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

TECHNICAL DATA SHEET

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. It features higher bond strength in the 120-180°C range. It also 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 Temperature:	120°C	150°C	160°C
Cure Time (minutes):	30	10	5

Cured Properties:

Shore Hardness @ 25°C:	84D
@ 121°C	75D
Lap Shear:	
Al/Al ASTM D-1002 (psi):	3150
304SS/304SS ASTM D-1002(psi):	3400
Tensile Strength (psi):	>6900
Coefficient of Linear Thermal Expansion (inch/inch°C):	6.2×10^{-5}
Glass Transition Temperature (t_g):	>120°C
Sag Resistance mils (TP 102)	
Initial @ 160°C:	370 – 420
After 4 days @ 40°C:	440
Press Flow at 42.5 psi	
Initial @ 25°C (TP 101) (seconds):	70 – 90
After 4 days @ 40°C (seconds):	80 – 100
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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