

NF 160L Reflowable Underfill Product Datasheet

Low Cost Ownership
Enhance Component Reliability
High Process Yield

Description

NF 160L underfill is Reflowable underfill and easy reworking liquid epoxy which can be used as a underfill for chip scale package, ball grid array devices, package on package and land grid array and some flip chip 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 environment where process speed and mechanical shock are the key concerns. 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 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 160 Underfill
PROPERTIES OF UNCURED MATERIAL	
Appearance	Colorless or yellowish Liquid
Specific Gravity (ASTM D 1475-60)	1.07 g/cc
Viscosity (Brookfield, 0.5 rpm)	15-25k cp
PROPERTIES OF CURED MATERIAL	
Glass Transition Temperature (Tg) (ASTM D3418-82)	100-110 °C

C.T. E (ASTM E 831), PPM /°C	$\alpha 1 = 65$; $\alpha 2 = 142$
Lap Shear Strength (FR4/FR4)	2000 psi
Extractable ions (MIL-STD-883E)	
Na+	<5ppm
K+	<5ppm
F-	<5ppm
Cl-	<10ppm
Surface insulation resistance (J-STD-004)	Pass

Recommended Curing Conditions

A typical reflow profile to reflow or alternate cure profiles may be evaluated.

Storage & Shelf Life

6 months provided materials are kept in a sealed original container at – 40 °C or below. 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 160L is a friendly, non-toxic material. However, general hygiene practice is recommended when handling these materials. For detailed information, please consult the product SDS.

Package

NF 160L is available in 10cc and 30cc syringe. Other packages are available as requested. Please contact YINCAE for order information.