

# URE-FIL™ 17 & 19

## Aluminum Fillers For Smooth-On® Resins



[www.smooth-on.com](http://www.smooth-on.com)

### PRODUCT OVERVIEW

URE-FIL™ 17 & 19 pure aluminum pellet fillers can be used with Smooth-On® liquid epoxy and urethane resins to improve thermal conductivity, dimensional stability, reduce shrinkage in large mass castings, etc. These fillers can also be used to add evenly distributed weight to metal cold-castings and to create artistic casting effects.

URE-FIL™ 17 are small grain aluminum pellets (400 micron). Smaller grain pellets will settle into areas of detail better, reducing voids between particles.

URE-FIL™ 19 are large grain aluminum pellets (1200 micron). Larger grain pellets will not fill areas of high detail as well as the smaller grain pellets but both pellet sizes can be used together for more uniform filling.

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### URE-FIL™ 17 & 19 ALUMINUM FILLER DETAIL

- URE-FIL™ 17 & 19 can be added to aluminum-filled urethane and epoxy resins for **vacuum forming applications** to **increase thermal conductivity** (even heat distribution) when casting parts for applications with higher temperature requirements.
- URE-FIL™ 17 & 19 will add evenly distributed weight to metal cold-castings to **simulate the feel of solid metal reproductions at a reduced expense** compared to metal foundry castings.
- URE-FIL™ 17 & 19 will lower exothermic (heat) temperatures during cure cycle (see chart on reverse side), which reduces the shrinkage rate resulting in improved dimensional stability in large mass castings.
- URE-FIL™ 17 & 19 can be added to **liquid urethane and epoxy resins** to create metallic visual effects when used with clear and colored liquid plastics.
- When fully cured, resin filled with URE-FIL™ 17 & 19 can be cut, drilled, turned and machine tooled.
- URE-FIL™ 17 & 19 should not be used as fillers in RTV rubber products.

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### PROCESSING RECOMMENDATIONS...

URE-FIL™ 17 & 19 pellets are recommended for use with Smooth-On® liquid epoxy and urethane resins. Pellets need to be thoroughly dispersed into the resin so that they are completely encapsulated. In order to reduce splashing during the mixing process: 1. Dispense pellets into a mixing container, 2. Dispense Parts A + B of resin and mix together thoroughly in a separate container, 3. Pour resin mixture onto dispensed pellets and stir together thoroughly.

**Note:** Pellets are sharp and should not be handled by bare hands. Exposed pellets can damage/abrade mold surfaces. Therefore, to maximize mold life, pour or brush a gel/face coat layer onto mold surface prior to casting. Allow gel/face coat layer partially cure before backfilling with resin/pellet mixture.

