Industrial Adhesives and Tapes Division
Performance Label Materials

Performance & Reliability

2014 Core Range Product Selection Guide

3M

3M Identification Systems:

Personalised, Suitable, and Secure

Identification, labelling, protecting and bonding is our business – worldwide and by the million, yet in a million different ways. We are also at your service: tell us precisely what you need and we will find the ideal solution for you, supporting your decision process with application-related lab tests and extensive technical documentation. As a result you will get the best-possible product or one that has been custom-tailored to your requirements by our technical staff.
We also provide local services for you and your team. We will be there to offer extensive training in the fields of “Labelling” or “Bonding” and to show you the vast range of possibilities our products offer. Take your benefit from the capabilities of a global corporation, helping you to get new ideas, to improve workflows and to achieve innovative and unique solutions.
Our sales team will be happy to provide you with personal consultation services and support during your own product tests. Go ahead and challenge us!

Contents

This Product Selection Guide contains details of our Core Range of Performance Label Materials. For details of our full range or for details on products not listed here, please call your 3M sales contact.

Experience in every field:

Our industry expertise

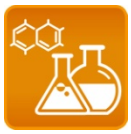
The conditions of use and specifications for labelling differ strongly from market to market. Over decades of working together in close partnership with our customers from various industries and with our vast network of associations and testing institutes, we have continuously evolved our product portfolio with a special focus on specific requirements. Based on our extensive insight into industries and their work processes, we are in a position to offer you labels that are more efficient and effective and also more pleasing to the eye.

Automotive

Fulfilling the requirements of the Federal Motor Transport Authority; member of the German Association of Automotive Industry (VDA). Strong focus on OEMs and Tier 1 and 2 suppliers Lab tests in our corporate 3M laboratory in accordance with the automotive standards. Use 3M™ Polyester Label Material 92200, for example, to create durable labels that provide information on tire pressure, fuel level or airbag instructions

Engineering

UL/cUL-approved components
Company-own UL Testing Lab at the 3M plant in Wroclaw, Poland Ensure durable attachment of your manufacturer instructions with permanent and variable data or barcodes, e. g. by using 3M™ Thermal Transfer Polyester Label Material 7872EC



Medical Engineering

Flexible materials to conform more readily to curves with small radii
Very high adhesive strength on hard-to-bond substrates. Destructible and non-transferable systems (VOID, Triangle). UL/cUL-approved components

Electronics

Compliance with all relevant VDE standards.
Mark your PCBs with barcode labels that last, e. g. using the heat- and solvent resistant 3M™ Label Material 3922. Use 3M™ Thermal Transfer Polyester Label Material 7872EC, for instance to attach variable product data to your electronic components.

Logistics

Solutions that meet your toughest challenges for the permanent and durable identification of transportation containers and other items References and applications in various industries, including the glass industry, fresh produce logistics and the automotive industry . Optimise your storage processes, e. g. by marking your shelves with 3M™ Retro-reflective Label Material 3929: it is able to extend the maximum and minimum scanning distance of long-range scanners.

Chemical Engineering

Label stocks that resist sea water and are able to withstand harsh Chemicals . Matching and highly solvent-resistant combinations of 3M Specialty Labels and 3M Ribbons for Thermal Transfer Print
Use 3M™ Durable Label Material 76962, for instance, for marking chemicals reliably with permanent information that remains legible

3M™ Polyester Label Materials

Adhesive type SE100

Product code	Finish	Adhesive thickness (mm)	Face film thickness (mm)	Liner type in mm (g/m^2)	Temperature resistance	Specs.
92200 TT2 GW PET50-SE100/65-65DWG	gloss white	0,065	0,050	double sided siliconised white glassine 0,056 (62)	- 40°C to +130°C	UL, cUL RoHS
92350 TT3 MS PET50-SE100/65-65DWG	matt silver	0,065	0,056	double sided siliconised white glassine 0,056 (62)	- 40°C to +130°C	UL, cUL RoHS
92205 TT0 GW PET125-SE100/100-90DWG	gloss white	0,100	0,125	double sided siliconised white glassine 0,077 (90)	- 40°C to +130°C	RoHS

Typical performance features

- These products utilise 3M's SE100 adhesive, designed for high bond performance to composite plastic materials.

- 3M™ Polyester Label Materials 92200 and 92350 are designed for application onto textured, grained and structured very low surface energy plastics such as polypropylene (PP), mineral filled and fibre reinforced PP and polyamide (PA) composites. These types of composite plastic materials are used increasingly in the automotive industry for interior and exterior applications.

- 3M™ Polyester Label Material 92205 is ideally suited for labelling of extruded plastic containers where high resistance to steam jet and washing cycles is required.
- Ultra-high 100 g/m^2 adhesive coat weight provides excellent adhesion on structured plastic surfaces
- Thick 125 micron PET face film withstands shrinkage following extrusion.

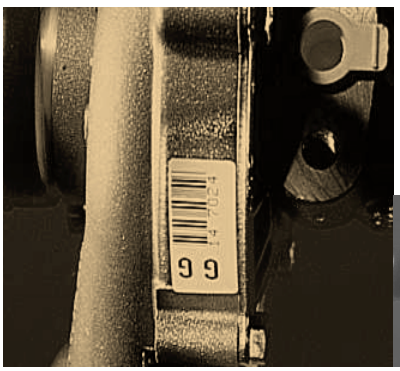
3M™ Polyester Label Materials

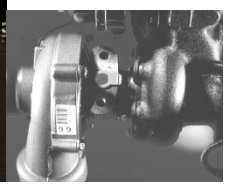
Adhesive type 350E

Product code	Finish	Adhesive thickness (mm)	Face film thickness (mm)	Liner type in mm (g/m^2)	Temperature resistance	Specs.
7871EC TT2 GW PET50-350E/46-65DWG	gloss white	0,046	0,050	double sided siliconised white glassine 0,056 (62)	- 40°C to +150°C	UL, cUL RoHS
7872EC TT2 PS PET50-350E/46-65DWG	platinum silver	0,046	0,050	double sided siliconised white glassine 0,056 (62)	- 40°C to +150°C	UL, cUL RoHS
7871EJ TT2 GW PET50-350E/46-90DWG	gloss white	0,046	0,050	double sided siliconised white glassine 0,077 (90)	- 40°C to +150°C	UL, cUL RoHS
7872EJ TT2 PS PET50-350E/46-90DWG	platinum silver	0,046	0,050	double sided siliconised white glassine 0,077 (90)	- 40°C to +150°C	UL, cUL RoHS
7874EC TT3 MW PET50-350E/46-65DWG	matt white	0,046	0,056	double sided siliconised white glassine 0,056 (62)	- 40°C to +150°C	UL, cUL RoHS
7879EJ TT3 MS PET75-350E/46-90DWG	matt silver	0,046	0,081	double sided siliconised white glassine 0,077 (90)	- 40°C to +150°C	UL, cUL RoHS
76751S TT3 MS PET50-350E/46-90DWG	matt silver	0,046	0,056	double sided siliconised white glassine 0,077 (90)	- 40°C to +150°C	UL, cUL RoHS
76610 TT3 MW PET50-350E/20-65DWG	matt white	0,020	0,056	single sided siliconised white glassine 0,056 (62)	- 40°C to +150°C	UL, cUL RoHS
7868E TT2 GW PET50-350E/20-65WG	gloss white	0,020	0,050	single sided siliconised white glassine 0,056 (62)	- 40°C to +150°C	UL, cUL RoHS
7876EC TT2 GC PET50-350E/46-65DWG	gloss clear	0,046	0,050	double sided siliconised white glassine 0,056 (62)	- 40°C to +150°C	UL, cUL RoHS

Typical performance features

- These products utilise 3M's adhesive 350E, designed to provide excellent adhesion to high and low surface energy plastics, metals, painted metals and powder coatings.





