

# STAR Technology

FORMULATING • INNOVATIVE • SOLUTIONS

## 533-01

### Epoxy Casting System

#### DESCRIPTION

STAR Technology 533-01 is an aluminum filled, room temperature curing casting system with a slow hardener. Slow hardeners, like 533-01 may be used for pours up to 4 inches in depth against a non-conductive surface or 6 inches in depth against a conductive surface. The addition of bulk fillers allows pours of greater depth. 533-01 also provides excellent reproduction of detail. When determining the maximum depth of a pour, factors to appraise include the configuration of the cast and the thermal conductance of the master. Typical applications for 533-01 include prototypes, machinable castings, hydro form dies, master models and patterns.

#### BENEFITS

|   |                            |
|---|----------------------------|
| May be cast in thickness up to 4 inches | Excellent machinability    |
| Accurate reproduction of detail         | Good dimensional stability |
| Low shrinkage                           |                            |

#### TYPICAL PROPERTIES (cured 7 days at 75°F)

|                                      |                 | <u>TEST METHOD</u> | <u>VALUE</u> |
|--------------------------------------|-----------------|--------------------|--------------|
| Mix Ratio, Resin to Hardener         | Parts by Weight |                    | 100:12       |
|                                      | Parts by Volume |                    | 100:19       |
| Mixed Viscosity (centipoise)         |                 | ASTM D2393         | 6,100        |
| Density (lbs./cu.ft.)<br>(lbs./gal.) |                 | ASTM D1475         | 89.16        |
|                                      |                 |                    | 11.92        |
| Pot Life at 75°F (hours)             |                 | ASTM 2471          | 3.3          |
| Cure Time at 75°F (days)             |                 |                    | 7            |
| Color                                |                 |                    | Grey         |
| Shore Hardness (D)                   |                 | ASTM D2240         | 87           |
| Tensile Strength (psi)               |                 | ASTM D638          | 3,300        |
| Flexural Strength (psi)              |                 | ASTM D790          | 6,900        |
| Flexural Modulus (psi)               |                 | ASTM D790          | 476,000      |
| Compressive Ultimate Strength (psi)  |                 | ASTM D695          | 10,500       |
| Maximum Service Temperature (°F)     |                 |                    | 180          |
| Machinability                        |                 |                    | Excellent    |

#### APPLICATION PROCEDURES

Carefully weigh out appropriate amounts of resin and hardener into a clean mixing container and thoroughly mix until all streaks and striations are gone. Scrape the sides and bottom frequently to ensure complete mixing. Pour the mixed material in the thinnest stream possible into a single spot of the mold cavity or in the sprue holes as desired. Allow the mixture to flow slowly over the mold surface or into the sprue hole to help eliminate air entrapment.

**CAUTION:** Unmixed compound from the sides or bottom of the container can cause soft spots or uncured areas in the completed casting. To prevent this, transfer the entire mixed contents to a second clean container and remix for a short time before using.

To the best of our knowledge, the information contained herein is accurate. However, STAR TECHNOLOGY, Inc., does not assume any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of the suitability of any material is the sole responsibility of the user. The information contained herein is considered typical properties and is not intended to be used as specifications for our products. This information is offered solely to assist purchaser in selecting the appropriate products for purchaser's own testing. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein and in the material safety data sheet, we cannot guarantee that these are the only hazards that exist. Repeated and prolonged exposure to epoxy resins can cause sensitization or other allergic responses.



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#### PRECAUTIONS

For industrial use only. Keep away from children.

Refer to the Safety Data Sheets (SDS forms) pertaining to this product before using.

Avoid contact with skin or eyes. In the event of an eye splash or contact, immediately flush with cold water for 15 minutes and contact a physician. If skin contact occurs, wash with mild soap and water. The wearing of safety glasses with side shields and impervious gloves is recommended.

#### RESIN WARNING STATEMENT

Warning! Causes irritation. May cause allergic skin reaction. Avoid all contact with skin, eyes, and clothing. Wash thoroughly after handling.

#### HARDENER WARNING STATEMENT

Danger! Corrosive. Causes burns to eye and skin. May cause allergic skin and/or respiratory reaction or sensitization. Do not get in eyes, on skin or clothing. Keep container closed. Use with adequate ventilation. Wash thoroughly after handling.

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