

K A U F M A N

PRODUCT
INFORMATION

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SureFlow 042

Description

SureFlow 042 is a *heavy-duty* self-leveling cementitious wear topping. SureFlow 042 will form a high-strength abrasion and chemical resistant, self-leveling mortar. Because it is based on portland cement and latex polymers, and does not depend on gypsum, it may be used indoors or outdoors. SureFlow 042 flows out to produce a smooth resurfacing or leveling compound for structurally sound existing slabs. Each bag requires only the addition of water. Because the mortar is polymer modified and is self-curing, it is designed for applications from ¼" up to 2" thick in one pour, without the addition of aggregate. With aggregate addition it may be applied thicker.

Uses

SureFlow 042 is designed to resurface, level, and smooth all damaged, spalled or otherwise rough or uneven concrete surfaces. Use it above, on, or below grade-both inside and out. It is designed to be left exposed to traffic as a heavy-duty wearing surface. Use SureFlow 042 on industrial and warehouse floors, parking garages, driveways, utility areas, etc. Use it to finish rough screeded concrete slabs and to repair concrete that was rained on during placing. It can even be used as a high strength patch for bad spots on floors without the need to trowel.

Features

Pumpable
Self-leveling
No surface coating required
Outdoor or Indoor use
Freeze-thaw resistant
Abrasion resistant
High strength
Compatible with floor tile adhesives
Walk on surface in 3 hours
Available in gray, white and red

Coverage/Yield

(52# bag cementitious blend)
23 ft² @ ¼" thickness
11.5 ft² @ ½" thickness
5.75 ft² @ 1" thickness
3.75 ft² @ 1.5" thickness
2.80 ft² @ 2" thickness
1 unit = .47 cu. ft.

Chemical Resistance - @ 75°F

Reagent	Constant Immersion	Temporary Spillage
Acetic Acid 10%		X
Chlorides, Deicing Salts	X	
Citric Acid 10%	X	
Ethyl Alcohol		NR
Formic Acid		NR
Gasoline-Leaded		X
Glycolic Acid 20%		NR
Hydrochloric Acid 10%		NR
Hydraulic Fluid	X	
Isopropyl Alcohol		X
Lactic Acid		NR
MEK		NR
Nitric Acid 12%		X
Oil		X
Perchloroethylene		X
Petroleum		X
Skydrol		X
Sodium Hydroxid Conc.	X	
Sulfates		X
Sulfuric Acid 10%		X
Water		X
Xylene		X

Above recommendation based on structural integrity. Occasional discoloration was not considered reason for non-recommendation.

Packaging

52 lb. moisture resistant bag. 56 bags per pallet.

Physical Properties - @ 72°F, air cured

Compressive Strength ASTM C-109	4 hours	2200 psi
	1 day	3500 psi
	28 days	7500 psi

Flexural Strength ASTM C-256	1 day	700 psi
	7 days	1020 psi
	28 days	1450 psi

Application Properties - @ 72°F

Mixing Time	1-2 minutes
Meld Time	15 minutes max.
Initial Set	2 hours
Final Set	4 hours
Foot Traffic	3 hours
Floor Covering	12 hours
Forklift Traffic (4 Wheel)	1 day

Flammability, ASTM E-84-8ia

Flame Spread	0
Fuel Contribution	0

Directions

Always evaluate first to be sure performance and appearances are satisfactory for the intended purpose.

Surface Preparation

Substrate must have a density of over 100 lb per cubic foot and a compressive strength of at least 3000 psi.

Surfaces must be cleaned of all foreign matter according to ASTM D-4258. Remove all laitance and unsound concrete as per ASTM D-4259. Waterblasting followed by shotblasting is the preferred method of preparation. Surfaces to be repaired must be sound, strong, and dense. Wet surface with water for at least an hour before application, to create a saturated surface dry condition, unless an epoxy bonding agent is being used. Do not allow substrate to dry during this time. Remove surface water before application of SureFlow 042 with squeegee.

Use a tensile test method, as prescribed in ACI 503R, to determine if the surface has been properly prepared. The surface shall be uniformly roughened to a degree similar in appearance to coarse sandpaper with coarse aggregate showing

Priming

After forming up the area to receive the topping and preparing the surface properly:

Interior surfaces: Apply SureWeld, diluted 1:1 with clean, potable water with clean, soft push broom at a rate of approximately 400 ft² per gallon and allow to dry. Then apply SureWeld straight and allow to dry prior to application of SureFlow 042. For especially porous concrete, we suggest additional thinned down applications of SureWeld. Please call Kaufman Products for more detailed information.

Exterior: For better adhesion and exterior applications, prime the dry surface with SurePoxy HM applied at 80 ft²/gal. Apply SureFlow 042 while HM is still tacky. Apply primer evenly. Priming not only provides increased bond to the substrate, but provides air release from the substrate, to prevent rising and forming bubbles and pinholes on the surface.

Mixing

Mix the 52 lb. bag of powder with 1- 1 1/4 gal. of potable water for at least 2 minutes with 1/2" heavy-duty type drill with paddle blade or "Jiffy" mixer and 500 maximum rpm., until a smooth, lump-free mixture is obtained. Always add the powder to the water. Be sure to keep the blade well below the surface to avoid whipping air into the mix.

After mixing, let sit for several minutes, mix again, and use within 5-10 minutes. Do not ever add plasticizers, accelerators, retarders, or any other ingredients besides potable water unless advised by Kaufman Products in writing.

Application

After preparation and priming of the surface, pour a thin layer of SureFlow 042 on to the substrate and be sure it is worked into the substrate and in intimate contact with primer. Place the rest of the 042 on top of the above while it is still wet. Strike off to desired thickness. SureFlow 042 will self-meld during the first 15 minutes at 70°F. This material is self-curing. Apply at a minimum of 1/4" thick.

For applications thicker than 2", mix 042 with 1/8" – 1/4" graded clean, dry pea gravel. The addition of aggregate will diminish the workability of the product.

Precautions

Avoid air entrapment caused by excessive or improper mixing. Keep mixing blade below top of mix. Clean all tools and equipment with water immediately after using. Do not add excess water, as this will weaken the mortar. Store bags in a dry area and do not expose to direct sun. Do not apply when substrate or ambient temperatures are below 50°F or above 85°F. Temperatures below 50°F start to retard self-leveling properties. Applications of 2" or more require special procedures. Never re-temper.

Existing expansion joints should be maintained and reproduced in the SureFlow 042 topping. Use of a joint-forming tool or saw can be used. In either case, the new joint in SureFlow 042 must be exactly over the existing joint. Steel strips can also be inserted in the old joint and brought to elevation just below the top surface of SureFlow 042. Cracks in the substrate must be repaired properly before resurfacing with SureFlow 042; otherwise, they can reappear in the new SureFlow 042. Consult your KPI representative. *Read Safety Data Sheet before using.*

Technical Information

Test results were achieved under laboratory conditions. Statistical variations will occur based upon mixing methods, temperature & humidity, test methodology, site conditions, curing conditions, application methods, and equipment.

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