A406

CRYOGENIC LABEL

Description

A406 85µ matt white print receptive polyester offers excellent low temperature cryogenic performance combined with good humidity and water resistance. Designed to be printed via LASSIE2 Plus / ColorCube ink-jet printer and pigment ink combination. The material enables the creation of four colour variable data labels for improved identification of cryogenic storage vessels vs. conventional single colour thermal transfer methods. A406 is coated with PFC high performance acrylic adhesive which exhibits high initial tack, good adhesion to both high and low surface energy substrates. PFC adhesive is suitable for exposure to liquid nitrogen.

Typical applications
On demand variable information labels for cryogenic identification of plastic and glass vessels for the preservation of blood, reproductive cells and other biological materials.

Typical industry sectors
Laboratory, medical, healthcare, pharmaceutical and electrical.

Facestock

85µ matt white print receptive polyester engineered to offer optimum performance when printed with LASSIE2 Plus / ColorCube printers using DURABrite Ultra or UltraChrome DL pigment-based inks. The surface coating enables high resolution print quality combined with superior water resistance.

Adhesive

PFC high performance permanent acrylic adhesive. PFC exhibits high initial tack and adhesion to a wide range of substrates, including many plastics. PFC adhesive offers very good adhesion and low temperature shear performance when applied to both glass and treated PP vials.

Liner

71gsm white super-calendared glassine release liner. The white glassine liner offers superior die-cutting performance.

General characteristics

Properties	Typical values		Unit of measure	Test method
Physical	Facestock Adhesive Liner		85µ ± 10% 25gsm ± 10% 71µ ± 10%	FTM 12
Peel adhesion Stainless steel Glass	**Initial** 11.9 12.7	**24 hours** 12.0 13.0	N/25mm @ 23˚C, 50% RH	FTM 1
Shear resistance	> 600		Seconds @ 40°C	FTM 8
Min, application temperature	+4°C		Celsius	
Service temperature range	-196°C* to +100°C		Celsius	

*** Service temperature range can be affected by application surface and curvature.**

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Environmental performance

Product code	A406		
Film appearance	Matt white		
Variable print method	Water based ink-jet		
Results	Glass tube	-196°C	Pass
		-80°C	Pass
		-40°C	Pass
		-20°C	Pass
		+4°C	Pass
		Control	Pass
	PP tube	-196°C	Pass
		-80°C	Pass
		-40°C	Pass
		-20°C	Pass
		+4°C	Pass
		Control	Pass

Label samples applied to glass and PP tubes at 23°C / 50%RH and then exposed to below conditions. Pass indicates no label peeling or removal after exposure to test conditions. Application surface: glass tubes (10mmØ) / PP microtubes (10mmØ). Label size: 22mm x 25mm (label covers 70% of the circumference of the tubes).

Conditions:
• Immersion in Liquid N2 for 8 hours at -196°C • Dry ice test at -80°C for 1 week • Deep freezer test at -40°C for 1 week
• Freezer test at -20°C for 1 week • Refrigerator test at 4°C for 1 week • Control at 23°C for 1 week

A406 will not adhere to wet surfaces. A406 will not adhere to some slip coatings applied to glass vials.

Certificates

REACH
Please contact Altec for the latest REACH document available.
RoHS
Please contact Altec for the latest RoHS document available.

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