



AV-590 JOINT FILLER POLYUREA™

JOINT FILLER

DESCRIPTION

AV-590 Joint Filler Polyurea has been specifically designed for filling sawcut control joints and contraction joints in concrete. **AV-590** is a two component, 100% solids, VOC free, rapid setting, polyurea system that cures to a semi-rigid resiliency which supports joint edges to prevent edge deterioration and concrete spalling. **AV-590** bonds tightly to the sides of concrete joints, prevents contaminant and water penetration and delivers high wear resistance and durability.

APPLICATION

- Control joints and contraction joints in concrete
- Use only on Type 1 joints
- Use only on fully cured concrete (minimum 30 day old; ideally 60-90 day old concrete).

FEATURES AND BENEFITS

- Non-shrink
- User friendly mix ratio 1:1 by volume
- Fast flush shave time in as little as 15 minutes
- Colorfast, resisting fading and discoloration
- Moisture tolerant
- Excellent substrate adhesion

FILLING TECHNIQUES

- Gravity feed
- Manual or power dispensing equipment

PACKAGING

10-Gallon Kit	
Resin	5.0 gallons
Hardener	5.0 gallons

SHIPPING

- Motor Class 55
- Resin: UN3082, Environmentally Hazardous Substance, Liquid, N.O.S. (diethylmethylbenzenediamine)
- Hardener: Not Regulated
- Air freight available

CLEANING PRODUCTS

- **AV-544** Epoxy Tool Cleaner™ (Proprietary Blend) – removes uncured and cured resin from equipment
- **AV-208** Technical Grade Acetone™ (CAS# 67-64-1) – removes uncured resin from equipment
- **AV-222** Cleaner™ (Proprietary Blend) – removes cured resin from equipment

STORAGE

Store between 70°F – 80°F (21°C – 27°C) in a dry atmosphere. Keep containers closed.

SAFETY

Always use OSHA-approved personal protective equipment (PPE). Refer to the SDS for complete safety precautions. The SDS is available by request or via download at avantigrout.com.

NOTICE

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PROPERTIES*

AV-590 UNCURED Resin and Hardener

Appearance:	Grey
Mixed Viscosity:	2,000 cP @ 68°F (20°C)
Flash Point:	Resin: >302°F (>150°C) Hardener: >392°F (>200 °C) CC
Application Thickness:	1/8" or greater
Gel Time	30 seconds @ 72°F
Shave Time	15 minutes – 24 hours @ 72°F
Cure Time	1 hour @ 72°F

AV-590 CURED

Tensile Strength:	2,758-3,447 KPa (400-500 psi) – ASTM D638
Elongation @ break:	120-150% - ASTM D638
Hardness Shore A	78-82– ASTM D2240

*Laboratory Results

AV-590 Joint Filler Polyurea is for Type 1 Joints ONLY

Name:	Control Joint
(ACI 504R-90)	Contraction Joint
	Non-working Joint
Characteristics:	No or negligible movement
	Sawcut

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, the joint should be vacuumed to remove all dust/debris ("raking" debris out of joint is an unacceptable joint cleaning procedure).

MIXING PROCEDURE

The Part A polyol should be pre-mixed using a Jiffy Mixer for 1-2 minutes to evenly disperse the colorant throughout the system. A ½" diameter, 30-40 element static mixer is recommended for proper mixing of the **AV-590** using power dispensing equipment. If a flush joint is desired slightly overfill the joint, allow curing and then using a floor scraper or knife-edge cut the material flush with the concrete.

AV-590 has a work life of <30 seconds at 72°F (22°C) and can be applied as thick as needed in one pass. If it is necessary to bond **AV-590** to itself, abrade the old material before applying new material.

AV-590 Joint Filler Polyurea may be removed from tools with Avanti's **AV-544** Epoxy Tool Cleaner or warm soapy water before they are fully cured.

APPLICATION TEMPERATURE

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 **AV-590**. Keep the temperature constant and near the long term temperature. Floor temperature must be between 60-80°F (15.6-26.6°C) during application for complete cure. Colder temperatures may inhibit the cure resulting in a sticky surface. The liquid material should be stored at 70-80°F (21–27°C) prior to installation.