3M™ Polyester Label Materials

Adhesive type 300E

Product code	Finish	Adhesive thickness (mm)	Face film thickness (mm)	Liner type in mm (g/m^2)	Temperature resistance	Specs.
7810EH TT5 MW PET50-300E/20-90WG	matt white	0,020	0,056	single sided siliconised white glassine 0,077 (90)	- 40°C to +150°C	UL, cUL RoHS
7813EH TT5 MS PET75-300E/20-90WG	matt silver	0,020	0,081	single sided siliconised white glassine 0,077 (90)	- 40°C to +150°C	UL, cUL RoHS
7860E TT2 GW PET50-300E/20-65WG	gloss white	0,020	0,050	single sided siliconised white glassine 0,056 (62)	- 40°C to +150°C	UL, cUL RoHS
7860EH TT2 GW PET50-300E/20-90WG	gloss white	0,020	0,050	single sided siliconised white glassine 0,077 (90)	- 40°C to +150°C	RoHS
7861E TT2 GC PET50-300E/20-65WG	gloss clear	0,020	0,056	single sided siliconised white glassine 0,056 (62)	- 40°C to +150°C	UL, cUL RoHS

Typical performance features

- These products utilise 3M's high strength acrylic adhesive 300E, designed for applications requiring greater initial adhesion, especially to LSE surfaces and powder-coats, without loss of shear or temperature resistance.

3M™ Polyester Label Materials

Adhesive type 300

Product code	Finish	Adhesive thickness (mm)	Face film thickness (mm)	Liner type in mm (g/m^2)	Temperature resistance	Specs.
7863	bright silver	0,020	0,051	single sided siliconised densified kraft 0,080 (90)	- 40°C to +150°C	CSA UL, cUL RoHS
7861	gloss clear	0,020	0,051	single sided siliconised densified kraft 0,080 (90)	- 40°C to +150°C	CSA UL, cUL RoHS

Typical performance features

- These products utilise 3M's high strength acrylic adhesive 300, designed for applications requiring greater initial adhesion, especially to LSE surfaces and powder-coats, without loss of shear or temperature resistance.

- Polyester label materials from 3M are used for a wide variety of permanent identification and decorative applications throughout industry.
- Due to the wide performance range of these polyester films and our #300/ 300E high strength acrylic adhesive, the products can be considered for the most permanent labelling requirements. The finishes offered provide the product designer a variety of decorative options.

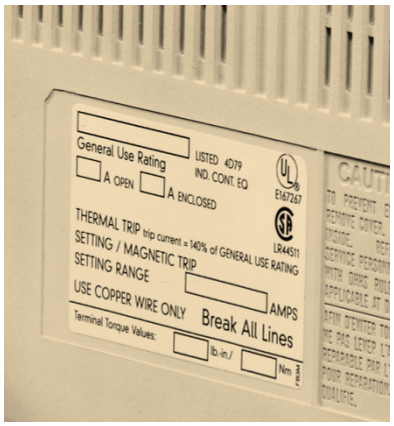
3M™ Polyester Label Materials

Adhesive type 310E

Product code	Finish	Adhesive thickness (mm)	Face film thickness (mm)	Liner type in mm (g/m^2)	Temperature resistance	Specs.
7808E TT3 MS PET50-310E/20-90WG	matt silver	0,020	0,056	single sided siliconised white glassine 0,077 (90)	- 40°C to +150°C	UL, cUL RoHS
7815EB TT5 MW PET50-310E/20-65WG	matt white	0,020	0,056	single sided siliconised white glassine 0,056 (62)	- 40°C to +150°C	UL, cUL RoHS
7815EH TT5 MW PET50-310E/20-90WG	matt white	0,020	0,056	single sided siliconised white glassine 0,077 (90)	- 40°C to +150°C	UL, cUL RoHS
7816E TT2 GW PET50-310E/20-65WG	gloss white	0,020	0,050	single sided siliconised white glassine 0,056 (62)	- 40°C to +150°C	UL, cUL RoHS
7816EC TT2 GW PET50-310E/20-65DWG	gloss white	0,020	0,050	double sided siliconised white glassine 0,056 (62)	- 40°C to +150°C	UL, cUL RoHS
7816EH TT2 GW PET50-310E/20-90WG	gloss white	0,020	0,081	single sided siliconised white glassine 0,077 (90)	- 40°C to +150°C	UL, cUL RoHS
7818EH TT5 MS PET75-310E/20-90WG	matt silver	0,020	0,081	single sided siliconised white glassine 0,077 (90)	- 40°C to +150°C	UL, cUL RoHS
7875E TT2 PS PET50-310E/20-65WG	platinum silver	0,020	0,050	single sided siliconised white glassine 0,056 (62)	- 40°C to +150°C	UL, cUL RoHS

Typical performance features

- These products utilise 3M's 310E high precision acrylic adhesive which has excellent UV resistance. This adhesive provides firmness and high precision strength on a variety of surfaces, including HSE plastics, glass and metals.



- The firmness of 3M 310E acrylic adhesive allows for easy thermal transfer printing with the above polyester label materials. These products are suitable for mid range durable labelling applications , including :

- Barcode labels and rating plates
- Property identification and asset labelling
- Warning, instruction and service labels for durable goods
- Nameplates for durable goods

3M™ Polyester Label Materials

Adhesive type 250E

Product code	Finish	Adhesive thickness (mm)	Face film thickness (mm)	Liner type in mm (g/m^2)	Temperature resistance	Specs.	Typical performance features
D85YB pearl white PET50-250E/20-65WG	gloss white	0,020	0,050	single sided siliconised white glassine 0,056 (62)	- 40°C to +150°C	UL, cUL RoHS	▪ These products utilise 3M's 250E general industrial acrylic adhesive which has lower initial peel, but comparable adhesion to both 300 and 300E adhesives. A firmer adhesive than 300 and 300E, resulting in less ooze.
D84YB platinum silver PET50-250E/20-65WG	platinum silver	0,020	0,050	single sided siliconised white glassine 0,056 (62)	- 40°C to +150°C	UL, cUL RoHS	
G61SB matt white PET50-250E/20-65WG	matt white	0,020	0,056	single sided siliconised white glassine 0,056 (62)	- 40°C to +150°C	UL, cUL RoHS	
G62SB matt silver PET50-250E/20-65WG	matt silver	0,020	0,056	single sided siliconised white glassine 0,056 (62)	- 40°C to +150°C	UL, cUL RoHS	

- These gloss & matt white PET face materials offer excellent printability by both conventional , thermal transfer print and UV digital ink jet
- Suitable for general industrial applications such as identification, instruction and warning purposes.
- Labels must withstand environmental conditions such as UV exposure, temperature extremes, grease, oil, gas and water exposure.
- 3M™ General Industrial Acrylic Adhesive 250E will bond to a wide variety of surfaces, including HSE and smooth LSE plastics, metals and powder coated paints

3M™ Pharmaceutical Paper Label Materials

Adhesive type 320

Product code	Finish	Adhesive thickness (mm)	Face film thickness (mm)	Liner type in mm (g/m^2)	Temperature resistance	Specs.
7000	high gloss white	0,023	0,102	single sided siliconised densified kraft 0,064 (70)	- 40°C to +175°C	UL[1] RoHS
7110	matt white	0,028	0,071	single sided Siliconised densified kraft 0,060 (65)	- 40°C to +175°C	UL[1] RoHS

Typical performance features

- Pharmaceutical paper label materials from 3M provide excellent resistance to flagging on small diameter vials. These label materials utilize 3M's high precision acrylic adhesive 320, which provides firmness and strength on a variety of surfaces including high surface energy (HSE) and low surface energy (LSE) plastics, as well as metals.

