

# Industrial Adhesives and Tapes

## 3M™ Laminating Adhesives for Silicone Bonding



# Silicone Bonding Solutions



3M™ Double Coated Tapes provide thin bonding solutions for Silicone and other specialty hard-to-bond substrates for a variety of applications.

Proprietary single liner technology used in 3M™ Double Coated Tape 96042 and 3M™ Adhesive Transfer Tape 91022 reduces liner waste, improves processing and extends product shelf life.

3M™ Double Coated Tape 9731 has a unique value as solutions for Silicone bonding to a variety of high surface energy and low surface energy substrates.



# 3M™ Laminating Adhesives for Silicone Bonding

## 3M™ Adhesive Transfer Tape 91022 & 3M™ Double Coated Tape 96042

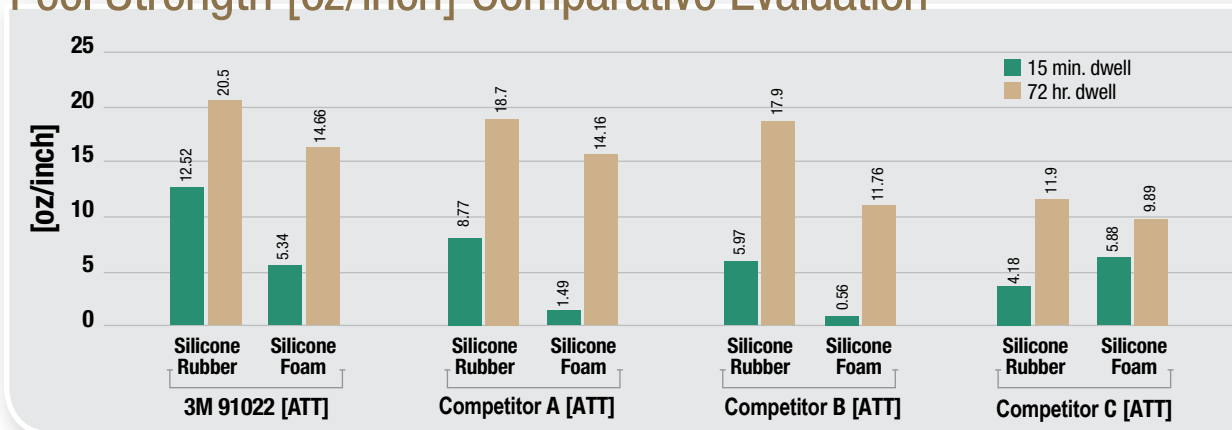
### Bond difficult substrates with... Silicone Pressure Sensitive Adhesive

- High shear and peel strength for hard-to-bond substrates such as Silicone rubbers and foams; polypropylene, polyethylene and other Low Surface Energy (LSE) materials and more on contact without priming
- Reliable solvent and high temperature resistance up to 500°F (260°C) for 3M™ 91022; 3M™ 96042 performs in temperatures up to 300°F (149°C) due to a PET Carrier for dimensional stability
- Good damping performance over a broad temperature range
- 12-month shelf life for extended usability and reduced waste
- Reduce liner waste by 50% and save time and cost of second liner removal and disposal
- Stable liner release over time (reference chart on back page)
- PET film liner is tear and moisture resistant, and offers improved processing and precise tooling for higher yields



**Single liner**  
for **50% less**  
**liner waste**

### Peel Strength [oz/inch] Comparative Evaluation



NOTE: The technical information and data provided here should be considered representative only and should not be used for specification purposes. The user should evaluate the 3M product to determine whether it is suitable for the user's purpose.

