



TECHNICAL DATA SHEET – ALUMINIUM LIQUID (F-2)

Revised: 01/2017

ORDERING INFORMATION

STOCK NO.: 10711

PACKAGE SIZE: 500g

DESCRIPTION

Aluminium filled epoxy liquid ideal for making moulds, patterns and fixings.

RECOMMENDED APPLICATIONS

- Used for making fine detailed duplicating masters
- Mould making for casting lightweight moulds
- Pattern making
- Making panographs
- Repairs to punch and die assemblies

PRODUCT DATA

TYPICAL PHYSICAL PROPERTIES

COLOUR	Aluminium
MIX RATIO BY VOLUME	5:1
MIX RATIO BY WEIGHT	9:1
% SOLIDS BY VOLUME	100
POT LIFE AT 25°C/ MINS	75
SPECIFIC VOLUME CC/KG	631
CURED SHRINKAGE CM/CM	0.0009
SPECIFIC GRAVITY	1.58
TEMPERATURE RESISTANCE / OC	Wet 48°C Dry 121°C
COVERAGE	1262cm ² /Kg @ 5mm
CURED HARDNESS / SHORE D	85 D
DIELECTRIC STRENGTH KV/MM	4
ADHESIVE TENSILE SHEAR / MPA	18.6
COMPRESSIVE STRENGTH MPA	68
COEFFICIENT OF THERMAL EXPANSION X10 ⁻⁶ CM/CM/°C	90
THICKNESS PER COAT / MM	As Required
FUNCTIONAL CURE TIME /HOURS	16
RECOAT TIME /HOURS	4
MIXED VISCOSITY /CPS (WHERE APPLICABLE)	15-25000

ALUMINIUM LIQUID (F-2)

ALUMINIUM FILLED EPOXY LIQUID

**CHEMICAL RESISTANCE - 7 DAYS ROOM TEMPERATURE CURE (30 DAYS)
TESTING CARRIED OUT 30 DAYS IMMERSION AT 21°C**

	POOR	FAIR	VERY GOOD	EXCELLENT
AMMONIA		•		
CUTTING OIL			•	
ISOPROPANOL ALCOHOL	•			
GASOLINE (UNLEADED)			•	
HYDROCHLORIC ACID 10%			•	
METHYL ETHYL KETONE (MEK)	•			
METHYLENE CHLORIDE	•			
SODIUM HYPOCHLORITE 5% (BLEACH)		•		
SODIUM HYDROXIDE 10%		•		
SULPHURIC ACID 10%			•	
XYLENE		•		

Excellent = +/- 1% weight change, Very Good = +/- 1-10% weight change, Fair = +/- 10-20% weight change, Poor = > 20% weight change

APPLICATION INFORMATION
CURE

A 12.7mm thick section of Devcon Epoxy will harden @ 24°C in 4 hours. The material will be fully cured in 16 hours.

SURFACE PREPARATION

Proper surface preparation is essential to a successful application. The following procedures should be considered:

- All surfaces must be dry, clean and rough.
- If surface is oily or greasy, use Devcon Fast Cleaner 2000 Spray/Cleaner Blend 300 to degrease the surface.
- Remove all paint, rust and grime from the surface by abrasive blasting or other mechanical techniques.
- Aluminium repairs: Oxidation of aluminium surfaces will reduce the adhesion of an epoxy to a surface. This film must be removed before repairing the surface, by mechanical means such as grit-blasting or chemical means.
- Provide a “profile” on the metal surface by roughening the surface. This should be done ideally by grit blasting (8-40 mesh grit), or by grinding with a coarse wheel or abrasive disc pad. An abrasive disc may be used provided white metal is revealed. Do not ‘feather edge’ epoxy materials. Epoxy material must be ‘locked in’ by defined edges and a good 3 - 5 mil profile.
- Metal that has been handling sea water or other salt solutions should be grit blasted and high pressure water blasted and left overnight to allow any salts in the metal to ‘sweat’ to the surface. Repeat blasting may be required to ‘sweat out’ all the soluble salts. A test for chloride contamination should be performed prior to any epoxy application. The maximum soluble salts left on the substrate should be no more than 40 p.p.m. (parts per million).
- Chemical cleaning with Devcon Cleaner Blend 300 should follow all abrasive preparation. This will help to remove all traces of sandblasting, grit, oil, grease, dust or other foreign substances.
- Under cold working conditions, heating the repair area to 38°C - 43°C immediately before applying any of Devcon’s Metal-filled Epoxies is recommended. This procedure dries off any moisture, contamination or solvents and assists the epoxy in achieving maximum adhesion to the substrate.

- Always try to make the repair as soon as possible after cleaning the substrate, to avoid oxidation or flash rusting. If this is not practical, a general application of FL-10 Primer will keep metal surfaces from flash rusting.

MIXING

Add hardener to resin. Mix thoroughly with spatula or similar tool until a uniform, streak-free consistency is obtained, should take about 4 minutes. Be sure to mix material from bottom and sides of container.

APPLICATION

Brush thin coat on prepared surface then pour material in a fine stream to avoid bubbles. Do not pour liquid epoxy in sections thicker than 25.4mm at a time. Allow applied epoxy to cool at room temperature before pouring additional thickness.

SHELF LIFE & STORAGE

A shelf life of 3 years from date of manufacture can be expected when stored at room temperature (22°C) in their original containers.

PRECAUTION

For complete safety and handling information, please refer to Material Safety Data Sheets prior to using this product.

WARRANTY

ITW Engineered Polymers will replace any material found to be defective. As the storage, handling and application of this material is beyond our control we can accept no liability for the results obtained.

DISCLAIMER

All information on this data sheet is based on laboratory testing and is not intended for design purposes. ITW Engineered Polymers makes no representations or warranties of any kind concerning this data.

For product information visit www.devconeurope.com alternatively for technical assistance please call +353 61 771 500.