- 3M™ Performance Paper Label Materials can be printed by conventional print methods such as letterpress, flexo, hot foil and also by thermal transfer
- Designed to survive autoclaving, ETO and gamma sterilization while adhered to most surfaces.
- Meets many pharmaceutical industry or manufacturer specifications.
- 3M™ Performance Paper Label Material 7110 readily fractures or de-laminates upon removal which is ideal for tamper-indicating labelling.

3M™ Pharmaceutical Paper Label Materials

Adhesive type 1000

Product code	Finish	Adhesive thickness (mm)	Face film thickness (mm)	Liner type in mm (g/m^2)	Temperature resistance	Specs.
7113	matt white	Not measurable 1000 repositionable acrylic	0,102	single sided siliconised densified kraft 0,081 (81)	- 30°C to +80°C	RoHS
7142	coated white	Not measurable 1000 repositionable acrylic	0,089	single sided Siliconised Kraft glassine 0,064 (65)	- 30°C to +80°C	RoHS

Typical performance features

- 7113 and 7142 are repositionable paper label materials with 3M's 1000 Adhesive which offers unique, one-piece removability from many surfaces, including fragile papers, and can be repositioned repeatedly for reuse on the same surface or application to another surface.

[1]Can be used to display the UL listing mark, but each case must be reviewed by UL follow-up services before use.

3M™ Over-laminating Label Materials

Adhesive type 310E

Product code	Finish	Adhesive thickness (mm)	Face film thickness (mm)	Liner type in mm (g/m²)	Temperature resistance	Specs.	Typical performance features
76500 TT1 MC PET23 310E/20-65WG	matt clear	0,020	0,029	single sided siliconised white glassine 0,056 (62)	- 40°C to +150°C	UL, cUL RoHS	▪ These high performance polyester over-laminating films utilise 3M's 310E adhesive which provides outdoor and UV-resistant durability. Intended for longer life applications
7736	matt clear	0,020	0,023	polyethylene coated kraft 0,080 (72)	- 40°C to +150°C	RoHS	
7746	gloss clear	0,020	0,023	polyethylene coated kraft 0,080 (72)	- 40°C to +150°C	RoHS	

▪ 3M™ Acrylate Over-laminating Film 7735FL utilises a highly UV resistant and outdoor durable acrylate film stock with 400 adhesive providing at least five years outdoor product life.

3M™ Over-laminating Label Materials

Adhesive type 400

Product code	Finish	Adhesive thickness (mm)	Face film thickness (mm)	Liner type in mm (g/m²)	Temperature resistance	Specs.	Typical performance features
7730FL	gloss clear	0,020	0,025	polyester film one sided siliconised 0,038 (53)	- 40°C to +150°C	UL, cUL RoHS	▪ These products utilise 3M's 400 adhesive mounted on a polyester film liner offer excellent clarity and outdoor product life. ▪ 7730FL and 7732FL utilise polyester face films ▪ 7737FL offers the opportunity to achieve the attractive appearance of a sub-surface screen printed Lexan™ nameplate with an economical over-laminate construction
7732FL	matt clear	0,020	0,025	polyester film one sided siliconised 0,038 (53)	- 40°C to +150°C	UL, cUL RoHS	
7735FL	gloss clear	0,076	0,020	polyester film one sided siliconised 0,038 (53)	- 40°C to +79°C	UL, cUL RoHS	
7737FL	matt velvet clear	0,075	0,020	polyester film one sided siliconised 0,038 (53)	- 40°C to +121°C	UL, cUL RoHS	

3M™ Cast Vinyl Label Materials (Scotchcal™ series)

Adhesive type 320

Product code	Finish	Adhesive thickness (mm)	Face film thickness (mm)	Liner type in mm (g/m²)	Temperature resistance	Specs.
3690E	gloss white	0,035	0,050	double sided siliconised brown glassine 0,075 (90)	-40°C to + 95°C (+150°C)*	UL, cUL RoHS
3692-1802E	gloss yellow	0,035	0,075	double sided siliconised white glassine 0,056 (62)	- 40°C to + 95°C (+150°C)*	UL, cUL RoHS
3698E	gloss silver	0,035	0,050	double sided siliconised brown glassine 0,075 (90)	-40°C to + 95°C (+150°C)*	UL, cUL RoHS

Typical performance features

- These products utilise 3M's 320 modified acrylic adhesive which shows high initial tack and good adhesion to nearly all surfaces including most LSE substrates, textured paint as well as curved surfaces

- Scotchcal Label Films are recommended for Thermal Transfer Printed Label Stock applications where a very high durability and performance is required combined with non-transferability on some surfaces and excellent covering power.
- Scotchcal Label Film 3690E is resistant to outdoor weathering, UV-light and many solvents as well as being dimensionally stable.

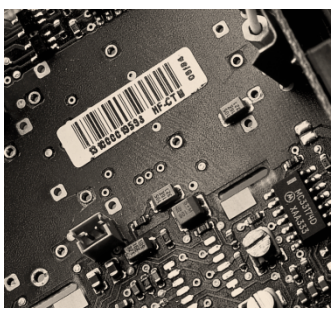
3M™ Cast Acrylic High Temperature Label Materials

Adhesive type 150

Product code	Finish	Adhesive thickness (mm)	Face film thickness (mm)	Liner type in mm (g/m²)	Temperature resistance	Specs.
3921	matt white	0,030	0,050	single sided siliconised densified kraft 0,080 (94)	-40°C to + 300°C	UL, cUL RoHS
3922	matt white	0,020	0,050	double sided siliconised glassine 0,056 (62)	- 40°C to + 300°C	UL, cUL RoHS
3922-DSL	matt white	0,020	0,050	double sided siliconised glassine 0,075 (90)	-40°C to + 300°C	UL, cUL RoHS

Typical performance features

- These products utilise 3M's 150 high temperature acrylic adhesive. Up to 300°C short-term heat resistance and excellent solvent resistance. High internal strength – ideal for applications to HSE plastics and metals.



- A high temperature-resistant label is applied to the face of a PCB to allow tracking around the manufacturing plant during board population, flow solder and drying processes.