### Silicone Bonding Product Portfolio Summary

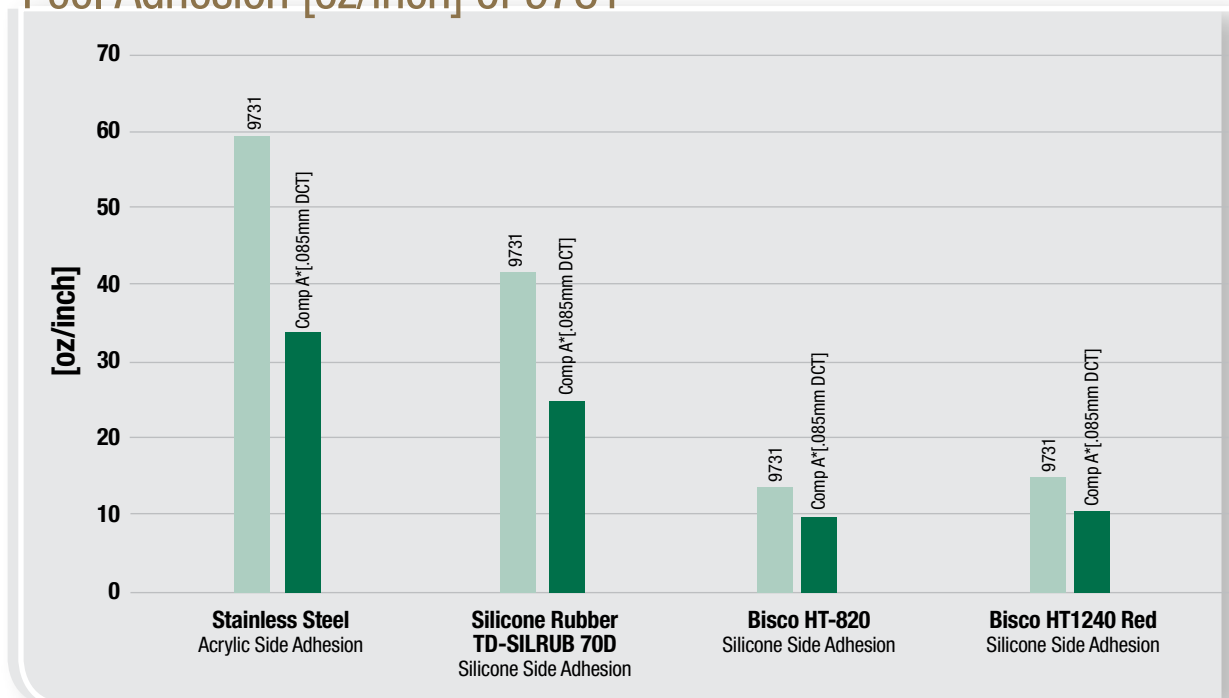
Product Number	Total Tape Caliper [not including liner]	Product Construction	Adhesive Type	Carrier Type	Liner Type	Temperature Resistance	Relative Adhesion to Silicone Rubber	Relative Adhesion to PC/ABS
91022	2mil [.05mm]	ATT	Silicone	-	White PET Film [2mil or .05mm]	500°F (260°C)	9	8
96042	5mil [.127mm]	DCT	Silicone	Clear PET Film 1mil [.025mm]	White PET Film [2mil or .05mm]	350°F (177°C)	9	8
9731	5.5mil [.140mm]	Differential DCT	350 [Acrylic] / Silicone	Clear PET Film 1mil [.025mm]	54# Tan PCK Paper / 2mil Clear PET Film	350°F (177°C)	9	8

# 3M™ Double Coated Tapes 9731

## Bond Silicone to HSE & LSE substrates

- Silicone/Acrylic differential double coated tape construction offers **excellent initial tack and adhesion**
- Variety of product constructions and calipers provides flexibility to **specify the best product with the best fit**
- Polyester carrier provides **dimensional stability and improved handling** with ease of die cutting and lamination
- PET and PCK double liners for **easy handling, moisture stability and liner removal**
- **Excellent high temperature, UV and solvent resistance**

## Peel Adhesion [oz/inch] of 9731



NOTE: The technical information and data provided here should be considered representative only and should not be used for specification purposes. The user should evaluate the 3M product to determine whether it is suitable for the user's purpose. Lower the grams/in, Better the liner removal  
\*Comp A [0.085mm DCT]

## Application Ideas

Automotive, Transportation & Specialty Vehicle • **Appliance**  
Medical & Electronic Devices • General Industrial

