



**Technical Data sheet**  
**Version 6**  
**Date : 08-12-2003**

**M1140 metallic permanent tape**

M1140 is a matt silver polyester tape for thermal transfer printing. It is formulated with a permanent acrylic adhesive and is mainly used for inventory marking as well as for adhesion onto rough surfaces. It can be recommended for outdoor usage. This tape is halogen free.

Property	Unit	Value		Test method
<b>1. General</b>				
- Total thickness	Micron	135 ± 10%		Micrometer
- Thickness face material	Micron	50 ± 10 %		
- Thickness liner	Micron	55 ± 10%		
<b>2. Adhesive properties</b>				
	N/25mm	<b>Dwell</b>		PSTC-1 (modified for 72 hours)
		<b>24 hrs</b>	<b>72 hrs</b>	
- To stainless steel		32	32	
- To glass		33	38	
- To PVC		23	38	
- To powder coated steel		21	34	
- To wood		17	18	
- To polypropylene film		15	16	
- To polyethylene		8	9	
- To Lever Arch File		10	12	
- To steel computer casing		10	16	
- To textured ABS		16	32	
<b>3. Chemical resistance of text printed in ILP219</b>				
- Eurosuper	30x	No visible effect		Crockmeter, 900g weight/arm
- Diesel	30x	No visible effect		
- Isopropylalcohol	30x	No visible effect		
- Ethanol	30x	No visible effect		
- Ethyl acetate	5x	Printing gone		
- Skydrol* LD-4 (hydraulic engine oil)	30x	No visible effect		
- Sabesto** ( brake fluid cleaner)	30x	No visible effect		
- Water	30 x	No visible effect		

<p><b>Abrasion resistance of text printed in ILP219</b></p> <ul style="list-style-type: none"> <li>- Pencil erasure</li> <li>- Polystyrene pin</li> <li>- Sandpaper</li> </ul>	<p>30x 30x 30x</p>	<p>No visible effect No visible effect Moderate print removal</p>	
<p><b>4. UV light stability of label</b></p> <p>30 days with UV light in suntester</p>		<p>No visible effect on text and background</p>	
<p><b>5. UV light stability of adhesive</b></p> <p>30 days with UV light in suntester</p>		<p>No loss of adhesive properties.</p>	
<p><b>6. Temperature stability</b></p> <ul style="list-style-type: none"> <li>- Application temperature</li> <li>- Long term high service temperature <ul style="list-style-type: none"> <li>- 30 days at 90°C</li> <li>- 30 days at 120°C</li> </ul> </li> <li>- Long term low service temperature <ul style="list-style-type: none"> <li>- 30 days at –18°C</li> </ul> </li> <li>- Short term high service temperature <ul style="list-style-type: none"> <li>- 5' exposure</li> </ul> </li> </ul>	<p>°C</p>	<p>Room temperature</p> <p>No visible effect</p> <p>No visible effect</p> <p>No visible effect</p> <p>No visible effect to tape up to 170°C ; slight shrinkage of tape at 180°C ; moderate shrinkage of tape at 210°C but tape still legible and functional</p>	
<p><b>7. Humidity resistance of label</b></p> <ul style="list-style-type: none"> <li>- 30 days at 40°C, 95 % R.H.</li> </ul>		<p>No visible effect on text and background</p>	
<p><b>8. Weatherability in QUV with rain/sun cycles</b></p> <ul style="list-style-type: none"> <li>- 30 days at 60°C</li> </ul>		<p>No visible effect on text. Slight yellowing of background</p>	
<p><b>9. Adhesion onto rough surfaces</b></p> <ul style="list-style-type: none"> <li>- 30 days on computer housing</li> </ul>		<p>No loss of adhesive properties.</p>	

<b>10. Shelf life of cassette</b>		1 year at 5-25°C and 40-80% relative humidity in its original packaging. We are confident that our product will perform well beyond this time frame. However, it remains the responsibility of the user to assess the risk of using such product. We encourage our customers to develop functional testing protocols that will qualify a product's fitness for use, in their actual applications.
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***\*Skydrol is a registered trademark from Solutia***

***\*\* Sabesto is a registered trademark from Wurth***

Scratch & Solvent resistance : The printed labels are subjected to different scratching sources and chemicals for a fixed number of cycles with a finger weight of 900g.