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ASTM D 638

Technical Bulletin

Flexfill 90 Joint Filler - K-560

Description:

Flexfill 90 has been specifically designed for filling sawcut control joints and contraction joints in concrete. Flexfill 90 is a two component, low viscosity liquid which cures to a semi-rigid, hard-rubber-like resiliency which supports joint edges to prevent edge deterioration and concrete spalling. Flexfill 90 joint filler bonds tightly to the sides of concrete joints, prevents contaminant and water penetration, and delivers high wear resistance and durability.

Product Advantages:

- VOC FREE, 100% SOLIDS
- FAST 3 HOUR SHAVE TIME
- IDEAL 1:1 MIX RATIO
- HIGH RESILIENCY
- BONDS TO MOST CONSTRUCTION MATERIALS
- EASILY COATED WITH COMPATIBLE TOPPINGS
- THIXOTROPIC JOINT FILLER CONSISTENCY- DESIGNED TO REDUCE JOINT FILLER "SINKERS" SAVING TIME AND MONEY

Handling Properties:

MIX RATIO BY VOLUME: 1:1

COLOR: light grey
WORKLIFE, AFTER MIXING RESIN & HARDENER: 8-10 min.@ 72°F
APPLICATION THICKNESS: 1/8" or greater
SHAVE TIME: 3 hours@ 72°F
CURING TIME: 16 hours@ 72°F

MIXED VISCOSITY@ 77°F: 8,000 cPs ASTM D 2196

Physical Properties:

TENSILE STRENGTH: 540 psi %TENSILE ELONGATION: 40%

HARDNESS (SHORE A): 92A ASTM D 2240

WHAT TYPE OF JOINT ARE YOU FILLING?

TYPE 1		TYPE 2	
USE FLEXFILL 90 HERE		DO <u>NOT</u> USE FLEXFILL 90 HERE	
Names*:	Control joint Contraction joint Non-working joint	Names*:	Expansion joint Isolation joint Working joint Significant movement Formed
Characteristics:	No movement or negligible movement Sawcut	Characteristics:	Significant movement Formed

^{*}Name distinctions are based on American Concrete Institute, ACI 504R-90

Joint Preparation:

Any loose concrete, previous joint compound or other materials must be removed to leave a clean, sound joint. In addition, all dirt, oil, sealers or chemical residue must also be removed for the full intended filler depth. To achieve optimum performance the joint must be sawcut with a diamond blade (if possible vacuum-equipped) in order to achieve a clean/dry surface for bonding. The blade should be run against each sidewall and extended the entire intended filler depth. After sawing, joint should be vacuumed to remove all dust/debris ("raking" debris out of joint is an unacceptable joint cleaning procedure). To prevent filler run-through you may "choke-off' the bottom of the joint by applying a ¼" deep (maximum) layer of dry, silica sand (30-60 mesh). Do not use a backer rod in saw cut contraction /control joints less than 2" deep. For those joints greater than 2" and construction joints (through-slab) you may use silica sand or a backer rod only if it is held down at least 2" from the top of joint.

Mixing:

Mix the Resin (Part A) and the Hardener (Part B) for 2-3 minutes with a slow speed (500 rpm or less) drill and Jiffy Mixer (mixing paddle). Pour the material into the joint. If a flush joint is desired slightly overfill the joint and let cure, then use a floor scraper or knife-edge to cut the material flush with the concrete. If you need less than a full kit, do not "eyeball" the mixture. Accurately measure the resin and hardener following the mixing ratios under "Handling Properties".

Flexfill 90 has a work life of 8-10 minutes at 72 °F (22 °C), and can be applied as thickly as needed in one coat. If it is necessary to bond Flexfill 90 to itself, abrade the old material before pouring new material.

Flexfill 90, before it has fully cured, may be removed from tools with Copps Enviro Kieen solvent or isopropyl alcohol.

Application:

Flexfill 90 should not be installed on "green" concrete. A minimum 30-day concrete cure is required. 90-120 days is ideal. The ideal time to install is when the area is at its long term, stable temperature. Do not rapidly change the temperature of the air/concrete before installing Flexfill 90. Keep the temperature constant, same as long term temperature. Floor temperature must be between 60-90 °F (15.5- 32.2°C) during application for complete cure. Temperatures below 50 °F (10 °C) will inhibit the cure resulting in a sticky surface. The liquid material should be stored at 60-90 °F prior to installation.

Additional Info:

Important product characteristics include tensile strength, percentage tensile elongation and Shore A hardness.

- These characteristics relate to Flexfill 90 after it has completely cured.
- In simple terms:

<u>Tensile strength</u> relates to the capacity of this material to hold together when stretched.

Percentage tensile elongation is the length the material can be stretched before failure.

<u>Shore A hardness</u> relates to a standard for "hardness -softness" so that different materials may be measured against the same reference point.

Flexfill 90 has been designed to function as a joint filler. It must stretch or give to allow for expansion or contraction within the concrete slab. At the same time it must deliver adequate support to joint shoulders receiving the force of hard wheel traffic carrying heavy loads. It must bond to joint sides to provide a seal to prevent contaminant entry and its surface texture must deliver sufficient wear capacity. Extensive tests and use of Flexfill 90 demonstrate these capacities.

Packaging:

K-560--20 (2 gallon) Premeasured Kit = 439 in³ K-560-100 (10 gallon) Premeasured Kit= 2217 in³ Bulk 55 Gallon Drums Available

SAFETY PRECAUTIONS

Flexfill 90 is an epoxy resin system. Please refer to safety data sheets before using this product. DO NOT WELD ON, BURN OR TORCH ON OR NEAR ANY EPOXY MATERIAL.

WARRANTY AND DISCLAIMER

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TB# 4560 (08/28//17)