

TECHNICAL DATA SHEET

STERILIZATION REEL

- PRODUCT CODE** : MELAfol 502 / 752 / 1002 / 1502 / 2002 / 2502
- RELATED STANDARDS** : MELAfol flat reels are manufactured according to EN 868-5 and ISO 11607 standards. The indicator used in the pouch production is classified as Class 1 Type Indicator according to the ISO 11140-1 standard. MELAfol reels meet the requirements of (EU) 2017/745 Medical Device Regulation.
- INTENDED USE** : MELAfol Reels are designed to provide excellent barrier for sterile medical device packaging purposes. Reels meet the Medical Industry's requirement for high quality, hygiene and safety levels. MELAfol reels are used for the packing of the Medical Devices before sterilization and it maintains the sterility of the products after sterilization. MELAfol Reels are ease to package and indicator used for the sterilization provides information with the sterilization status of the medical devices.
- OPERATION CONDITIONS** : MELAfol reels are used for steam, ethylene oxide, formaldehyde sterilization methods. The sterilization conditions should be determined by the end user regarding to material to be sterilized.

SPECIFICATIONS :

	PROPERTIES	UNIT	STANDARD	TYPICAL VALUE
MEDICAL PAPER	SUBSTANCE	g/m ²	ISO 536	60
	THICKNESS	µm	ISO 534	83
	BENDTSEN POROSITY	ml/min	ISO 5636-3	1000
	AIR PERMEANCE	µm/(Pa.s)	ISO 5636-3	11,4
	BENDTSEN ROUGHNESS FS	ml/min	ISO 8791-2	375
	BENDTSEN ROUGHNESS WS	ml/min	ISO 8791-2	375
	TENSILE STRENGTH /MD	kN/m	EN ISO 1924-2	6,4
	TENSILE STRENGTH /CD	kN/m	EN ISO 1924-2	3,4
	WET TENSILE STRENGTH /MD	kN/m	ISO 3781	2,1
	WET TENSILE STRENGTH /CD	kN/m	ISO 3781	1,1
	BURST STRENGTH	kPa	ISO 2758	350
	TEARING STRENGTH /MD	mN	ISO 1974	600
	TEARING STRENGTH /CD	mN	ISO 1974	650
	WET BURST	kPa	ISO 3689	150
	WATER REPELLENCY	s	EN 868-2 (app.D)	35
	PORE SIZE	µm	EN 868-2 (app.E)	21
	COBB TEST (60 s)	g/m ²	ISO 535	15
	FLUORESCENCE	pts/dm ²	EN 868-2 (app.B)	0
	pH: between 5.0 and 8.0 (ISO6588-2)		Chloride content < 0,05% (ISO 9197)	
		Sulphate Content < 0,25% (ISO9198)		
FREE FROM LEAD AND HEAVY METALS AND TOXIC MATERIALS				



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LAMINATED FILM	PROPERTIES	UNIT	STANDARD	TYPICAL VALUE	
	THICKNESS		μm	ISO 534	LAM.FILM
PP					40 \pm 5
PET					12 \pm 2
THERMAL SEAL		$^{\circ}\text{C}$	ASTM F 88	180 \pm 5 (1.3 bar- 14 m/min)	
TENSILE	N/15 mm	MD CD	ASTM D 882-12	min. 28	
				min. 30	
TEAR	mN	MD CD	ASTM D 1922-09	min. 70	
				min. 70	
HAZE		%	ASTM D 1003	max. 9	
FREE FROM LEAD AND HEAVY METALS AND TOXIC MATERIALS					

PRODUCT SPECIFICATIONS

REEL	PROPERTIES	UNIT	STANDARD	TYPICAL VALUE	
	SEAL STRENGTH		cm	ASTM F 88	< 25
Edge Seal (N/15 mm)			3,0 \pm 0,5		4,0 \pm 0,75
BUBBLE TEST			ASTM F 2096-04	None	
PINHOLE DETERMINATION			EN 868-5 Annex C	None	
DIMENSION CONTROL		cm or mm	ASTM F 2203-13	Required dimensions	
LEAKAGE TEST			ASTM F 1929-15	None	
PEEL DIRECTION			EN 868-5 Annex E	Must not break the particle	
INDICATOR CONTROL			ISO 11140-1	Must return to the specified color	

INDICATOR	STERILIZATION METHOD	BEFORE STERILIZATION	AFTER STERILIZATION
	STEAM		Pink
EO		Green	Yellow / Orange
FORMALDEHYDE		Red	Green

PACKAGING : MELAfol reels are packaged as below.

