

KYOCERA Chemical Corporation URL: http://www.kyocera-chemi.jp/ TEL: +81-(0)48-225-6915

## **Eutectic Joint Applicable NCP**

## First in The Market!! Effective for Thermal Cycle Improvement /Eutectic Joint Applicable NCP (NCP:Non Conductive Paste)

·		Charact	eristic Ta	ble of New	NCP	
Strong Points1) Eutectic Joint Applicable NCP at Higher Temperaturethan Normal NCP Assembly(In Normal NCP, Void Appeared during Eutectic Assembly)2) (In Normal NCP, Heat Press = Physical Mechanical Joint only)Dramatic Improvement of Reliability due to Eutectic Electrode Joint3) Cost Down by one Process combined both of Eutecticand Encapsulation ProcessApplicationa) Flip Chip Assembly for COF, LCD Driver with Eutectic Joint(Electrode Join and Underfill Layer Creation in One Process)b) Pre-cote Underfill Process for Eutectic Electrode Joint(Joint Development with Misuzu Industries Corporation)		Characteristic Item			New NCP	Test Conditions
		Liquid Properties	Viscosity(Pa s)		40	25°C
			Tixotropic		1.0	0.5/2.5rpm
			GelationTime(sec)		50	150°C
			Ash content(wt%)		3.0	600°C
		Cured Properties	Tg(°C)		30	ТМА
			Modulu	ıs(Mpa)	500	DMA
			CTE(	ppm)	60	ТМА
			Impurit		2.0	Cl ion
			Impurity(ppm)		1.2	Na ion
	ormal NCP		"Brand-New" NCP for Eutectic Joint			
Eutectic Assembly(280-420°C) 0.5-1 sec Normal NCP Assembly (180-240°C) 2-15 sec Pre-heat Temperature 70 - 90°C Tact Time(sec)	High Temperature ->Void generation Electrode IC Substrate Normal NCP These Voids caused Reliability Degradation such as Moisture Absorption and Crack.			High Temp.Resistive NCP (Void Less) Eutectic Joint New NCP High Reliability Formation of Joint : Eutectic Adhesive Strength : more than 1.2kg/cm <sup>2</sup> Eutectic(Alloy) Connection		