

ENSURE 8310 series



For top polymer: Introducing **ENSURE**, a comprehensive line of advanced heat cure adhesives utilizing the latest resin and additives. As companies continue to introduce compact products with ever decreasing size and profiles, the miniaturization trend introduces delicate components and requires the use of mechanical assembling methods.

ENSURE 8310 series adhesives are formulated for structural bonding of such intricate and delicate components. **ENSURE 8310** series possess excellent dimensional stability and cured with very low shrinkage to prevent assemblies from strain and stress during service. Moisture and thermal expansion. **ENSURE 8310** series are formulated for stability at room temperature while suitable for low temperature. **ENSURE 8310** series are best suited for bonding and encapsulating of miniature components, assemblies and fixtures provided used for portable consumer electronics such as music players, mobile phones, digital camera, external hard drives, smart cards, miniature speakers, etc. and engineering products such as compact sensor and encoders, miniature vibration motors, piezoelectric sensors, defusers, etc.

Key Characteristics & Features

ENSURE 8310 series

CURING SYSTEM: Heat curing

KEY SUBSTRATE: Plastic

SECONDARY SUBSTRATE: Metals, glass & ceramic

RESPONSIVE & CONSISTENT CURING

- Allow consistent curing of bonding area with varying depths
- Suited for temperature sensitive components with need of curing at low temperature
- Permit assembly of components with shaded bonding area

EXCELLENT DIMENSIONAL STABILITY

- Possess low shrinkage, high modulus, high glass transition temperature & low coefficient of thermal expansion
- Protect intricate & delicate assembly against strain & stress from CTE mismatch & thermal cycling
- Permit assembly of dissimilar materials

EXCELLENT SERVICE TEMPERATURE

- Enhance resistance & reliability of assembly against high temperature & temperature cycling
- Protect against higher reflow temperature for lead free soldering

LOW MOISTURE ABSORPTION

- Enhance resistance & reliability of assembly against humidity
- Permit service under demanding environmental conditions

Typical Applications

- Bonding, sealing & locking of plastics such as polyacrylate, polycarbonate, PET, ABS, acrylic, polystyrene, PVC, fo pvc and other substrates such as glass, metals & ceramic
- Bonding & miniature & delicate components & devices onto housings, chassis & frames where parts of the bonding area are shaded from ultraviolet exposure
- Mounting for mechanical assemblies
- Rapid fixturing & locking of components after alignment or partial assembly

Ordering Information

Product line: ENSURE

Grade: EN-8311, EN-8312, EN-8313

Variant: Additional features, such as low temperature & ultraviolet cure are available on request.

Reference: Technical & Material Safety Datasheets are available on request.

Package Size: Available in 10ml syringe, 20ml syringe, 200ml cartridge. Other packaging & size available on request.

Notes: Information on restricted hazardous substances are available on request.

Selection & Classification

Liquid, 1.000 - 1.000 cP

ENSURE (N-411)



Viscos. liquid, 14.000 - 15.000 cP thick

ENSURE (N-412)



Semi-paste, 20.000 - 22.000 cP thick

ENSURE (N-413)



Typical Material Properties

ENSURE 803.0 series

Base	Epoxy
Appearance	Clear / Amber & Fluorescent
Curing	120°C for 10 minutes
Refractive index	1.51
Hardness, Shore D	80
Expansion @ break, %	3
Delugeage, %	<0.5
Tensile Strength, MPa (PSI)	20.9 - 27.6 (3,130 - 4,000)
Modulus, MPa (PSI)	1,734 - 1,876 (250,000 - 275,000)
Shear Strength (Steel / Steel), MPa (PSI)	37.6 (2,000)
Moisture absorption @ 80% RH & 80°C, % Weight	<0.8
Glass transition temperature (T _g), °C	110
Coefficient of thermal expansion (CTE), ppm / °C	
a) CTE before T _g	25
b) CTE above T _g	80
Service temperature, °C	-40 to 200