

October, 2013

## 3M™ Adhesive Transfer Tape 9505

### Product Description

3M™ Industrial Acrylic Adhesive 220 is an economical choice for most general industrial bonding in metal, painted metal, and high surface energy plastic applications.

### Product Features

- Up to 350°F short-term heat resistance
- Good chemical resistance
- Good shear strength



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## Technical Information Note

The following technical information and data should be considered representative or typical only and should not be used for specification purposes.

## Typical Physical Properties

Property	Values	
Adhesive Thickness	0.12 mm	4.9 mil
Liner	58# Polycoated Kraft Paper (PCK)	
Liner Thickness	0.11 mm	4.2 mil
Liner Color	Tan	

## Typical Performance Characteristics

90° Peel Adhesion		Dwell/Cure Time	Substrate
5.8 N/cm	53 oz/in	15 min ± 5 min	Stainless Steel
11 N/cm	98 oz/in	72 hr @ Room Temperature	Stainless Steel
9.7 N/cm	89 oz/in	72 hr @ Room Temperature	Glass
7.1 N/cm	65 oz/in		ABS
7.1 N/cm	63 oz/in		Polycarbonate (PC)

Property: 90° Peel Adhesion  
Method: ASTM D3330  
Backing: Aluminum Foil

Property	Values	Test Condition	Notes
Static Shear	5000 min	2000g @ Room Temperature	1in x 1in
Static Shear	4000 min	10000 @ 70°C (158°F)	1in x 1in

## Available Sizes

Property	Values		Notes
Master Width	1.22 m	48 in	More sizes may be available. Please call 800-223-7427 or talk to your local 3M representative for more information.

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## Environmental Performance

**Humidity Resistance** – High humidity has a minimal effect on adhesive performance. Bond strength shows no significant reduction after exposure for 7 days at 90°F (32°C) and 90% relative humidity.

**UV Resistance** – When properly applied, nameplates and decorative trim parts are not adversely affected by outdoor exposure.

**Water Resistance** – Immersion in water has no appreciable effect on the bond strength. After 100 hours at room temperature, the high bond strength is maintained.

**Temperature Cycling Resistance** – High bond strength is maintained after cycling four times through:

4 hours at 158°F (70°C)

4 hours at -20°F (-29°C)

4 hours at 73°F (22°C)

**Chemical Resistance** – When properly applied, nameplate and decorative trim parts will hold securely after exposure to numerous chemicals including oil, mild acids and alkalis.

**Bond Build-up:** The bond strength of 3M™ Industrial Acrylic Adhesive 220 increases as a function of time and temperature

**Temperature/Heat Resistance:** 3M™ Industrial Acrylic Adhesive 220 is usable for short periods (minutes, hours) at temperatures up to 350°F (177°C) and for intermittent longer periods (days, weeks) up to 250°F (121°C).

**Lower Temperature Service Limit:** 40°F (-40°C). The glass transition temperature, TG, for 3M™ Industrial Acrylic Adhesive 220 is -31°F (-35°C). Many applications survive below this temperature. Factors to consider are: the materials being bonded, the dwell at RT before cold exposure and the stresses below the TG (ie. expansion/contraction stresses, impact). Optimum conditions are: bonding HSE materials, longer time at RT before cold exposure and little or no stress below the glass transition temperature.

## Handling/Application Information

### Application Ideas

- Attaching nameplates, appliquéés, and decorative trim to metal and high surface energy plastics
- Laminating to sub-surface printed polycarbonate or polyester graphic overlay materials
- Used in the automotive, appliance and electronics industries for cost-effective, long-term bonding applications

### Storage and Shelf Life

It is suggested that products are stored at room temperature conditions of 70°F (21°C) and 50% relative humidity. If stored properly, product retains its performance and properties for 24 months from date of manufacture.

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## Information

**Technical Information:** The technical information, guidance, and other statements contained in this document or otherwise provided by 3M are based upon records, tests, or experience that 3M believes to be reliable, but the accuracy, completeness, and representative nature of such information is not guaranteed. Such information is intended for people with knowledge and technical skills sufficient to assess and apply their own informed judgment to the information. No license under any 3M or third party intellectual property rights is granted or implied with this information.

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## Trademarks

3M is a trademark of 3M Company.

## References

### Safety Data Sheet (SDS)

[https://www.3m.com/3M/en\\_US/company-us/SDS-search/results/?gsaAction=msdsSRA&msdsLocale=en\\_US&co=ptn&q=9505](https://www.3m.com/3M/en_US/company-us/SDS-search/results/?gsaAction=msdsSRA&msdsLocale=en_US&co=ptn&q=9505)

## Family Group

	9502	9505	9552	9555
Adhesive Thickness (mm)	0.06	0.12	0.06	0.12
Liner	58# Polycoated Kraft Paper (PCK)	58# Polycoated Kraft Paper (PCK)		
Liner Thickness (mm)	0.11	0.11		
Liner Color	Tan	Tan		

## ISO Statement

This Industrial Adhesives and Tapes Division product was manufactured under a 3M quality system registered to ISO 9001 standards.

## Bottom Matter Images

[Image 4]

[Image 5]

## Recognition/Certification

TSCA: This product is defined as an article under the Toxic Substances Control Act and therefore, it is exempt from inventory listing requirements

MSDS: 3M has not prepared a MSDS for this product which is not subjected to the MSDS requirements of the Occupational Safety and Health Administration's Hazard Communication Standard, 29 C.F.R.1910.1200(b)(6)(v). When used under reasonable conditions or in accordance with the 3M directions for use, this product should not present a health and safety hazard. However, use or processing of the product in a manner not in accordance with the directions for use may affect its performance and present potential health and safety hazards.

UL: These products have been recognized by Underwriters Laboratories, Inc. under UL 969. For more information on the UL Certification, please visit the website at <http://www.3M.com/converter>, select UL Recognized Materials, then select the specific product area.

Military: Meets Mil-P-19834

Note: One of 3M's core values is to respect our social and physical environment. 3M is committed to comply with ever-changing, global, regulatory and consumer environmental, health, and safety (EHS) requirements. As a service to our customers, 3M is providing information on the regulatory status of many 3M products. Further regulation information including that for OSHA, USCPIS, FDA, California Proposition 65, READY and RoHS, can be found at [3M.com/regs](http://3M.com/regs).