	<u>Product Code</u>	<u>Pieces in carton</u>
	MELAfol 502	5 cm
	MELAfol 752	7,5 cm
	MELAfol 1002	10 cm
	MELAfol 1502	15 cm
	MELAfol 2002	20 cm
	MELAfol 2502	25 cm



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TECHNICAL DATA SHEET

STERILIZATION POUCH

- PRODUCT CODE** : MELAfol 501 / 751 / 1001 / 2051
- RELATED STANDARDS** : MELAfol flat sterilization pouches are manufactured according to EN 868-5 and ISO 11607 standards. The indicator used in the pouch production is classified as Class 1 Type Indicator according to the ISO 11140-1 standard. MELAfol Pouches meet the requirements of (EU) 2017/745 Medical Device Regulation.
- INTENDED USE** : MELAfol Pouches are designed to provide excellent barrier for sterile medical device packaging purposes. Pouches meet the Medical Industry's requirement for high quality, hygiene and safety levels. MELAfol pouches are used for the packing of the Medical Devices before sterilization and it maintains the sterility of the products after sterilization. MELAfol Pouches are ease to package and indicator used for the sterilization provides information with the sterilization status of the medical devices.
- OPERATION CONDITIONS** : MELAfol pouches are used for steam, ethylene oxide and formaldehyde sterilization methods. The sterilization conditions should be determined by the end user regarding to material to be sterilized.

SPECIFICATIONS :

	PROPERTIES	UNIT	STANDARD	TYPICAL VALUE	
MEDICAL PAPER	SUBSTANCE	g/m ²	ISO 536	60	
	THICKNESS	µm	ISO 534	83	
	BENDTSEN POROSITY	ml/min	ISO 5636-3	1000	
	AIR PERMEANCE	µm/(Pa.s)	ISO 5636-3	11,4	
	BENDTSEN ROUGHNESS FS	ml/min	ISO 8791-2	375	
	BENDTSEN ROUGHNESS WS	ml/min	ISO 8791-2	375	
	TENSILE STRENGTH /MD	kN/m	EN ISO 1924-2	6,4	
	TENSILE STRENGTH /CD	kN/m	EN ISO 1924-2	3,4	
	WET TENSILE STRENGTH /MD	kN/m	ISO 3781	2,1	
	WET TENSILE STRENGTH /CD	kN/m	ISO 3781	1,1	
	BURST STRENGTH	kPa	ISO 2758	350	
	TEARING STRENGTH /MD	mN	ISO 1974	600	
	TEARING STRENGTH /CD	mN	ISO 1974	650	
	WET BURST	kPa	ISO 3689	150	
	WATER REPELLENCY	s	EN 868-2 (app.D)	35	
	PORE SIZE	µm	EN 868-2 (app.E)	21	
	COBB TEST (60 s)	g/m ²	ISO 535	15	
	FLUORESCENCE	pts/dm ²	EN 868-2 (app.B)	0	
	pH: between 5.0 and 8.0 (ISO6588-2)		Chloride Content < 0,05% (ISO 9197)		
			Sulfate Content < 0,25% (ISO9198)		
FREE FROM LEAD AND HEAVY METALS AND TOXIC MATERIALS					



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STERILIZATION POUCH

LAMINATED FILM	PROPERTIES	UNIT	STANDARD	TYPICAL VALUE		
	THICKNESS	µm	ISO 534	LAM.FILM	53 ± 5	
				PP	40 ± 5	
				PET	12 ± 2	
	THERMAL SEAL	°C	ASTM F 88	180 ± 5 (1.3 bar- 14 m/min)		
	TENSILE	N/15 mm	MD CD	ASTM D 882-12	min. 28	
					min. 30	
	TEAR	mN	MD CD	ASTM D 1922-09	min. 70	
min. 70						
HAZE	%	ASTM D 1003	max. 9			
FREE FROM LEAD AND HEAVY METALS AND TOXIC MATERIALS						

PRODUCT SPECIFICATIONS

POUCH	PROPERTIES	UNIT	STANDARD	TYPICAL VALUE	
	SEAL STRENGTH	cm	ASTM F 88	< 25	≥ 25
		Edge Seal (N/15 mm)		3,0 ± 0,5	4,0 ± 0,75
		Top Seal (N/15 mm)		4,0 ± 0,5	5,0 ± 0,5
	BUBBLE TEST		ASTM F 2096-04	None	
	PINHOLE DETERMINATION		EN 868-5 Annex C	None	
	DIMENSION CONTROL	cm or mm	ASTM F 2203-13	Required dimensions	
	LEAKAGE TEST		ASTM F 1929-15	None	
PEEL DIRECTION		EN 868-5 Annex E	Must not break the particle		
INDICATOR CONTROL		ISO 11140-1	Must return to the specified color		

INDICATOR	STERILIZATION METHOD	BEFORE STERILIZATION	AFTER STERILIZATION
	STEAM	Pink	Brown / Black
	EO	Green	Yellow / Orange
	FORMALDEHYDE	Red	Green

PACKAGING

: MELAfol flat pouches are packaged 250 pieces in a film package. Each 1000 pieces are packaged in a carton box.

MELAfol gusseted pouches are packaged 100 pieces in a film package. 100 pieces are packaged in a carton box.



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