- 3M™ Cast Acrylic High Temperature Label Materials are thermal transfer printable, allowing for very fine definition bar codes
- Acrylic label material withstands temperatures associated with the flow solder process
- Printed image is IPA resistant when used with appropriate ribbon
- Typically lower cost than most polyimide equivalent labels

3M™ Destructible Polyurethane Label Materials

Adhesive type 350

Product code	Finish	Adhesive thickness (mm)	Face film thickness (mm)	Liner type in mm (g/m^2)	Temperature resistance	Specs.
3812	matt white	0,025	0,040	single sided siliconised white glassine 0,075 (90)	- 40°C to +120°C	UL, cUL RoHS
3812-DSL	matt white	0,025	0,040	double sided siliconised glassine 0,056 (62)	- 40°C to +120°C	UL, cUL RoHS

Typical performance features

- These products utilise 3M's adhesive 350, designed to provide excellent adhesion to high and low surface energy plastics, metals, painted metals and powder coatings.

- 3M™ Destructible Polyurethane Label Materials are non-shrink white opaque films designed as non-removable label stocks. Once applied in the correct manner, a one piece removal is not possible on most surfaces.

3M™ Acrylic Laser Markable Label Materials

Adhesive type 350

Product code	Finish	Adhesive thickness (mm)	Face film thickness (mm)	Liner type in mm (g/m^2)	Temperature resistance	Specs.
7846 2 layer acrylic	gloss black / white	0,030	0,062	single sided Siliconised white kraft 0,080 (94)	- 40°C to +200°C	UL, cUL RoHS
7847 2 layer acrylic	matt black / white	0,030	0,062	single sided Siliconised white kraft 0,080 (94)	- 40°C to +200°C	UL, cUL RoHS
7848 2 layer acrylic	matt silver / black	0,030	0,062	single sided Siliconised white kraft 0,080 (94)	- 40°C to +200°C	RoHS

Typical performance features

- These products utilise 3M's adhesive 350, designed to provide excellent adhesion to high and low surface energy plastics, metals, painted metals and powder coatings.

- 3M™ Acrylic Laser Markable Label Materials provide excellent chemical and environmental resistance. Two-layered film construction provides excellent long-term performance. Excellent adhesion to LSE plastics. Brittle face material provides destructibility on some surfaces.

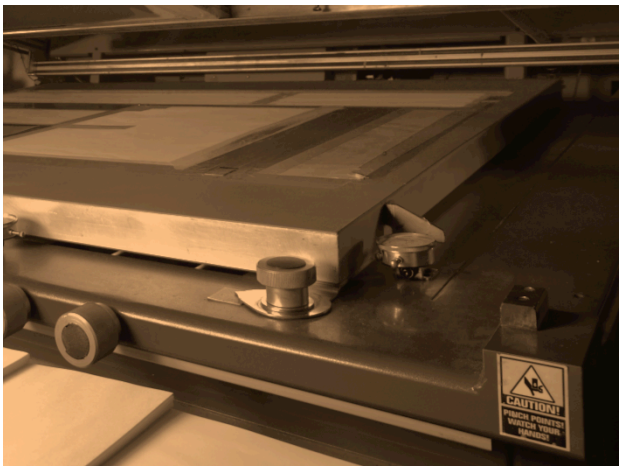
3M™ Polyester Screen Printable Label Materials (sheeted)

Adhesive type 350

Product code	Finish	Adhesive thickness (mm)	Face film thickness (mm)	Liner type in mm (g/m^2)	Temperature resistance	Specs.
7903	bright silver	0,046	0,051	double sided polyethylene coated kraft 0,170 (146)	- 40°C to +150°C	UL, cUL RoHS
7905	gloss clear	0,046	0,051	double sided polyethylene coated kraft 0,170 (146)	- 40°C to +150°C	UL, cUL RoHS
7908	gloss white	0,046	0,051	double sided polyethylene coated kraft 0,170 (146)	- 40°C to +150°C	UL, cUL RoHS
7**909**	brushed silver	0,046	0,051	double sided polyethylene coated kraft 0,170 (146)	- 40°C to +150°C	UL, cUL RoHS

Typical performance features

- 3M™ Screen Printable Sheet Polyester Label Materials are durable, high performance materials that offer excellent thermal stability, moisture resistance and chemical resistance. These materials utilize 3M's adhesive 350, which is designed to permanently bond to high and low surface energy plastics, textured and contoured surfaces, powder coatings, and slightly oily metals.



- The face material for 3M's screen printable sheet polyester label materials 7905, 7908, is top-coated for improved ink anchorage. Variable information can be added by the end-user as the material is thermal transfer printable.
- The face material for 3M's screen printable sheet polyester label materials 7903 and 7909 is print treated for ink anchorage.
- The liner for 3M screen printable sheet polyester label materials 7903, 7905, 7908,and 7909 provides easy sheet processing and is designed for lay-flat. The backside of the liner is not printable.

3M™ Aluminium Foil Label Materials

Adhesive type 320

Product code	Finish	Adhesive thickness (mm)	Face film thickness (mm)	Liner type in mm (g/m²)	Temperature resistance	Specs.	Typical performance features
7800	silver matt	0,042	0,050	single sided densified kraft 0,084 (90)	- 40°C to +180°C	UL, cUL RoHS	▪ These products utilise 3M's 320 adhesive, which offers excellent adhesion to a variety of surfaces including high surface energy (HSE) and low surface energy (LSE) plastics.
7940	silver matt	0,042	0,050	double sided polyethylene coated kraft 0,170 (146)	- 40°C to +180°C	UL, cUL RoHS	

- 3M™ Aluminium Foil Label Materials are durable, thin gauge, 1145 H19 aluminium, designed to meet a wide range of difficult nameplate application requirements
- The liner for 3M™ Aluminium Foil Label Material 7800 is designed for rotary roll to roll applications
- The liner for 3M™ Aluminium Foil Label Material 7940 provides easy sheet processing and is designed to be lay-flat. The back-side of the liner is not printable

3M™ Retro-reflective Label Materials

Adhesive type 200

Product code	Finish	Adhesive thickness (mm)	Face film thickness (mm)	Liner type in mm (g/m²)	Temperature resistance	Specs.	Typical performance features
3929	silver retro-reflective	0,025	0,123	clay coated paper 0,114 (130)	- 40°C to +180°C	UL, cUL RoHS	▪ 3M™ Label Material 3929 is designed for long range bar code scanning. When bar code printed, the retro-reflective face material extends the maximum and minimum scanning distance of long range scanners.

NOTE: 3M is unable to specify a maximum scanning distance with this material because of the differences between long range scanners

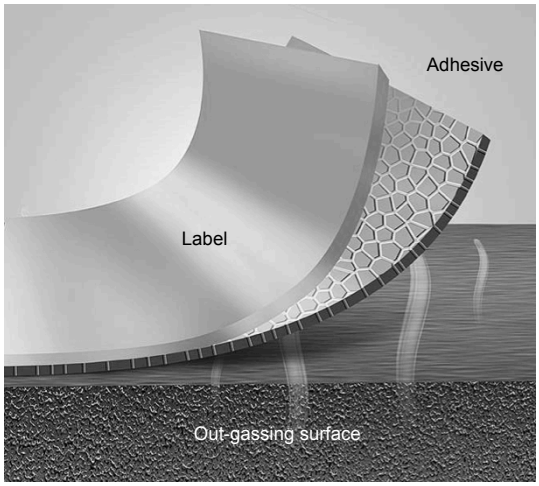
3M™ Structured Adhesive Label Materials

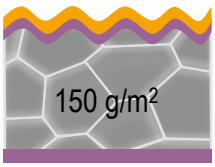
Adhesive type 350

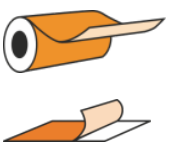
Product code	Finish	Adhesive thickness (mm)	Face film thickness (mm)	Liner type in mm (g/m^2)	Temperature resistance	Specs.
7220SA	gloss white	0,028	polyester 0,050	embossed polyethylene coated kraft 0,195 (150)	- 40°C to +150°C	RoHS
7214SA	brushed silver	0,028	polyester 0,050	embossed polyethylene coated kraft 0,195 (150)	- 40°C to +150°C	RoHS
7051SA	matt white	0,028	extended vinyl 0,095	embossed polyethylene coated kraft 0,195 (150)	- 40°C to +90°C	RoHS

Typical performance features

- These products utilise 3M's 350 adhesive, designed to provide excellent adhesion to high and low surface energy plastics, metals, painted metals and powder coatings.







