Ref. 7879 — Matt silver TT3 polyester

Matt silver TT3 polyester 81 µm / #350 E acrylic adhesive / white densified glassine liner

DESCRIPTION

Self-adhesive label made of matt silver polyester with TT3 treatment, designed for thermal transfer printing. The matt TT3 treatment gives high resistance combined with a surface smooth enough for thermal transfer, and the printed image offers excellent resistance to abrasion and chemicals, including brake fluid. The #350 E acrylic adhesive, 46 µm thick, offers excellent adhesion even to low surface energy substrates and offers high resistance to temperature and chemicals. The 90 g/m² densified glassine liner is siliconised on both sides, to ease die-cutting and prevent adhesive transfer.

QUICK SUMMARY

Facestock: Matt silver TT3 polyester, 81 µm

Adhesive: #350 E permanent acrylic, 46 µm

Liner: White densified glassine, 90 g/m²

Printing: Thermal transfer with resin ribbons

Key points

· UL and cUL listed (file MH 18072)

· Printed image resists abrasion and chemicals

· Bonds to low surface energy substrates

· Adhesion retained after 72 h at −40 °C

· Shelf life: 24 months

KEY ADVANTAGES

- Matt TT3 treatment: high resistance combined with a surface smooth enough for thermal transfer printing.
- The printed image offers excellent resistance to abrasion and chemicals, including brake fluid.
- #350 E adhesive: excellent adhesion to low surface energy substrates and resistance to temperature and chemicals.
- Adhesive thickness of 46 µm, allowing excellent adhesion on textured surfaces.
- 90 g/m² densified glassine liner, siliconised on both sides, which eases rotary die-cutting.
- UL and cUL listed (file MH 18072).

RECOMMENDED APPLICATIONS

- Rating plates and barcode labels.
- Property identification and asset labelling.
- Warning, instruction and service labels on durable goods.
- Identification plates for durable goods, electronic equipment and sports equipment.

PRINTABILITY

The facestock is treated to receive inks by thermal transfer, with resin ribbons recommended. It can also be printed by all the traditional rotary processes: flexo, hot stamping, letterpress and screen printing. Suitable ribbons: Armor AXR 8, Ricoh B110 CX, Sony TR 5070, Astromed R5 and RY, and Kurz 501.

MATERIAL STRUCTURE

LAYER	CODE	DESCRIPTION
Facestock	—	Matt silver polyester with TT3 treatment. Thickness of 81 µm.
Adhesive	#350 E	Permanent acrylic. Thickness of 46 µm.
Liner	—	White densified glassine paper, siliconised on both sides. Thickness of 77 µm and substance of 90 g/m².

90° PEEL ADHESION (FTM 2)

SUBSTRATE AND CONDITION	UNITS	VALUE	STANDARD
Aluminium (20 min at 23 °C)	N/cm	6.9	FTM 2
Aluminium (72 h at the UL maximum temperature)	N/cm	9.4	FTM 2
Stainless steel (20 min at 23 °C)	N/cm	7.4	FTM 2
Stainless steel (72 h at the UL maximum temperature)	N/cm	11.0	FTM 2
ABS (20 min at 23 °C)	N/cm	6.9	FTM 2
Polycarbonate (20 min at 23 °C)	N/cm	7.1	FTM 2
Polypropylene (20 min at 23 °C)	N/cm	5.4	FTM 2
High-density polyethylene (20 min at 23 °C)	N/cm	4.1	FTM 2

COLD ADHESION AND THERMAL STABILITY

PROPERTY	UNITS	VALUE	STANDARD
Aluminium (−40 °C, 72 h)	N/cm	6.3	FTM 2
Stainless steel (−40 °C, 72 h)	N/cm	8.0	FTM 2
ABS (−40 °C, 72 h)	N/cm	7.5	FTM 2
Polypropylene (−40 °C, 72 h)	N/cm	6.4	FTM 2
High-density polyethylene (−40 °C, 72 h)	N/cm	4.0	FTM 2
Machine-direction shrinkage (149 °C, 24 h)	%	0.7	—
Cross-direction shrinkage (149 °C, 24 h)	%	0.9	—
Humidity resistance (38 °C, 100 % RH, 24 h)	—	No visual or adhesion change	—

CHEMICAL RESISTANCE

Four-hour immersion tests at 22 °C. The specimens are applied to stainless steel for 24 hours before immersion and adhesion is measured one hour afterwards, at a 90° angle (FTM 2 method) and 305 mm/min.

RESULTS BY CHEMICAL

CHEMICAL	ADHESION TO STEEL (N/CM)	VISUAL APPEARANCE	EDGE PENETRATION (MM)
Heptane	8.2	No change	3
Petrol	6.0	No change	3
Diesel	6.1	No change	1
SAE 15W40 motor oil	7.4	No change	0
DOT 4 brake fluid	7.8	No change	1
Windscreen washer fluid	7.1	No change	0
Isopropyl alcohol (IPA)	6.8	No change	1
Toluene	5.2	No change	4
Methyl ethyl ketone	5.4	No change	4
Citrus solvent	6.2	No change	2
Teepol detergent	7.4	No change	0
pH 4 solution	6.6	No change	0
pH 10 solution	7.2	No change	0
409 solution	6.6	No change	0

STORAGE CONDITIONS

PROPERTY	UNITS	VALUE	TOLERANCE
Optimum storage temperature	°C	22	± 2
Storage relative humidity	%	50	± 5
Shelf life from manufacture	months	24	—

STORAGE AND SHELF LIFE

Shelf life of 24 months from the date of manufacture, if the product is kept at 22 °C and 50 % relative humidity. Keeping the labels in plastic bags is recommended.

USAGE RECOMMENDATIONS

- For the highest level of adhesion, the surface must be clean and dry.
- The solvents most used to clean surfaces are heptane and isopropyl alcohol.
- The best adhesion performance is achieved with the surface at room temperature or above.
- Low temperatures, below 10 °C, can stiffen the adhesive: adhesion can be increased by applying more pressure.
- Use rotary dies. Stacking the labels in sheets or fan-folding them is not recommended.

IMPORTANT NOTES

- UL and cUL listed: refer to file MH 18072.
- For information on compatible inks meeting UL and cUL requirements, contact 3M technical service.
- Resin ribbons are recommended to achieve high durability of the markings.
- The values are averages determined by standard methods and are not valid for specification purposes.

This document is a technical data sheet for commercial use. For any advice on the suitability of the material, please contact us.