

NF 158R Filled Fluxing Underfill Product Datasheet

Outstanding Thermal Cycling Performance

Excellent Mechanical Shock Performance

High Process Yield

Description

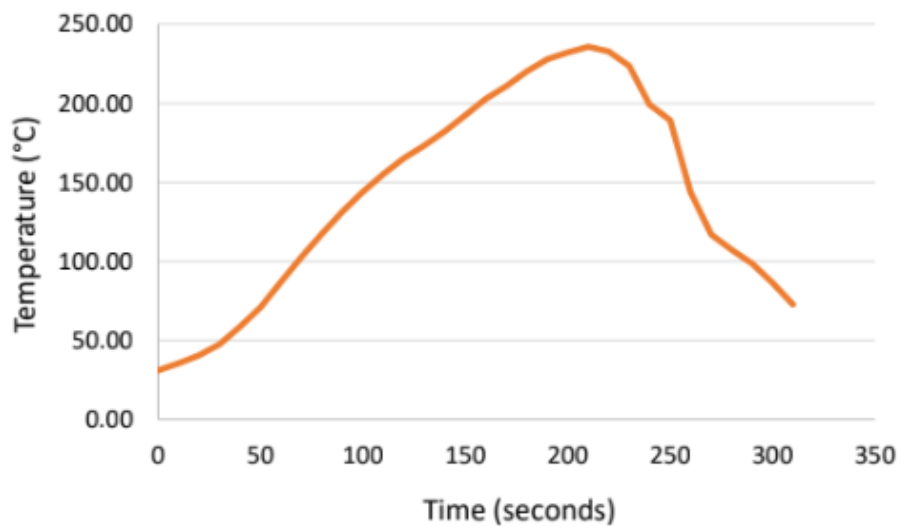
NF 158R is a filled fluxing liquid epoxy underfill, which can be used as an underfill for flip chip, chip scale package, ball grid array devices, package on package and land grid array application. It is also suitable for bare chip protection in a variety of advanced packages such as memory cards, chip carriers, hybrid circuits and multi-chip modules. It is designed for high production and friendly environments where process speed and mechanical shock are the key concern. This material is easily dispensed, minimizes induced stresses and provides outstanding reliability performance (e.g. temperature cycling performance) and excellent mechanical resistance. The performance of the drop test has been improved by two orders of magnitude compared with that with the use of solder paste.

Typical Physical Properties

Product Name	NF 158R Filled Fluxing Underfill
PROPERTIES OF UNCURED MATERIAL	
Appearance	White
Specific Gravity (ASTM D 1475-60)	1.5 g/cc
Viscosity (Brookfield, 0.5 rpm)	70 – 120 kcp
PROPERTIES OF CURED MATERIAL	
Glass Transition Temperature (Tg) Via TMA (ASTM D3418-82)	125°C

C.T. E (ASTM E 831), PPM /°C	$\alpha_1 = 50$; $\alpha_2 = 135$
Lap Shear Strength (FR4/FR4)	2600 psi
Extractable ions (MIL-STD-883E)	
Na+	<5ppm
K+	<5ppm
F-	<5ppm
Cl-	<10ppm
Surface insulation resistance (J-STD-004)	Pass

Recommended Curing Conditions



Storage & Shelf Life

6 months provided materials are kept in a sealed original container at –40 °C. Storage beyond this period can produce higher viscosity. Protect from moisture, evaporation and foreign materials. Process ability of these products can be adversely affected by evaporation and contamination.

Safety

NF 158R is a friendly, non-toxic material. However, general hygiene practice is recommended when handling this material. For detailed information, please consult the product SDS.

Package

NF 158R filled fluxing underfill series are available in 10cc and 30cc. Other packages are available depending upon customer's request. Contact YINCAE for order information.