- These label materials are designed for use at Narrow Web & Screen Print Converters and OEM's who need to apply bubble-free product identification decals and graphics for long-term durability. 3M™ Performance Labels with Structured Adhesive can be applied wrinkle and bubble-free, even on plastics that are prone to out-gassing, reducing costly rework & scrap.

- **How does it work?**

The Structured Adhesive Label Material features unique micro-channels throughout the adhesive so air flows freely from between the label adhesive and substrate, virtually eliminating bubbles caused by entrapment or out-gassing. The "SA" technology keeps labels smooth and bubble free better than traditional label stock

3M™ Chemical Resistant Polyester Label Materials

Adhesive type 350E

Product code	Finish	Adhesive thickness (mm)	Face film thickness (mm)	Liner type in mm (g/m^2)	Temperature resistance	Specs.	Typical performance features
76962 AR MW PET50 350E/46-65DWG	matt white	0,046	0,050	double sided siliconised white glassine 0,056 (62)	- 40°C to +150°C	UL, cUL RoHS	▪ These products utilise 3M's 350E adhesive, designed to provide excellent adhesion to high and low surface energy plastics, metals, painted metals and powder coatings.
76964 AR MS PET50 350E/46-65DWG	matt silver	0,046	0,050	double sided siliconised white glassine 0,056 (62)	- 40°C to +150°C	UL, cUL RoHS	
7870E	matt white	0,027	0,050	single sided siliconised white glassine 0,077 (90)	- 40°C to +150°C	UL RoHS	

76962 and 76964 polyester label stocks are also recommended for printing with Ricoh B110 CU ribbon

▪ Product identification labels that need to withstand harsh environments and resistance to aggressive solvents / chemicals are often pre-printed and then over-laminated by the converter.

▪ 3M™ Durable Resin Ribbon 92904 offers high solvent & chemical resistance when printed on a AR and 7870E polyester label materials allowing sequential labelling of parts at the point of application without the need for over-lamination.

▪ The combination of 3M 92904 ribbon with 3M recommended label stocks offers superior chemical resistance to very harsh organic solvents (e.g. Acetone, Methyl ethyl ketone (MEK), Toluene) for on-demand variable printing applications in Automotive, Electronics (e.g. chemical cleaning, degreasing) and Chemical Drum and IBC labelling.

3M™ Laser Toner Printable Polyester Label Materials

Adhesive type 250E

Product code	Finish	Adhesive thickness (mm)	Face film thickness (mm)	Liner type in mm (g/m^2)	Temperature resistance	Specs.	Typical performance features
76638 LT1 MW PET50 250E-100LK	matt white	0,020	0,056	polyethylene coated white kraft 0,128 (120)	- 40°C to +150°C	UL, cUL RoHS	▪ These products utilise 3M's 250E general industrial acrylic adhesive which has lower initial peel, but comparable adhesion to both 300 and 300E adhesives. A firmer adhesive than 300 and 300E, resulting in less ooze.
I00Y3 Laserprint MS PET50-HP250-90LK	matt silver	0,020	0,056	layflat white kraft 0,094 (90)	- 40°C to +150°C	UL, cUL RoHS	

▪ 3M™ Laser Toner Printable Polyester Label Materials have matt top coats designed to accept images via laser toner. The top coat also provides improved ink anchroage for traditional forms of press printing

3M™ Polyester Tamper-indicating Label Materials : TRIANGLES

Adhesive type 350E

Product code	Finish	Adhesive thickness (mm)	Face film thickness (mm)	Liner type in mm (g/m^2)	Temperature resistance	Specs.	Typical performance features
76970 TT5 MW PET50 TRIANGLES 350E/20-90WG	matt white	0,020	0,056	single sided siliconised white glassine 0,077 (90)	- 40°C to (+150°C)*	RoHS	▪ These products utilise 3M's adhesive 350E, designed to provide excellent adhesion to high and low surface energy plastics, metals, painted metals and powder coatings.
76971 TT5 MS PET50 TRIANGLES 350E/20-90WG	matt silver	0,020	0,056	single sided siliconised white glassine 0,077 (90)	- 40°C to (+150°C)*	RoHS	

3M™ Polyester Tamper-indicating Label Materials : VOID

Adhesive type 300

Product code	Finish	Adhesive thickness (mm)	Face film thickness (mm)	Liner type in mm (g/m^2)	Temperature resistance	Specs.	Typical performance features
7380	matt white	0,020	0,058	Densified kraft 0,078 (90)	- 40°C to +120°C	UL, cUL RoHS	▪ These products utilise 3M's high strength acrylic adhesive 300E, designed for applications requiring greater initial adhesion, especially to LSE surfaces and powder-coats, without loss of shear or temperature resistance.
7866	gloss white	0,020	0,050	densified kraft 0,078 (90)	- 40°C to +120°C	UL, cUL RoHS	

3M™ Polyester Tamper-indicating Label Material: BLUE STOP

Adhesive type 350E

Product code	Finish	Adhesive thickness (mm)	Face film thickness (mm)	Liner type in mm (g/m^2)	Temperature resistance	Specs.	Typical performance features
76811 TT0 Gloss Blue STOP PET-50-350E-90WG **NEW**	gloss blue	0,020	0,050	single sided siliconised white glassine 0,077 (90)	- 40°C to (+150°C)*	RoHS	▪ These products utilise 3M's adhesive 350E, designed to provide excellent adhesion to high and low surface energy plastics, metals, painted metals and powder coatings.

- 3M™ 76811 TT0 Gloss BLUE STOP PET50-350E/20-90WG is a tamper-indicating polyester label material, designed to provide a STOP message pattern in the face material when removal is attempted
- The face material is top-coated for thermal transfer printing. The top-coat also provides improved ink anchorage for traditional forms of press printing
- 76811 polyester label material uses 3M's adhesive 350E, which is designed for applications where high performance and chemical resistance is important
- The BLUE STOP security system, when tampered with, will activate a security mechanism to give a clear on blue contrast "STOP" message in the face of the polyester

3M™ White Polyolefin Label Material

Adhesive type P1650

Product code	Finish	Adhesive thickness (mm)	Face film thickness (mm)	Liner type in mm (g/m²)	Temperature resistance	Specs.	Typical performance features
FP0354EG NEW	matt white	0,038	0,083	single sided siliconised white glassine 0,056 (62)	- 40°C to +60°C	RoHS	▪ 3M™ White Polyolefin Label Product FP0354EG is a matte white opaque material that offers excellent durability, conformability and moisture resistance. This label product utilizes 3M's P1650 adhesive, which is designed for use in demanding environments.

