TECHNICAL DATA SHEET

NITTO DENKO CORPORATION
Semiconductor Related Products Divis

CLEAR TRANSFER MOLDING COMPOUND
NT-8523

NT-8523 is an epoxy resin compound for use in transfer molds, and as an optical semiconductor packaging material it possesses superior characteristics.

1. FEATURES

1) Higher unti reflow performance for lead free requiaments
2) Lower modulus
3) For encapsulation of opto-devices, it possesses superior moldability and reliability.

2. MOLDING CONDITIONS

Different curing condition will be applied with different mold design, package type, device type etc. General recommendation is as follows.

Outer releasing agent (silicones or fluorinated compounds) must be applied onto the mold surface prior to use of this product to ease its release from the mold dies.

Molding condition:

Mold Temperature:	150 - 160 °C
In-mold cure time:	5-6min
Transfer pressure:	3 – 8 MPa (30 – 82 kgf/cm^2)

Post mold curing condition

Temperature x time:	150 °C x 3 hrs

Note:
Post cure time above is the required time after molded packages reach to the indicated temperature. Temperature rising rate of molded package changes depending on air flowing condition and heat capacity of packages and their holders in the oven. Please confirm the time needed to reach the cure temperature and add that time to recommended one above.

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3. PROPERTIES

3.1 GENERAL PROPERTIES

Inspected specimens were cured under following condition.

In-mold curing : 150 °C x 6 min

Post mold curing : 150°C x 3 hrs

PROPERTY	TEST CONDITION	UNIT	VALUE	REMARKS
Specific Gravity	JIS K 6911	—	1.21	
Hardness	Shore D		84	
Molding shrinkage	JIS K 6911	%	1.48	
Water Absorption		wt%	0.13	25±5℃ 24hrs
Boiling Water Absorption			0.51	95℃×1h
Flexural Strength		N/mm^2	124	
Flexural Modulus			3200	
CTE below Tg		K^{-1}	$7.0x10^{-5}$	
CTE above Tg			$19x10^{-5}$	
Tg - (TMA)		°C	93	
Tg - (DSC Tmg)			95	
Transmittance at 400 nm	Spectrophotometer	%	>80	$1.0mm^t$
Refractive Index	Abbe method		1.58	at 589.3 nm

- The above values are not specifications and cannot be guaranteed.

4. ATTENTION

Before use, see Material Safety Data Sheet (MSDS) of this product.

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