



**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 (Part A) 42 lbs. in 5.0-gallon container
- Hardener (Part B) 42 lbs. 5.0-gallon container

**SHIPPING**

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

**CLEANING PRODUCTS**

- **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](http://avantigrout.com).

**NOTICE**

The data, information and statements contained herein are believed to be reliable, but are not construed as a warranty or representation for which Avanti International assumes any legal responsibility. Since field conditions vary widely, users must undertake sufficient verification and testing to determine the suitability of any product or process mentioned in this or any other written material from Avanti for their own particular use. **NO WARRANTY OF SUITABILITY OR FITNESS FOR A PARTICULAR PURPOSE IS MADE.** In no case shall Avanti International be liable for consequential, special, or indirect damages resulting from the use or handling of this product.

**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  
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 .50" 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-208 Technical Grade Acetone™ 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.