



TECHNICAL DATA SHEET

NITTO DENKO CORPORATION
Semiconductor Related Products Divis

CLEAR TRANSFER MOLDING COMPOUND NT-8524

NT-8524 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 anti reflow performance for lead free requirements
- 2) It shows high adhesion strength to Au and substrate
- 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:	4-5min
Transfer pressure:	3 – 8 MPa (30 – 82 kgf/cm ²)

Post mold curing condition

Temperature x time:	150 °C x 3 hrs
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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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Note:

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3. PROPERTIES

3.1 GENERAL PROPERTIES

Inspected specimens were cured under following condition.

In-mold curing : 150 °C x 4 min

Post mold curing : 150°C x 3 hrs

PROPERTY	TEST CONDITION	UNIT	VALUE	REMARKS	
Specific Gravity	JIS K 6911	—	1.25		
Hardness	Shore D		86		
Molding shrinkage	JIS K 6911	%	1.30		
Water Absorption		wt%	0.16	25±5°C 24hrs	
Boiling Water Absorption			0.32	95°C × 1h	
Flexural Strength		N/mm ²	129		
Flexural Modulus			3200		
CTE below Tg		K ⁻¹	6.5x10 ⁻⁵		
CTE above Tg			17x10 ⁻⁵		
Tg - (TMA)		°C	130		
Tg - (DSC Tmg)			125		
Transmittance at 400 nm		Spectrophotometer	%	>80	1.0mm ^t
Refractive Index		Abbe method		1.57	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.