

3M™ Universal Cover Tape (UCT) 2688A

Product Description

3M™ Universal Cover Tape (UCT) 2688A is a transparent film tape with a synthetic, room-temperature, pressure-sensitive adhesive zone. 3M UCT tape 2688A is used to seal electrical and electronic components into all embossed carrier tape materials, including paper.

Available Widths

3M UCT tape 2688A is available in the standard widths below, supplied in 300 meter, splice free rolls.

Standard Sizes	Widths (mm)					
Carrier Tape	8	12	16	24	32	44
Cover Tape	5.4	9.3	13.3	21.3	25.5	37.4
Medial Width	3.8	7.7	11.7	18.3	22.5	34.4

Standard Packaging Format

3M UCT tape 2688A is available in standard packaging formats. The product is provided on a green plastic core, packaged with high density paper wafer inserts and a centering core. The product is protected with a single, polyethylene bag and placed between two endcaps with corrugated pads on the top in a cardboard carton.

Typical Physical Properties and Performance Characteristics

Note: The following technical information and data should be considered representative or typical only and should not be used for specification purposes. Final product specifications and testing methods will be outlined in the Certificate of Analysis (COA) that is shipped with the commercialized product.

Description		Units	Typical Performance	Test Notes	Test Method
Material Properties	Backing Type		Polyester		
	Adhesive Type		PSA		
	Sealing Temperature		Room Temperature	1	
Physical Properties	Tensile Strength	N/mm Width	6.0	2	Modified ASTM-D3759
	Elongation	%	150	2	Modified ASTM-D3759
	Haze	%	2.4	3	ASTM-D1003
	Transmission	%	85	3	ASTM-D1003
	Thickness	mm	0.048	2	ASTM-D3652
Electrical Properties	Resistivity (Back Side)	Ohms/sq	10 ¹²	4	ANSI/ESD S541-2008
	Resistivity (Component Side)	Ohms/sq	10 ⁷	4	ANSI/ESD S541-2008
Product Format	Core Type	Material	Plastic		
	Core Inner Diameter	mm (in)	76.2 (3.0)		
	Roll Diameter	mm (in)	190.5 (7.5)		
	Roll Length	m (yd)	300 (328)		

Test Notes:

- Do not seal pressure sensitive adhesive cover tapes with heat . Pressure in the range of 10 to 50 psig is recommended.

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2. Tensile tests and thickness measurements are conducted at 23°C (73°F), 70% RH, in the machine direction of the polypropylene film.
3. Optical properties are measured using a BYK-Gardner Haze-Gard Plus Transmission Meter.
4. Resistivity is measured at room temperature by Resistance Meter.

Special Application Notes

Due to the manufacturing process of 3M UCT tape 2688A, imperfection of adhesive coating is expected, and may cause an open seal after the taping process. Based on a 3M internal DDPM (Defect Parts Per Million) level study, the probability of an open seal is extremely low. Furthermore, if the open seal case falls within the guideline below, the risk of an application issue is extremely low. The following conclusions are drawn based on 3M internal simulation:

1. Based on Open Seal DPPM level study
 - a. Occurrence: Low
 - b. Severity: Low
2. 3M Open Seal Guideline
 - a. When size is smaller than 50% of pitch size, it is acceptable
 - b. When size is bigger than 50% of pitch size, it is acceptable if DPPM is less than 3.4 (component level)

