

**PENSTICK® Digital 4152CLS / 4152WHS**  
 Cling film for Digital Printing



<b>Film</b>		
Material	plasticised PVC (Phthalate-free)	
Thickness	150 µm ( ± 10%) (DIN 53370 48h after separation)	
Density	1,229 g/m³ ( ± 5%)	
Colour/Surface	transparent (CL) and white (WH) glossy	
Surface Tension	35mN/m (±2 mN/m)	
Optical Transparency	waterclear, flow-lines, fisheyes, slightly mat; white: opaque	
Shrinkage	1 minute after separation from backing paper: MD about - 4%; CD + 1%	
Adhesion	0,06N/25mm (FTM 1) on clean glass	
Application Temperature	min. + 5°C	
Service Temperature Range	-20 °C bis +70 °C	
Expected Life Time	indoors 3 years; outdoors 1 year (Central Europe)	
<b>Liner</b>		
Typ 4152	Material	Castline: cast coated cardboard, white surfaced, printable backside
	Thickness	165 µm ( ± 7,5%)
	Grammage	130 g/m² ( ± 7,5%)
<b>Laminate</b>		
Typ 4152	Thickness	315 µm ( ± 9%)
<b>Converting</b>		
Printability	Solvent inkjet, Eco- and Mild-Solvent Inks, Latex Inks	
Plotting	Good plotting characteristics with cardboard liner.	
Remark	The application at the printed side must take place only on glass. By application on plastics and lacquers reactions between surface and Solvent-Ink are possible. Using Eco- and Mild-Solvent inks residues on the glass surface are possible.	
<b>Regulations and Standards</b>		
The material has been tested against the following regulations and standards:	<ul style="list-style-type: none"> <li>▪ EN 71-3 (Safety of toys, migration of heavy metals)</li> <li>▪ EN 71 Part 9-11 (Safety of toys, migration of Solvents, Monomers, Plasticizers)</li> <li>▪ DIN 53160 (Resistance to perspiration and saliva 6/1974)</li> <li>▪ according to this Regulation (EC) 1907/2006 suitable for toys and childcare articles</li> <li>▪ 2011/65/EU (RoHS - restriction of hazardous substances 06/2011)</li> </ul>	
<b>General</b>		
Formats	Width: 914mm, 1.370mm Length: 25m	
Size Tolerance	± 2mm over 1.000 mm ( ± 0,3%)	
Storage Stability	1 year original packaging 21 °C (70 °F)/50% RH	
Special Properties	PENSTICK® Digital is a cling vinyl that <ul style="list-style-type: none"> <li>▪ clings without adhesive on smooth, glossy surfaces (like glass, PET, PMMA, PC, ...)</li> <li>▪ could be easily removed</li> <li>▪ leaves no residues (in combination with lacquers and plastics the compatibility must be tested)</li> <li>▪ could be reused / reapplied</li> <li>▪ adheres on both sides (also on the printed side - solvent inkjet)</li> </ul>	

All technical properties are typical values.

**PRODUCT PERFORMANCE AND SUITABILITY**

All Statements, technical information and recommendations about our products are obtained from tests believed to be reliable. They are provided as a guide and shall in no event constitute a warranty of any kind. MOLCO therefore undertakes no responsibility either for the result deriving from their adoption or for any claims or liability arising from the use of the material. It is not recommended to swallow pieces of film. Because conditions of use are beyond our control, all products are sold with the express understanding that the purchaser has independently determined the suitability of such products for its purpose. Subject to technical changes without prior notice.

