Polymer Concrete 100XT

PRODUCT DATA SHEET

SELECTION & SPECIFICATION DATA

Generic Type	Aggregate-Filled Novolac Epoxy Mortar
Description	A three-component, epoxy mortar that is well suited for the construction of floors or structures requiring resistance to mild acids, alkalis, and other corrosive chemicals. The material exhibits excellent bond strength to concrete and physical properties at least 3 times that of standard concrete. Suitable for use in areas exposed to heavy traffic and abuse. In addition to field installations, this product can be supplied in precast shapes. These include precast trench sections, sumps, pits, floor slabs, pump pads and other fabrications that are made to fit the exact dimensions of each specific project. Precast shapes are fabricated off site and delivered to job site, ready to drop into place. Construction joints in precast pieces are quickly and easily seamed on site. These quick turnaround precast systems minimize downtime.
Features	• Exceptional strength and durability • Excellent chemical resistance to a wide range of chemicals • High resistance to abrasion • Extremely low shrinkage
Typical Uses	• Truck unloading pads • Chemical process flooring • Pump pads and tank piers • Precast trenches and sumps
Primer	Self-priming after 28 days On green or damp concrete, use Vapor Stop after a minimum of 5 days. For damaged or deteriorated concrete, use Primer 67. Consult your Dudick representative.
Coverage Rate	Typical installations on high traffic floor slabs are placed at a nominal 1” (25.4 mm) thickness. For foot traffic or light duty areas, at least a 1/2” (12.7 mm) thickness generally is recommended. Each lift can be 2” to 4” in depth. A maximum of 8", using clean dry pea gravel, can be placed in each lift. For sloping or lifts exceeding 4”, contact your Dudick representative for best practices and recommendations. For minimum 1/2" topping: 9 ft^2 per bag of Polymer Concrete Aggregate with mixed resin @ 1/2" or 500 mils (12.7 mm) 57 ft^2 per 18 gal kit @ 1/2" or 500 mils (12.7 mm) For cast in place applications: 2.4 cu ft/kit or .14 cu ft/mixed gallon. (using 6 bags) As a flowable, precision grout for minimum 1/2": 9 ft^2 per bag of Polymer Concrete Aggregate with mixed resin @ 1/2" or 500 mils (12.7 mm) 38 ft^2 per 12 gal kit @ 1/2" or 500 mils (12.7 mm) (using 4 bags)

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SUBSTRATES & SURFACE PREPARATION

Concrete

Must be primed with Primer 67 series products.
Concrete must be prepared mechanically to remove surface laitance. Oils, grease or other contaminant must be removed prior to surface preparation. Concrete must be free of curing compounds and form release agents (per SSPC SP-13/NACE No.6). Surface texture should be similar to 40-60 grit sandpaper or the visual standard, CSP 5 or greater from the International Concrete Repair Institute (ICRI) with pea gravel exposed. The prepared surface shall have a minimum tensile strength of 250 PSI per ASTM D7234.

All concrete substrates must be checked for moisture and pass the ASTM D4263 Plastic Sheet Test prior to product application.

PERFORMANCE DATA (TYPICAL VALUES)

Test Method	Results
Bond Strength of concrete ASTM D-7234	Greater than cohesive strength of concrete
Coefficient of Expansion ASTM C-531	$12x10^{-6}$ in./in.°F
Compressive Strength ASTM C-579	16,500 PSI
Shrinkage	<0.05% (varies with amount of filler used)
Tensile Strength ASTM C-307	5,400 PSI

MIXING & THINNING

Thinning | Do not thin.

Pot Life | 30 minutes @ 70°F (21°C)

APPLICATION PROCEDURES

General

Forms may be constructed of wood or metal. They should be coated with a generous amount of automotive or floor paste wax to prevent adhesion to the polymer concrete after it has cured. Forms should be leak-proof since the polymer concrete will flow. If necessary, they can be sealed with putty or other non-hardening materials.
Forming, transportation and pouring techniques, and the tools used are similar to those employed for normal concrete work. Thus, the polymer concrete can be prepared and installed by skilled plant maintenance personnel or by local contractors.

IMPORTANT: With all epoxies, after priming and before each additional coat, examine the surface for amine blush (oily film). If present, remove by washing with warm water and detergent.

Mixing

Add the premeasured hardener to the liquid and mix well for at least three minutes. Pour the mixed liquid into a concrete mixer (6 cu. ft. or less), turn it on, and allow it to “wet out” the interior surface. Add the remaining aggregate (approximately 300 lbs.) to the catalyzed resin in the concrete mixer, and mix two to three minutes, achieving a uniform consistency.

First Batch: Remove approximately 5% (10 lbs.) of aggregate and discard it from the amount provided to avoid dry mixing for the first batch only.
As with normal concrete work, mixing and pouring should be a continuous process. When work is interrupted for any period of time (i.e. while moving to a new area, overnight, etc.) this "first batch" procedure must be followed to provide the “wetting out” of the mixer interior and prevent the formation of a dry batch. The “first batch” process should also be followed when beginning a new area to achieve the reduced viscosity required to “wet out” the concrete foundation and achieve self-priming action.

APPLICATION CONDITIONS

Condition	Material	Surface	Ambient	Humidity
Minimum	60°F (16°C)	50°F (10°C)	50°F (10°C)	0%
Maximum	80°F (27°C)	110°F (43°C)	110°F (43°C)	90%

Substrate temperature must be 5ºF (3ºC) above the dew point.

CURING SCHEDULE

Surface Temp.	Cure for Service
50°F (10°C)	7 Days
75°F (24°C)	5 Days

CLEANUP & SAFETY

Cleanup | Use S-10 Cleaning Solvent or Thinner 2 to clean tools and equipment.

Safety | Read and follow all caution statements on this product data sheet and on the SDS. Employ normal safety precautions. Keep container closed when not in use.

Ventilation | Ventilation must be used during and after application until the coating is cured. The ventilation system should be capable of preventing the solvent vapor concentration from reaching the lower explosion limit for the solvents used. User should test and monitor exposure levels to insure all personnel are below guidelines. Use MSHA/NIOSH approved air respirators as needed.

Caution | Fire and explosion hazards: This product contains less than 1% volatile components, however, vapors are heavier than air and can travel long distances, ignite and flash back. Eliminate all Ignitions sources. Keep away from sparks and open flames. All electrical equipment and installations should be made and grounded in accordance with the National Electric Code. In areas where explosion hazards exist, workers should be required to use non-ferrous tools and wear conductive and non-sparking shoes.

PACKAGING, HANDLING & STORAGE

Packaging |
0.4 Cu. Ft. unit:
Part A: .4 gallons in a 5 gal pail
Part B: .17 gallons in a gallon can
1 x 50 lbs. of aggregate
Yields approximately 3 mixed gallons
2.4 Cu. Ft. unit:
Part A: 2.5 gallons in a 5 gal pail
Part B: 1.2 gallons in a 3.5 gal pail
6 x 50 lbs. bags of aggregate Yields approximately 18 mixed gallons

Shelf Life |
Part A: 12 months
Part B: 12 months
Aggregate: 36 months

Storage | Warning: All Dudick products classified by DOT labels as either white, yellow or red labels must not be mixed or stored together as an explosive reaction may occur.
Store all products in a cool, dry area away from open flames, sparks or other hazards.

WARRANTY

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