

CONCRETE CONSTRUCTION

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If at First you Don't Succeed...

Epoxy specialists flourish by fixing other flooring contractors' mistakes.

By Joanne Costin



FIREHOUSE 33 FLOOR REPLACEMENT

LOCATION:
Pinellas Park, Fla.

OWNER:
Pinellas Park Fire Department

PROJECT:
4,400 sq. ft. of Increte Systems High-Performance Pigmented Epoxy followed by Increte's water-based urethane embedded with silica sand.

CONTRACTORS:
EZ Out Floor Removal, Oldsmar, Fla.
Elite Epoxy, Indian Rocks, Fla.

PROJECT COST:
\$28,600

DOING THE JOB the way it should have been done has become the lucrative specialty of Marc Freiermuht, president of EZ Out Floor Removal in Oldsmar, Fla., and Les Thomas, president of Elite Epoxy in Indian Rocks, Fla. Their businesses are thriving thanks to surface contractors who look for shortcuts and don't follow manufacturer instructions.

"If I had to say why a floor failed, it was because there was no prep done," says Freiermuht. He specialized in floor removal and surface preparation when launching

The green epoxy floor at Firehouse 33 lasted only half of its expected 10 years. It was replaced with Admiral Blue, a custom color developed for another customer by Increte Systems. Photos: Increte Systems

his company in 2005 because he wanted to provide an uncommon service. “Sometimes the coating contractor just pressure washes or acid etches. Neither gets the concrete surface profile (CSP) the manufacturer specifies.”

Thomas agrees, adding that epoxy coatings fail prematurely because many contractors also don’t know how to apply the product or what to put on top of it. “I have as much work as I want,” he says.

All three factors caused the green epoxy at Firehouse 33 in Pinellas Park, Fla., to last about half its expected 10-year life. The city replaced the badly stained and delaminating coating with a bright blue Increte Systems epoxy designed to provide high-gloss, high-build protection for concrete and masonry. The 100% solids formula has less solvent odor than typical industrial coatings and is easily buffed. To save money, it was embedded while wet with silica sand instead of quartz to create a non-skid surface.

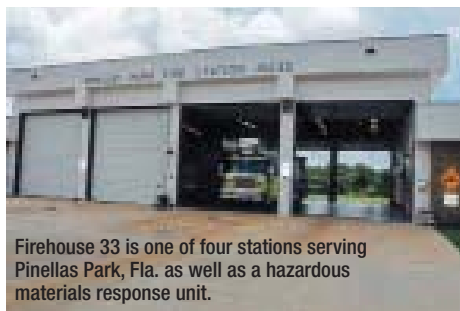
Admiral Blue wasn’t one of the company’s 30 standard colors, but something Increte made for another customer and had available. When shown a sample, the fire department loved it.

Proper prep as specified by the manufacturer includes cleaning the surface to remove oils, waxes, and contaminants, and then grinding the surface to create the manufacturer’s recommended CSP.

Substrate condition determines how EZ Out Floor Removal approaches a job. “If the concrete is hard, we use a larger array of tooling,” says Freiermuht. “If it’s soft, we can only use the grinders and scarifiers. The firehouse had a section that was softer, so we used a ride-on scraper with special carbide blades for removal and a planetary grinder for surface prep.”

The process took two days. Removing epoxy costs \$1 to \$2.50 per square foot, depending on how much must be removed.

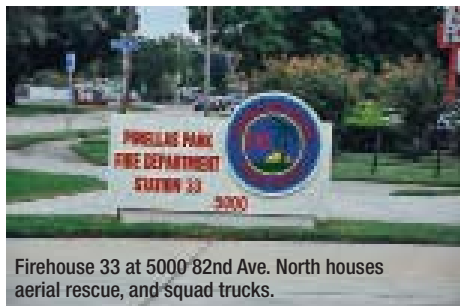
Another important step is checking for moisture, which can cause the epoxy to separate from the surface. An internal relative humidity test can determine if the concrete is dry enough to proceed. Primers can be used to hold back moisture or for a floor without the preferred profile.



Firehouse 33 is one of four stations serving Pinellas Park, Fla. as well as a hazardous materials response unit.

**Learn the right way
to apply epoxy by
attending a two-day
seminar at
Increte Systems
in Odessa, Fla.,
on Dec. 3 and 4.**

**To register,
call 800-752-4626.
For more, visit
www.increte.com.**



Firehouse 33 at 5000 82nd Ave. North houses aerial rescue, and squad trucks.

Application alert

Thomas learned about epoxy application from his brother-in-law. He launched Elite Epoxy 12 years ago and works with his daughter. Business is split equally between residential and commercial work. Installation on this job was \$5 per square foot.

“When the two parts of the epoxy (Part A: Resin and Part B: Cure) are mixed together in a prescribed ratio, a chemical reaction occurs,” says Increte Systems field specialist Thomas Anderson. “The material is only spreadable for 15 minutes, so contractors must work in smaller batches.”

Tools for mixing the epoxy are also clearly specified in product instructions. Mixing too fast traps air in the epoxy and causes air bubbles to form after application. Anderson says epoxy is best spread with a squeegee and back roll with ¼ nap roller. The top coat water-based urethane should also be applied with ¼ nap roller.

Skimping on product is another common mistake. “A typical epoxy is applied at 150 square feet per gallon,” says Anderson. “If applied too thin, it won’t hold silica sand.” Sand or quartz is typically broadcast into the epoxy to create a non-skid surface.

Spurred by growth in residential and commercial construction as well as a widening array of products, Freiermuht and Thomas could become even wealthier if surface contractors continue to ignore epoxy manufacturers’ instructions.

Color and design options have led to a growing number of applications beyond garages. The high-gloss, hard-wearing surface works well for restaurants, manufacturing plants, commercial buildings, warehouses, labs, and medical facilities. Custom colors are possible, as are additives that create granite, metallic, and quartz-look finishes.

Transparency Market Research estimates the concrete floor coatings market will grow 6.8% annually through 2020. **CS**

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