▪ The face film on FP0354EG is extremely pliable and conformable. This makes it ideal for applications where the face material must conform with changes in the substrate , such as pharmaceutical labelling applications.
▪ FP0354EG is also thermally transfer printable with 3M™ 92904 Durable Resin Ribbon to provide printed images with high resistance to acetone solvent.

3M™ White Polypropylene Label Material

Adhesive type P1400

Product code	Finish	Adhesive thickness (mm)	Face film thickness (mm)	Liner type in mm (g/m²)	Temperature resistance	Specs.	Typical performance features
7777	gloss white	0,023	0,066	super calendered kraft paper 0,08 (80)	- 30°C to +125°C	UL, cUL RoHS	▪ 3M™ Polypropylene Label Material 7777 is a durable material that offers good thermal stability and moisture resistance. This label material utilises 3M's P1400 permanent acrylic adhesive, which is designed for use in various applications.

3M™ White Polyethylene Tamper-indicating Label Material

Adhesive type 350E

Product code	Finish	Adhesive thickness (mm)	Face film thickness (mm)	Liner type in mm (g/m²)	Temperature resistance	Specs.	Typical performance features
76968E	matt white	0,020	0,095	single sided siliconised white glassine 0,077 (90)	- 40°C to +60°C	RoHS	▪ 76968E utilises 3M's 350E adhesive, designed to provide excellent adhesion to high and low surface energy plastics, metals, painted metals and powder coatings.

UL- and cUL-Certification

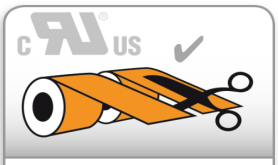
If you and your company wish to export electronic products to the USA and/or Canada, it will be necessary to apply for a UL (for the USA) or a cUL/CSA (for Canada) safety test in order to fulfil the specific country's consumer protection regulations. Special requirements must be met in terms of the name plates applied to the devices if they contain information relevant for safety. 3M has its own authorized UL/cUL testing lab at our Wroclaw manufacturing facility. Here, our Label stocks are tested to the requirements specified by UL Standard 969 (Marking and Labelling Systems) to ensure their suitability as name plate materials. Both their adhesive strength and their wear resistance are tested, also with regard to the feasibility of additional printing using thermal transfer. The tested label stock/thermal transfer ribbon combinations are then deemed UL or cUL recognised component parts in the category PGJI2/8, listed with the 3M file numbers MH 18072 (PGJI2/8) and MH 16411 (PGJI2).

Is your name plate UL/cUL certified?

Does your name plate satisfy the requirements of the safety testing? The only way to find out is by providing a complete chain of evidence of the specific certification showing all prior steps "your" labels have taken, from the material production through several potential process/trading steps, all the way to you.

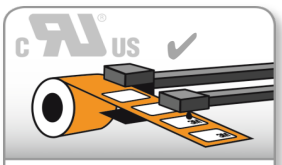
Label Stock Manufacturer 3M:
3M Wroclaw (UL File MH 18072)
+ 3M Medina (UL File MH 16411)
Category PGJI2 (UL) & PGJI8 (cUL)

Compliance must be proven for each of these steps. Only if this requirement is met, is it permissible to print the specific symbol (UL, cUL, CSA) on the packaging, the core of a roll, the roll header labels or on the actual name plate itself. Ultimately, this certification is shown by applying the mirror image of the UR Logo to the product label. Missing evidence discovered when tracing certified components during UL tests often leads to irritation and unnecessary follow-ups.



Slitter Distributor Company

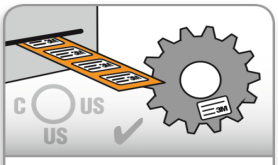
Obtaining UL, cUL and CSA approval is a time-consuming and costly process. 3M as manufacturer of label stock has therefore had an extensive range of products certified, including the most common printing processes, in order to help substantially reduce the testing efforts necessary for our market partners.



Converter company

In general, it is required that all components and process steps of the label are approved:

- the basic material (face material and adhesive)
- all cutting and die-cutting processes, printing processes and inks
- all further treatments (for example, over-laminate)
- all steps and components necessary for receiving additional printing (inks and ribbons)



Appliance Manufacturer (e.g. medical devices)
End customer prints blank labels with thermal transfer ribbons that are approved to UL and cUL

Product coding explained

Primary Range:

Market Product Code: 7871EC

Descriptor: TT2 GW PET50 – 350E/46 – 65DWG

- Top coat
- Finish , Gloss White
- Face film (Polyester 50 micron)
- Adhesive code (and c/w if 350E)
- Liner code (number = gsm , K = Kraft, WG = White glassine

Top-coats

Product:	Appearance:	Description:
TT1	Matt	cUL approved. General-purpose thermal transfer printable top-coat (Can also be dot matrix printed with a suitable ribbon or laser toner printed)
TT2	Gloss	cUL approved. General-purpose thermal transfer printable top-coat
TT3	Matt	cUL approved. High durability and chemical resistant thermal transfer printable matt top-coat for automotive (brake fluid resistant) and other demanding applications. Excellent UV resistance.
TT4	Matt	cUL approved. Outdoor UV-resistant thermal transfer printable matt top-coat. Also printable by laser toner printers and some dot matrix ribbons.
TT5	Matt	cUL approved. Premium quality thermal transfer and flexographic printable matt top-coat. Can be thermal transfer printed at lower heat settings on many printers , thus extending print head life.
LT1	Matt	Not cUL approved with laser toner. General purpose laser toner printable top-coat. Also printable by some thermal transfer printers and also some dot matrix ribbons.
AR	Matt	3M's most durable top-coat. Thermal transfer printed image is resistant to most chemicals, including Acetone, when used with the appropriate thermal transfer ribbon.

Adhesives

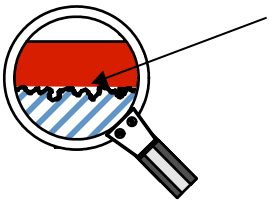
Product	Description	Application Temperature	Service Temperature
150	High temperature-resistant acrylic adhesive. Up to 232°C short-term heat resistance and excellent solvent resistance. High internal strength – ideal for application to HSE plastics and metals.	> +10°C	-40°C to +232°C
200	High performance acrylic adhesive. Up to 177°C short-term heat resistance and medium solvent resistance. Excellent peel strength on HSE plastics and metals. Good long-term ageing.	> +10°C	-40°C to +177°C
250E	Acrylic adhesive. This adhesive has lower initial peel, but comparable adhesion to both 300 and 300E adhesives. A firmer adhesive than both 300 and 300E, resulting in less ooze.	> +10°C	-40°C to +150°C
300	High-strength acrylic adhesive. Up to 121°C short-term heat resistance. Greater initial adhesion, especially to LSE plastics. Quick flowing for application to textured plastics and powder-coats.	> +10°C	-40°C to +121°C
300E	High-strength acrylic adhesive. This adhesive is designed for applications requiring greater initial adhesion, especially to LSE surfaces and powder-coats, without loss of shear or temperature resistance.	> +10°C	-40°C to +150°C
310E	High-precision acrylic adhesive. Excellent UV resistance. This adhesive provides firmness and high-precision strength to a variety of surfaces, including HSE plastics, glass and metals.	> +10°C	-40°C to +150°C
320	High-tenacity acrylic adhesive. This adhesive is designed for applications requiring high bond strength on a variety of surfaces, including HSE and LSE plastics. Excellent flagging resistance on small diameters.	> +10°C	-40°C to +121°C
350	High-holding acrylic adhesive. This is a modified acrylic adhesive, designed for very high bond strength to most surfaces. Excellent holding strength, even at high temperatures.	> +10°C	-40°C to +150°C
350E	High-holding acrylic adhesive. This is a modified acrylic adhesive, designed for very high bond strength to most surfaces. Excellent holding strength, even at high temperatures.	> +10°C	-40°C to +150°C
400	Low-temperature acrylic adhesive. Good low temperature performance and peel strength on many surfaces. Excellent clarity and UV-resistance makes this adhesive ideal for window labels or over-laminating applications.	> -12°C	-51°C to +121°C
1000	Repositionable acrylic adhesive. Good holding to many surfaces. Clean removal or numerous re-applications to many surfaces. Stain-resistant on many surfaces.	> -15°C	-30°C to +121°C
P1400	High-performance tackifed acrylic adhesive. Excellent UV and moisture resistance. Formulated for use in demanding environments. Excellent adhesion to a wide range of substrates.	> +5°C	-30°C to +150°C
P1650	High-performance acrylic adhesive. Designed to meet difficult automotive specifications. Good chemical and moisture resistance. Excellent thermal stability. Resistance to many automotive and industrial fluids.	> +5°C	-40°C to +150°C
SE100	Acrylic adhesive designed to provide superior bonding to low surface energy plastics and composites, typically those used in automotive applications. Also suitable for many rough or textured surfaces.	> +15°C	-40°C to +150°C

