

STAR Technology

FORMULATING • INNOVATIVE • SOLUTIONS

603-03

Epoxy Surface Coat System

DESCRIPTION

STAR Technology 603-03 is a gray, heat resistant, aluminum filled surface coat. Its excellent thixotropy allows for non-sag on a vertical surface. 603-03 provides excellent reproductions of surface detail. It requires a heat cure for applications above 150°F. When cured according to the cure schedule, 603-03 can be used continuously at 275°F and intermittently up to 325°F. It is ideal for use with Star Technology's high temperature laminating systems, such as 610-01. When choosing any surface coat, consideration should be given to tool size, configuration, build method, and final use. Generally, high temperature tools dictate the thinnest surface coat practical for the application. Typical applications for 603-03 include high temperature tooling aids, bonding fixtures, RIM molds, foundry patterns, core boxes, and vacuum form molds.

BENEFITS

Excellent intermediate high temperature properties
Excellent dimensional stability

No sag on a vertical surface
Accurate reproduction of detail

TYPICAL PROPERTIES

Mix Ratio:

By Weight

By Volume

Mixed Viscosity (cps):

Density (lbs/cu in):

(lbs/gal):

Pot Life (minutes):

Color:

Cure Schedule:

24 hours @ 75 °F + 2 hours @ 150°F + 1 hour @ 200 °F + 1 hour @ 250°F + 1 hour @ 300 °F + 2 hours @ 350 °F

Shore Hardness (D):

Tensile Strength (psi):

Flexural Strength (psi):

Flexural Modulus (psi):

Compressive Ultimate Strength (psi):

Glass Transition Temperature (°F):

Maximum Service Temperature (°F):

Shrinkage (%):

Coefficient of exp. (in/in/'c)

TEST METHOD

VALUE

100:13

100:17

ASTM 2393

56,000

ASTM 1475

.0528

12.19

ASTM 2471

50 to 60

Grey

ASTM 2240

86

ASTM D638

4,089

ASTM D790

10980

ASTM D790

136,929

ASTM D695

11,300

250

325

Nil

2.1E-5

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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 insure complete mixing. Do not use a paint shaker.

NOTE: To obtain optimum service temperature follow the suggested curing schedule with thermocouple monitoring. Thermocouple monitoring is recommended on all post cured tools. High temperature tools must be post cured prior to use. High temperature tools should be cured 50°F beyond anticipated use temperature.

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

Additional Cure Schedule - If thermocouple monitoring equipment is not available then a longer step cure is a better choice, e.g.

2 hours @ 150°F + 2 hours @ 200°F + 2 hours @ 250°F + 2 hours @ 300°F + 2 hours @ 350°F

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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