

## Inductive Curing One Component Epoxy Resin

### ***DENATITE      XNR3628LV***

#### Description

XNR3628LV is a one component, heat curable epoxy adhesive. It forms strong bonds to metals and ceramics. XNR3628LV has exceptional thermal stability and resistance to water, humidity and solvents. This product offers high heat resistance and cures in less than 30 seconds via induction heating.

#### Typical Uses:

- \* Permanent magnet motors and loudspeaker assembly
- \* Air conditioning joint tubes and compressors
- \* High temperature structural bonding
- \* Filter end cap and side seam assembly

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The information given in this publication is based on the present state of our knowledge but any conclusion and recommendations are made without liability on our part.

Buyers and users should make their own assessment of our products under their own conditions and for their own requirements

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## - Typical Properties

Item		Test Method	Value
Aspect		Visual	Gray paste
Viscosity ( 25°C )		Br.HBT #T-A/5rpm	130 Pa.s
Specific gravity ( 25°C )		Substitution method	1.43
Gelation time	(120°C)	Gel timer	480 s
	(150°C)	Hot plate	90 s
	(180°C)	Hot plate	20 s
Storage life ( 15°C )		-	6 months
Cure schedule		120°C / 60min	
Once part reaches temperature		150°C / 20 min	
		180°C / 5min	
(Induction)		200°C / 60sec	

## - Typical Cured Properties

### 1. Adhesive strengths at 25°C

Item	150°C / 10 min cured	180°C / 5min cured
Lap shear strength*	28 N/mm <sup>2</sup>	29 N/mm <sup>2</sup>
T - peel strength**	45 N/25mm	60 N/25mm

\* Substrates : Mild steel (JIS G-3141, SPCC-D, 125x25x1.6mm)  
 Surface preparation : abrasion and degreasing with acetone  
 Over lap : 10mm, single

\*\* Substrates : Mild steel JIS G-3141, SPCC-D, 150x25x0.5mm  
 Surface preparation : abrasion and degreasing with acetone

## 2. Mechanical properties

Curing condition : 150°C /10min

Item		Test Method	Value
Durometer hardness ( 25°C )		ASTM D-2240	D - 86
Tensile strength ( 25°C )		ASTM D-638	33 N/mm <sup>2</sup>
Flexible strength ( 25°C )		ASTM D-790	82 N/mm <sup>2</sup>
Flexible modulus ( 25°C )		ASTM D-790	4100 N/mm <sup>2</sup>
Compressive strength ( 25°C )		ASTM D-695	164 N/mm <sup>2</sup>
Heat distortion temperature		ASTM D-648	154 °C
Coefficient of linear thermal expansion	(< Tg)	TMA Method	52 x10 <sup>-6</sup> K <sup>-1</sup>
	(> Tg)		143 x10 <sup>-6</sup> K <sup>-1</sup>
Water absorption		JIS K-6911	0.1 %
Tg		DSC Method	147 °C

## 3. Electrical Properties

Curing condition : 150°C /10min

Item		Test Method	Value
Dielectric constant ( 10 kHz )	25°C	ASTM D-150	6.3
	100°C		6.7
Dielectric dissipation factor ( 10 kHz )	25°C	ASTM D-150	0.01
	100°C		0.04
Volume resistivity ( 500 V )	25°C	ASTM D-257	2x10 <sup>15</sup> ohm-cm
	100°C		4x10 <sup>13</sup> ohm-cm
Dielectric strength		JIS K-6911	25°C 6 kV/mm