#### **Mix Ratio for Using with Unfilled Resins (by Weight or by Volume):**

1 Part Mixed Resin (A + B) + 2 Parts Filler

#### **Mix Ratio for Using with Aluminum Filled Resins (by Weight):**

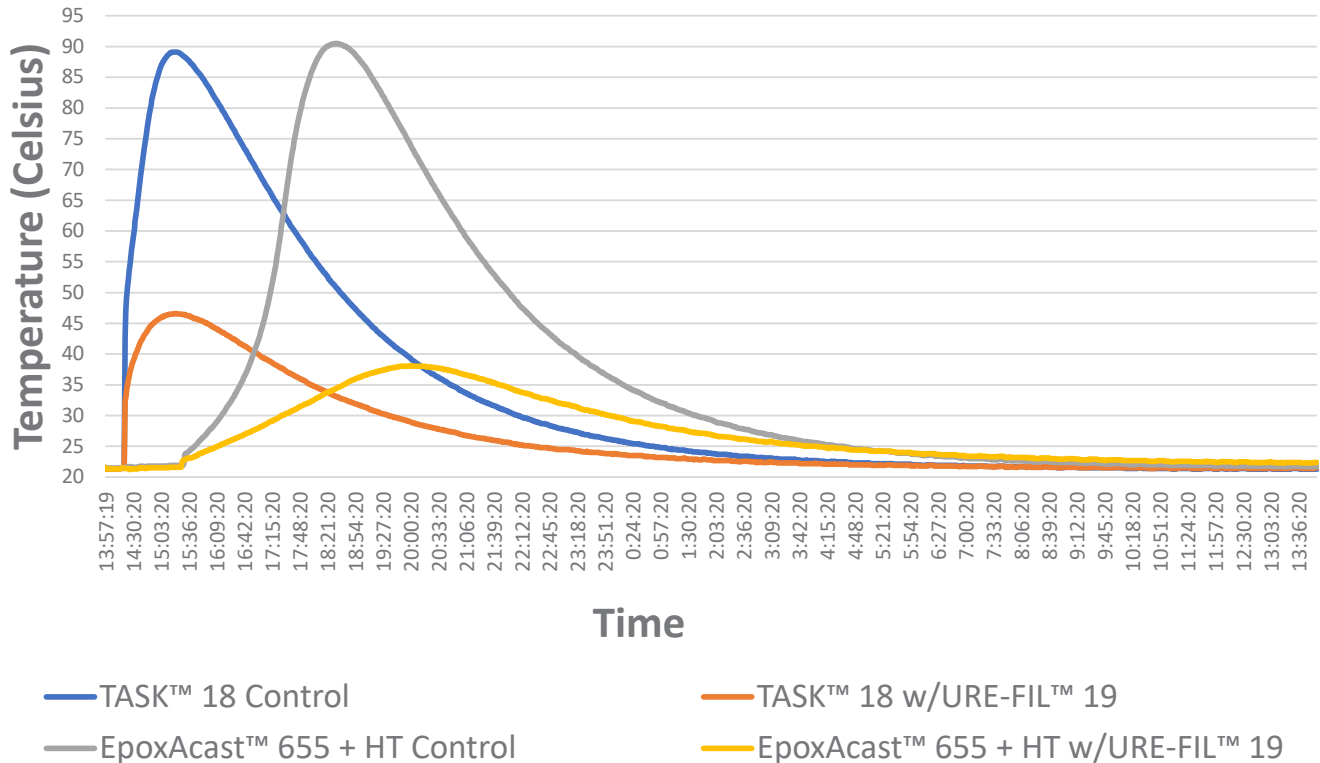
1 Part Mixed Resin (A + B) + 1 Part Filler

## MEASUREMENT OF EXOTHERMIC HEAT OVER 24 HOURS

Average Mass/Volume of URE-FIL™ 19 Filled Castings: 14.52 lbs (6.6 kg) / 1 Gallon (3.8 L)

Average Mass/Volume of Unfilled Castings: 17.6 lbs (8 kg) / 1 Gallon (3.8 L)

Thickness of All Castings: 6 in (15.25 cm)



The above chart shows the maximum exotherm of castings with and without URE-FIL™ 19 filler. URE-FIL™ 19 filled castings resulted in significantly lower exotherm (in proportion to the amount of filler used).

### Safety First!

The material safety data sheet (MSDS) for this or any Smooth-On product should be read before using and is available on request. All Smooth-On products are safe to use if directions are read and followed carefully.

Avoid contact with skin and eyes. Avoid dust formation. Do not breathe dust. Provide appropriate exhaust ventilation at machinery and at places where dust can be generated. Do not create a dust cloud by using a brush or compressed air. Keep containers tightly closed in a dry, cool and well-ventilated place. Do not store together with volatile chemicals as they may be absorbed onto product.

Approved respirator may be necessary if local exhaust ventilation is not adequate. Wear eye/face protection. Wear suitable protective clothing. No special protective equipment required. Handle in accordance with good industrial hygiene and safety practice.

#### Keep Out Of Reach Of Children.

**IMPORTANT:** The information contained in this bulletin is considered accurate. However, no warranty is expressed or implied regarding the accuracy of the data, the results to be obtained from the use thereof, or that any such use will not infringe upon a patent. User shall determine the suitability of the product for the intended application and assume all risk and liability whatsoever in connection therewith.



Call Us Anytime With Questions About Your Application

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The new [www.smooth-on.com](http://www.smooth-on.com) is loaded with information about mold making, casting and more.