



# TECHNICAL DATA SHEET



**Noelle Industries, Inc.**  
Adhesives • Coatings • Conductives • Encapsulants

## NOELLE 804-18

### Fast One Component Structural Epoxy Adhesive

#### Description:

Noelle 804-18 is a one component, fast, aluminum filled, induction curable, high temperature, non sag, structural epoxy adhesive. Noelle 804-18 was specifically engineered to meet the rigorous requirements of bonding materials to metal housings. Even the most difficult zinc phosphate surfaces have been successfully bonded using this adhesive. Noelle 804-18 can also be used as a structural adhesive for bonding dissimilar substrates.

#### Advantages:

Noelle 804-18 offers excellent thermal stability over a broad temperature spectrum. High bond strength in the 120-180°C range; It features excellent solvent, water, and salt resistance; flexibility, as well as impact resistance; and thermal conductivity are some of the unique attributes of this adhesive. Noelle 804-18-2 can be cured in less than 10 seconds using induction or microwave heating processes.

#### Physical Properties:

Color: Metallic gray  
Pounds per Gallon 11.9  
Specific Gravity 1.43

#### Shelf Life: (Sealed container)

Three Months @ 25°C  
Six Months @ -10°C  
One Year @ -40°C

#### Cure Schedules:

(Longer times or higher temperatures will further enhance end properties.)

Cure Temp:	120°C	150°C	160°C
Cure Time:	30 min.	10 min.	5min.

#### Cured Properties:

Shore Hardness:	84D @ 25°C
	75D @ 121 °C
Lap Shear, Al/Al ASTM D-1002:	3150 psi.
304SS/304SS ASTM D-1002:	3400 psi
Tensile Strength	>6900 psi
Coefficient of Linear Thermal Expansion (in/in°C):	6.2 x 10 <sup>-5</sup>
Glass Transition Temperature (t <sub>g</sub> ):	>120°C
Sag Resistance mils(TP 102)	Initial @ 160 °C 370 – 420
	After 4 days @ 40 °C 440
Press Flow at 42.5 psi @ 25°C (TP 101)	70 – 90 secs.
	After 4 days @ 40 °C 80 – 100 secs.
Water Absorption	<0.5 %

All values reported above are typical values, and are reported as a means of reference. Individual testing should be done to determine actual results, tested at specific conditions.

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