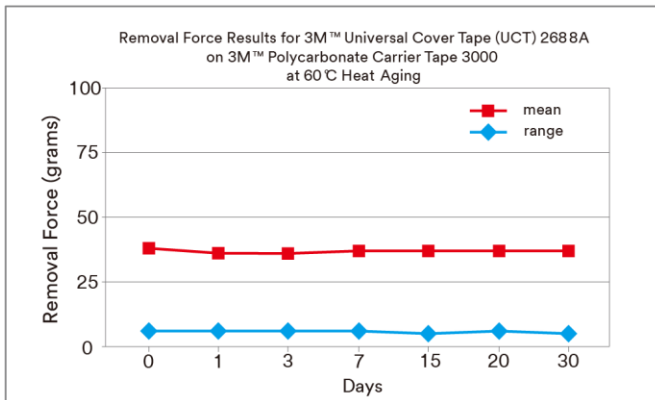
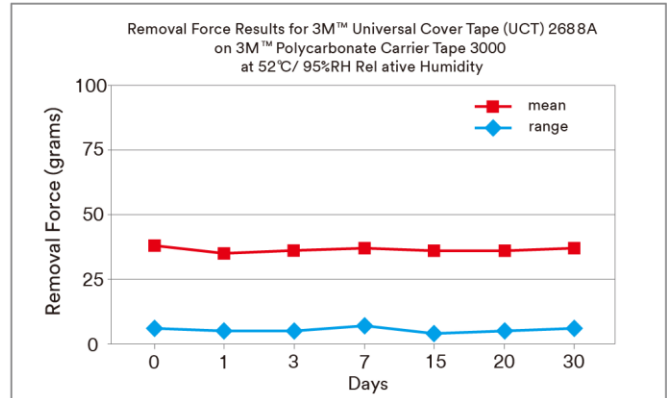
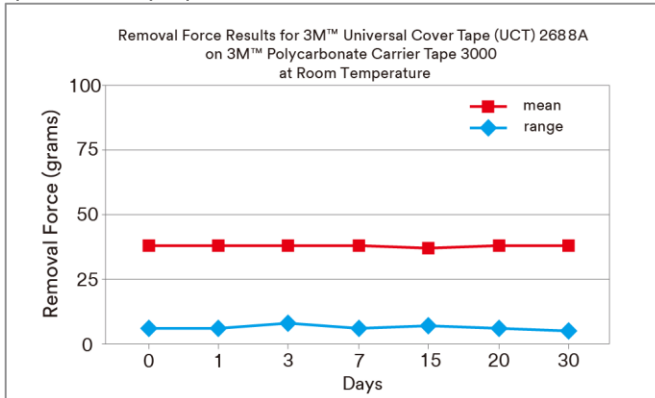
Typical Adhesive and Removal Properties

3M UCT tape 2688A has a simple process window. Desirable adhesion to the carrier can be achieved with the application of pressure to the non-adhesive surface of the cover tape over the adhesive strips with a reciprocating pressure sensitive adhesive O-ring shoe, compliant roller, or mechanical mechanism for proper wet-out. The removal (peel) force is obtained by peel initiation and removal of medial section of cover tape. Still photos demonstrating typical peel initiation and removal force procedures are shown in this technical sheet. Visit www.3Mtapeandreeel.com for full video viewing of these demonstrations. Removal force charts depict typical room temperature and aging characteristics of 3M tape 2688A sealed to 3M™ Polycarbonate Carrier 3000.

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Typical Removal Force Results

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Sealing Parameters

Cover Tape: 3M™ Universal Cover Tape (UCT) 2688A, 5.4mm
Carrier Tape: 3M™ Polycarbonate Carrier Tape 3000, 8mm
Sealing Mode: Reciprocating (Rubber O-Ring Shoe)
Pressure: 1.0 bar
Dwell Time: 0.01 sec
Temperature: Room temperature ≈ 23°C (73°F)

Graph Notes

The graphs in this document represent sealing and removal performance attained under the conditions specifically stated in the sealing parameters section above. Pressure is the indicated gauge pressure used to achieve seals, and may vary among sealing equipment manufacturers. The use of a different sealing mechanism (e.g. reciprocating versus roller or metal) may have an effect on the performance obtained under otherwise identical conditions due to differences in pressure or pressure distribution. The use of heat is not recommended.

Removal force “peel” data presented is representative of peel studies conducted according to the requirements of the current ANSI/EIA-481-E Standard. Sealed samples used in these studies were wound on 330 mm diameter reels to simulate typical production use. Samples tested at elevated temperature and humidity were stabilized at room temperature for a period of four hours prior to testing.

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Peel initiation on 3M™ Universal Cover Tape (UCT) 2688A



Rework (at peel enabling feature on 3M™ Universal Cover (UCT) Tape 2688A



Removal Force Testing of 3M™ Universal Cover (UCT) Tape 2688A



Rework (resealed) on 3M™ Universal Cover (UCT) Tape 2688A

Storage and Shelf Life

The shelf life of 3M™ Universal Cover Tape (UCT) 2668A is 24 months from the date of manufacture when stored in the original packaging materials and stored at 35°C (95°F) and 70% relative humidity. The product should be protected from direct sunlight and should be used on a “first-in, first-out” basis.

Certificate of Analysis (COA)

The 3M Certificate of Analysis (COA) for this product is established when the product is manufactured and deemed commercially available from 3M. The COA contains the 3M test methods, specifications limits and test results for the product’s performance attributes that the product will be supplied against. Contact your local 3M representative for this product’s COA.

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Regulatory: For regulatory information about this product, contact your 3M representative.

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