- **Gasket Attachment:** Best in class adhesion to Silicone-based substrates provides robust product performance. Primerless bonding improves productivity and yields.
- **Keypad Attachment:** Higher initial and aged adhesion to Silicone provides bonding to medical-grade Silicone substrates and quick attachment for improved processing.
- **Reducing/Eliminating buzz/squeak/rattle:** Best in class adhesion to difficult substrates for Silicone foam attachment. Primerless bonding provides a primary bonding solution with no mess.
- **High Temperature Applications:** Best in class adhesion to Silicone-based substrates provides robust product performance. Primerless bonding improves productivity and yields.
- **General Purpose Silicone Foam Attachment:** Performance on flexible silicone materials provides reliable bonding and improved productivity through processing efficiency.
- **Temporary Bond for Processing Difficult Substrates:** Best in class adhesion to difficult substrates, including varnished leather & Silicone products increases productivity and yield and provides excellent convertability.

# Product Selection (construction details)

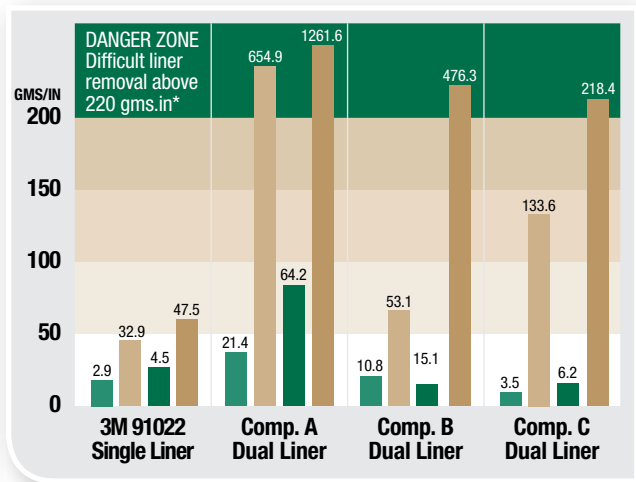
Product Number	Product Construction	Primary Liner	Adhesive I Type	Carrier	Adhesive II Type	Secondary Liner	Total Tape Caliper [not including liner]	Size Available
91022	ATT	White PET Film [2mil or .05mm]	Silicone 2mil [.05mm]	—	—	—	2mil [.05mm]	48"x60 yards*
96042	DCT	White PET Film [2mil or .05mm]	Silicone 2mil [.05mm]	Clear PET Film 1mil [.025mm]	Silicone 2mil [.05mm]	—	5mil [.127mm]	48"x60 yards*
5053	Secondary Liner	Clear PET Film [3mil or .076mm]	—	—	—	—	—	46"x360 yards*
9731	DCT	54# Tan PCK Paper [5.4mil or .137mm]	350 1.6mil [.041mm]	Clear PET Film 1mil [.025mm]	Silicone 2.9mil [.074mm]	Clear PET Film [3mil or .076mm]	5.5mil [.140mm]	48"x60 yards*

\* **Note:** The caliper listed is based on a calculation from manufacturing controlled adhesive coat weights using a density of 1.110 g/ cc. Remember that our products are always available in metric dimensions as well.

## Product Selection Guide for Bonding Silicone Substrates

## 3M™ Adhesive Transfer Tape 91022 Liner Release

		Secondary Substates						
		Silicone Sponge	Silicone Foam	Silicone Film	Silicone Rubber	Medical Grade Silicone Rubber	Metals	High Surface Energy Plastics
Silicone Substates	Silicone Sponge	91022 or 96042				9731		
	Silicone Foam	91022 or 96042				9731		
	Silicone Film	91022 or 96042				9731		
	Silicone Rubber	91022 or 96042				9731		
	Medical Grade Silicone Rubber	91022 or 96042				9731		



Legend:   
■ 7-day CT Initial Easy   
■ 7-day 70°C Aged Easy   
■ 7-day CT Initial Tight   
■ 7-day 70°C Aged Tight   
 \*Lower the gms/in, better the liner removal.

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