot life.
- Pot life of 7780/7781 is 6 hours under normal conditions of temperature and relative humidity.
- Physical properties of 7780/7781 like adhesion, gloss and hardness will decrease if primer is applied beyond its usable pot life.
- Mix only the amount of material than can be applied within 7780/7781 usable pot life.
- Dispose according to local regulations 7780/7781 material that has passed its usable pot life.

CONCRETE ADHESION OVER USEABLE MIXED LIFE

- Adhesion to concrete is in general larger than concrete cohesion.
- Adhesion to concrete ranges from 300 psi to more than 400 psi depending on concrete quality.

SUBSTRATE LIMITATIONS

- 7780/7781 must be able to wet the substrate (concrete).
- Surface must be free of excessive moisture.
- Surface must be free of contaminants.
- Surface must be free of water-repellent compounds.
- Surface texture should be prepared to industry standard (ICRI's CSP3-4). Avoid weakening concrete surface by aggressive shotblasting.
- Concrete should be able to resist a 250 psi pull.
- Check concrete substrate for alkalinity, chloride and moisture content.

ADHESION OF TOPCOATS AS 7780/7781 AGES

- Adhesion of polyurethane base coat is not affected by epoxy primer age. Adhesion tested at 3, 5 and 7 days after primer application showed no significant difference.
- It is good practice to recoat as soon as the primer is cured to avoid potential surface contamination that may affect intercoat adhesion.
- Avoid extended exposure of epoxy primer to UV rays.

SUITABLE SUBSTRATES FOR 7780/7781

- Concrete
- Wood

PRODUCTS THAT BOND WELL TO 7780/7781

Product	Adhesion (psi)
7430	>400
7430-02	>400
FC7500/FC7960	>400
FC7520/FC7961	>400
FC7520/FC7962	>400
FC7530/FC7963	>400
70410	>400
70860/70865	>400
7430-02	300 - 400*
7430-02	400 - 500**

- Adhesion tested without accelerator under Conditions of low temperature and high humidity (*).
- Adhesion tested with accelerator under conditions of low temperature and high humidity (**).

STORAGE AND HANDLING

7780/7781 will freeze and become unusable below 32°F (0°C). Do not ship or store unless protection from freezing is available. Do not apply if conditions will not permit complete cure before rain, dew or freezing temperatures occur. Do not apply in the late afternoon if moisture condensation can appear during the night. Do not apply 7780/7781 at temperatures below 50°F (10°C).

HEALTH AND SAFETY

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

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