Surface Preparation Considerations

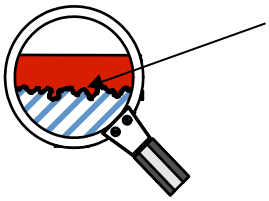
For maximum bond strength of any pressure-sensitive adhesive, the substrate surface should be clean and dry. Typical cleaning solvents are heptane and isopropyl alcohol.

PLEASE NOTE: When using solvents, read and follow carefully the manufacturer's precautions and directions for use.

For best bonding conditions, the application surface should be at room temperature or higher. Low temperature surfaces, for example those below 5°C can cause the adhesive to become so firm that it will not develop maximum contact with the substrate. Higher initial bonds can be achieved through increased rub down pressure.



In the first example, the diagram shows poor rub down pressure, resulting in large areas of non-contact between the adhesive and the substrate.



In the second example, the diagram shows good rub down pressure, resulting in total contact between the adhesive and the substrate.

Surface Energy and Adhesives Compatibility

Surface energy is measured in dynes per centimetre. The dyne level is the actual reading of the critical surface tension. The chart below compares the relative surface energy of commonly used substrates and suggests which of the 3M Label Material adhesives should be suitable for each category. The final choice is, of course subject to evaluation and approval for each individual application by the user.

Metals and Glass

Surface Energy:	Substrate:
1103 Dynes/cm:	Copper
840 Dynes/cm:	Aluminium
753 Dynes/cm:	Zinc
526 Dynes/cm:	Tin
458 Dynes/cm:	Lead
700 - 1000 Dynes/cm:	Stainless Steel
250 – 500 Dynes/cm:	Glass

High Surface Energy Plastics

Surface Energy:	Substrate:
50 Dynes/cm:	Kapton®
47 Dynes/cm:	Phenolic
46 Dynes/cm:	Nylon
45 Dynes/cm:	Alkyd Enamel
43 Dynes/cm:	Polyester (PET)
43 Dynes/cm:	Epoxy Paint
43 Dynes/cm:	Polyurethane Paint
42 Dynes/cm:	ABS
42 Dynes/cm:	Polycarbonate
39 Dynes/cm:	PVC
38 Dynes/cm:	Noryl®
38 Dynes/cm:	Acrylic

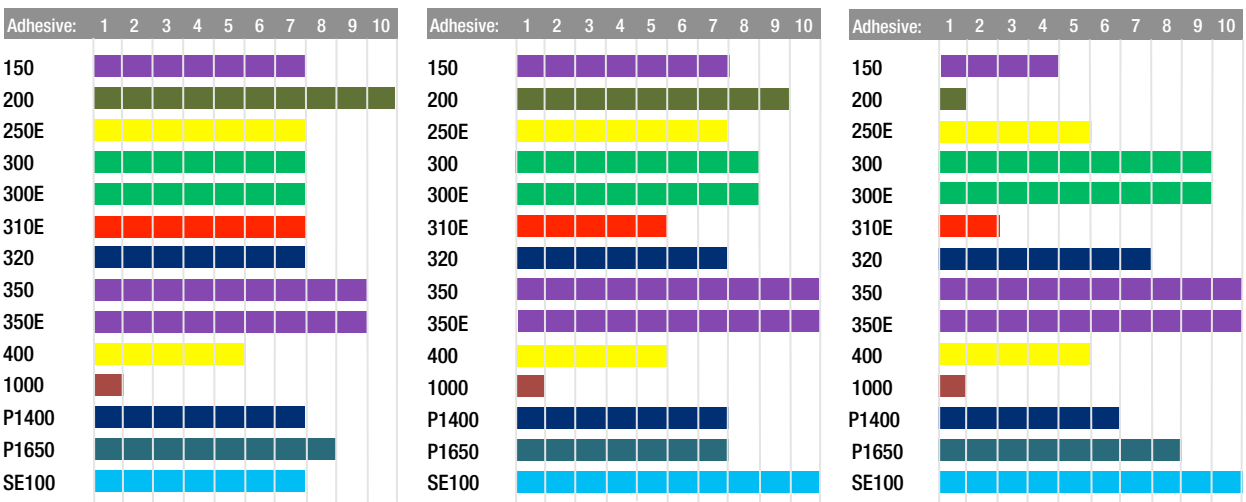
Low Surface Energy Plastics

Surface Energy:	Substrate:
37 Dynes/cm:	PVA
36 Dynes/cm:	Polystyrene (PS)
36 Dynes/cm:	Acetal
33 Dynes/cm:	EVA
31 Dynes/cm:	Polyethylene (PE)
29 Dynes/cm:	Polypropylene
28 Dynes/cm:	Tedlar®
24 Dynes/cm:	Silicone
18 Dynes/cm:	Teflon
** Dynes/cm:	Powder-coats

** Broad range of surface energies

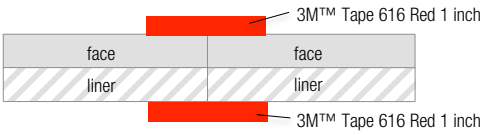
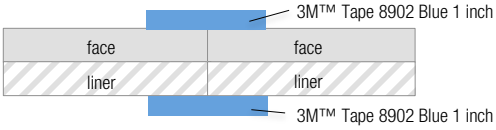
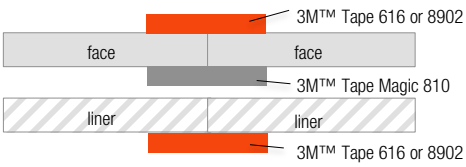
Adhesive Selection Chart Based on Surface Energy

(The charts below are based on relative adhesion within each given surface energy category)



1 = Lowest Performance, 10 = Highest Performance – Above adhesives are used in the manufacture of our core range of Label Materials. Contact us for details of our full range.

