

# Devcon Aluminum Liquid (F-2)

Epoxy; Epoxide

Devcon

## Message:

Aluminum-filled, pourable epoxy for making molds, patterns, and holding fixtures that can be machined, drilled, or tapped.

Intended Use:

Mold-making, patterns, holding fixtures, leveling equipment

Product features:

Machinable to metallic finish

Low viscosity, self-leveling liquid

Castable

Low shrinkage

| General Information          |                 |                    |             |
|------------------------------|-----------------|--------------------|-------------|
| Filler / Reinforcement       | Aluminum filler |                    |             |
| Features                     | Low viscosity   |                    |             |
|                              | Machinable      |                    |             |
|                              | Low shrinkage   |                    |             |
| Uses                         | Template        |                    |             |
|                              | Mold/Mold/Tool  |                    |             |
| Appearance                   | Aluminum white  |                    |             |
| Forms                        | Liquid          |                    |             |
| Processing Method            | Casting         |                    |             |
| Physical                     | Nominal Value   | Unit               | Test Method |
| Specific Gravity             | 1.58            | g/cm <sup>3</sup>  |             |
| Specific Volume              | 0.632           | cm <sup>3</sup> /g |             |
| Solid content-by Volume      | 100             | %                  |             |
| Temperature Resistance       |                 |                    |             |
| Dry                          | 121             | °C                 |             |
| Wet                          | 49              | °C                 |             |
| Tensile Shear Adhesion       | 18.6            | MPa                | ASTM D1002  |
| Molding Shrinkage - Flow     | 0.090           | %                  | ASTM D2566  |
| Hardness                     | Nominal Value   | Unit               | Test Method |
| Durometer Hardness (Shore D) | 85              |                    | ASTM D2240  |
| Mechanical                   | Nominal Value   | Unit               | Test Method |
| Tensile Modulus              | 5170            | MPa                | ASTM D638   |
| Flexural Strength            | 49.5            | MPa                | ASTM D790   |
| Compressive Strength         | 67.7            | MPa                | ASTM D695   |
| Thermal                      | Nominal Value   | Unit               | Test Method |
| CLTE - Flow                  | 9.0E-5          | cm/cm/°C           | ASTM D696   |

|                      |               |       |             |
|----------------------|---------------|-------|-------------|
| Thermal Conductivity | 0.66          | W/m/K | ASTM C177   |
| Electrical           | Nominal Value | Unit  | Test Method |
| Dielectric Strength  | 3.9           | kV/mm | ASTM D149   |
| Dielectric Constant  | 8.60          |       | ASTM D150   |
| Thermoset            | Nominal Value | Unit  | Test Method |

#### Thermoset Components

Mixing ratio by weight: 9.0

#### Component a

Mixing ratio by capacity: 5.0

Mixing ratio by weight: 1.0

#### Component B

Mixing ratio by capacity: 1.0

|                         |               |     |  |
|-------------------------|---------------|-----|--|
| Pot Life (24°C)         | 75            | min |  |
| Thermoset Mix Viscosity | 15000 - 25000 | cP  |  |

| Additional Information | Nominal Value | Unit | Test Method |
|------------------------|---------------|------|-------------|
|------------------------|---------------|------|-------------|

Cured 7 days @ 75°F

| Uncured Properties | Nominal Value | Unit | Test Method |
|--------------------|---------------|------|-------------|
|--------------------|---------------|------|-------------|

|             |    |    |  |
|-------------|----|----|--|
| Curing Time | 16 | hr |  |
|-------------|----|----|--|

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