Product and Manufacturing Standards

Requirement	Standard
Core Diameter	Inner Diameter: 76.6mm Core wall thickness: 12mm
Number of splices	0-250 m = 1 splice maximum 250-500m = 2 splices maximum 500m-1000m = 3 splices maximum More than 3 splices = contact with customer
Splice Positioning	There should be no splice within the first 50 metres and last 50 metres of the roll
Splice Configuration	For materials with one side liner siliconised:  For materials with two side liner siliconised:  Special strengthened splice on customer request: (for one side siliconised liners, tape = 3M 616, for two sided siliconised liners, tape = 3M 8902) 
Slit Width Tolerance	+/- 1 mm
Roll Length Tolerance	+/- 1 %
Roll Length Specification	For products with 350E adhesive coated at 46gsm – maximum roll length is 500 metres For products with 350E adhesive coated at 65gsm – maximum roll length is 250 metres
Total Order Tolerance	For CORE (NOW) products, +/-10% For Laminate to Order (LTO) products, +/- 15%

Product Index by Face Material

Product code	Finish	Page
76610	matt white polyester	Page 5
76638	matt white polyester	Page 16
76962	matt white polyester	Page 16
7810EH	matt white polyester	Page 6
7815EB	matt white polyester	Page 7
7815EH	matt white polyester	Page 7
7870E	matt white polyester	Page 16
7874EC	matt white polyester	Page 5
G61SB	matt white polyester	Page 8
7220SA	gloss white polyester	Page 15
7816E	gloss white polyester	Page 7
7816EC	gloss white polyester	Page 7
7816EH	gloss white polyester	Page 7
7860E	gloss white polyester	Page 6
7860EH	gloss white polyester	Page 6
7868E	gloss white polyester	Page 5
7871EC	gloss white polyester	Page 5
7871EJ	gloss white polyester	Page 5
7908	gloss white polyester (S)	Page 13
92200	gloss white polyester	Page 4
92205	gloss white polyester	Page 4
D85YB	gloss white polyester	Page 8
76751S	matt silver polyester	Page 5
76964	matt silver polyester	Page 16
7808E	matt silver polyester	Page 7
7813EH	matt silver polyester	Page 6
7818EH	matt silver polyester	Page 7
7879EJ	matt silver polyester	Page 5
92350	matt silver polyester	Page 4
G62SB	matt silver polyester	Page 8
I00Y3	matt silver polyester	Page 17
7872EC	platinum silver polyester	Page 5
7872EJ	platinum silver polyester	Page 5
7875E	platinum silver polyester	Page 7
D84YB	platinum silver polyester	Page 8

Product code	Finish	Page
7214SA	brushed silver polyester	Page 15
7909	brushed silver polyester (S)	Page 13
7863	bright silver polyester	Page 6
7903	bright silver polyester (S)	Page 13
7861	gloss clear polyester	Page 6
7861E	gloss clear polyester	Page 6
7876EC	gloss clear polyester	Page 5
7905	gloss clear polyester (S)	Page 13
76500	matt clear over-laminating polyester	Page 10
7732FL	matt clear over-laminating polyester	Page 10
7736	matt clear over-laminating polyester	Page 10
7730FL	gloss clear over-laminating polyester	Page 10
7746	gloss clear over-laminating polyester	Page 10
7735FL	gloss clear over-laminating acrylic	Page 10
7737FL	matt velvet over-laminating film	Page 10
3690E	gloss white cast vinyl	Page 11
3690-1802E	gloss yellow cast vinyl	Page 11
3698E	gloss silver cast vinyl	Page 11
3929	retro-reflective silver	Page 14
7800	matt silver aluminium foil	Page 14
7940	matt silver aluminium foil (S)	Page 14
7051SA	matt white extended life vinyl	Page 15
7000	gloss white pharmaceutical paper	Page 9
7110	matt white pharmaceutical paper	Page 9
7113	matt white pharmaceutical paper	Page 9
7142	coated white pharmaceutical paper	Page 9
7846	gloss black / white 2-layer acrylic	Page 12
7847	matt black / white 2-layer acrylic	Page 12
7848	matt silver / black 2-layer acrylic	Page 12
3921	matt white cast acrylic high temperature	Page 11
3922	matt white cast acrylic high temperature	Page 11
3922-DSL	matt white cast acrylic high temperature	Page 11
3812	matt white destructible polyurethane	Page 12
3812-DSL	matt white destructible polyurethane	Page 12

(S) indicates a sheeted product

Product Index by Face Material

3M Converter Markets

UNIT CONVERSION CHART

	Multiply by:	Divide by:	Formula
To convert square meters			
to square feet:	10.764		(# of m2) x 10.764 = ft2
to square yards:	1.2		(# of m2) x 1.20 = yd2
to MSI:	1.55		(# of m2) x 1.550 = MSI
To convert square feet			
to square meters:	0.093		(# of ft2) x 0.093 = m2
to square yards:	0.111		(# of ft2) x 0.111 = yd2
to MSI:	0.144		(# of ft2) x 0.144 = MSI
To convert square yards			
to square meters	0.836		(# of yd2) x 0.836 = m2
to square feet	9		(# of yd2) x 9 = ft2
to MSI	1.296		(# of yd2) x 1.296 = MSI
To convert MSI (Thousand square inches)			
to square meters:	0.645		(# of MSI) x 0.645 = m2
to square yards:	0.77	1.296	(# of MSI) x 0.77 = yd2 or (# of MSI) / 1.296 = yd2
to square feet:	6.94	0.144	(# of MSI) x 6.94 = ft2 or (# of MSI) / 0.144 = ft2
To convert paper or liner basis weights:			
From pounds to grams per square meters:	1.63		(# of lbs) x 1.63 = grams/m2
From grams per square meter to pounds:	0.613		(# of grams/m2) x 0.613 = lbs
To convert millimeters to inches:	0.03937		(# of mm) x .0303937 = inches

3M Converter Markets

PRICE CONVERSION CHART

	Multiply by:	Divide by:	Formula
To convert price per square meter			
to square feet:	0.093		(price/m2) x 0.093 = price/ft2
to square yards:	0.836		(price/m2) x 0.836 = price/yd2
to MSI:	0.645		(price/m2) x 0.645 = price/MSI
To convert price per square foot			
to square meters:	10.764		(price/ft2) x 10.764 = price/m2
to square yards:	9		(price/ft2) x 9 = price/yd2
to MSI:	6.94	0.144	(price/ft2) x 6.94 = price/MSI or (price/ft2) / 0.144 = price/MSI
To convert price per square yard			
to square meters	1.2		(price/yd2) x 1.20 = price/m2
to square feet	0.111		(price/yd2) x 0.111 = price/ft2
to MSI	0.77	1.296	(price/yd2) x 0.77 = price/MSI or (price/yd2) / 1.296 = price/MSI
To convert price per MSI			
to square meters:	1.55		(price/MSI) x 1.550 = price/m2
to square yards:	1.296		(price/MSI) x 1.296 = price/yd2
to square feet:	0.144		(price/MSI) x 0.144 = price/ft2

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3M

Industrial Adhesives & Tapes Division
3M Wroclaw Sp. z.o.o
Kowalska 143
51-424 Wroclaw
Poland

Industrial Adhesives & Tapes Division
3M Europe
Hermeslaan 7
1831 Diegem
Belgium
tthinchcliffe@mmm.com
jarufat1@mmm.com