

TECHNICAL DATA

Item	Conditions	Unit	FS50-M		FS90-M	
			no3 no4 no5	no7 no9	no5 no7	no9 no13
Thickness (approx.)		Microns	30,40 50,70,90		50,70 90,130	
Tensile Strength	23°C 50% R.H.	kg/mm ²	11~14 12~15		10~11 11~12	
Ultimate Elongation L/T	23°C 50% R.H.	%	180~200 140~160		220~320 180~280	
Secant Modulus L/T	23°C 50% R.H.	kg/mm ²	55~65 55~65		45~55 45~55	
Haze		%	3~9		4~12	
Gloss L/T		%	130~150 130~150		120~150 120~150	
Shrink L/T	at 90°C	%	35/40		*	
Barrier						
- Watervapour	40°C 90% R.H.	g/m ² /day	9~25		6~16	
- Carbon dioxide	23°C 80% R.H.	cc/m ² /day	90~125		50~65	
- Oxygen	23°C 80% R.H.	cc/m ² /day	18~25		10~15	

NB: These values are typical values for KREHALON Form Shrink films. They are not intended for use as limiting specifications.
L/T = Longitudinal and Transversal values where applicable.

REMARKS

- 1) FS50/90-F have similar properties as FS50/90-M except higher gas-transmissions, needed for cheese ripening
- 2) FS50/90-C have similar properties as FS50/90-M except higher heat-resistance, needed for cooking and surface-pasteurisation
- 3)* Typical shrink values of FS90-M after thermoforming are measured between 25 and 40% depending on thermoforming conditions.

PACKAGING

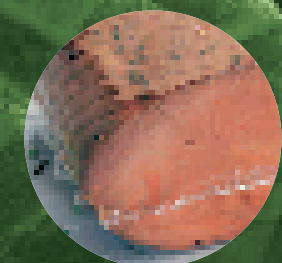
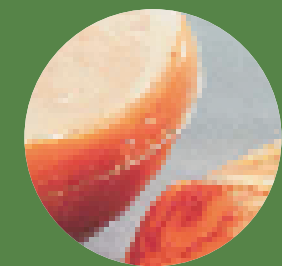
To prevent damage during shipping, but to limit excessive packaging materials, all KREHALON Form Shrink film is packed on overwrapped pallets. The normal sales unit is therefore by pallet quantities. The amount of film per pallet depends on the slit width/thickness and is available upon request.

IMPORTANT NOTES

For hot water shower or dipping 95°C is the maximum recommended temperature. The ideal storage temperature is 20-25°C with an ideal R.H. of 50-60%. Temperature should not exceed 30°C. Avoid direct sunlight and contact with radiators and heating pipes.



FS50 FS90 FILMS



Krehalon

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FS50 FS90

KREHALON FS50 and FS90 range of films are multilayer heat shrinkable films especially designed, using innovative proprietary technology, for the Form Shrink process.

The unique structure of FS50 and FS90 films enables a wide range of gas and moisture barriers with excellent forming, sealing and machinability. KREHALON FS50 and FS90 films, because of their structure, help to meet environmental concerns for non-chlorine containing materials and less packaging waste.



With its controlled barrier, shrink and special optical properties FS50 and FS90 bring protection as well as glass-like, clear presentation to all of your products. KREHALON FS50 and FS90 films were developed in conjunction with specially prepared thermoforming machines. Together the FS50 and FS90 films and the thermoforming machine have created the Form Shrink system. The Form Shrink system offers to users an innovative automated approach to either vacuum packaging or MAP packs, which uniquely have all the advantages of full shrink presentation. KREHALON FS50 and FS90 films are designed for the packaging and protection of fresh meat, processed meat, cheese, fish, poultry and game.

KREHALON FS50 and FS90 Films

Availability

KREHALON FS50 and FS90 films are available single wound on reels with 6 inch (152mm) cores. FS50 and FS90 films are available in several types depending on the application and use. Selection of the correct combination of films is vital for optimum pack performance. FS50 films are designed as a top web film for all packs and as a forming web for shallow draw applications. FS50 films are available in three types depending on application and barrier requirements as follows:

FS50-M	for high barrier packs used as top web as well as shallow forming web
FS50-C	for high barrier pasteurised or cook in packs used as top web as well as shallow forming web
FS50-F	for medium barrier, or gas release, packs as top web as well as shallow forming web

Each type of FS50 films are available in the following thicknesses:

No.3	= approximately 30 micron
No.4	= approximately 40 micron
No.5	= approximately 50 micron
No.7	= approximately 70 micron
No.9	= approximately 90 micron

FS90 films are designed as a deep draw forming webs. FS90 films are available in three types depending on application and barrier requirements as follows:

FS90-M	for high barrier deep draw packs
FS90-C	for deep draw pasteurised or cook in packs
FS90-F	for medium barrier, or gas release, deep draw packs

Each type of FS90 films are available in the following thicknesses:

No.5	= approximately 50 micron
No.7	= approximately 70 micron
No.9	= approximately 90 micron
No.13	= approximately 130 micron

NB. Any of the above KREHALON FS50 and FS90 range of films can be used in combination with each other as they are all compatible for sealing.

AVAILABLE WIDTHS

KREHALON FS50 and FS90 films can be slit into single wound films from 100mm to 580mm wide in 5mm increments. FS50 and FS90 films are wound on 6 inch (152mm) paper cores.

COLOUR AVAILABILITY

All KREHALON FS50 and FS90 films are available as clear films. FS50 and FS90 films are also available in a range of pigmented colours. Please contact KREHALON for further details of availability.

PRINTING

KREHALON FS50 and FS90 films can be supplied flexographically printed. Top webs can be either continuous or position printed. Forming webs can only be continuous printed.

AVAILABLE ROLL SIZES

The amount of film on a roll varies according to thickness as below:

Thickness	Roll Length
No.3	2500 m
No.4	1800 m
No.5	1600 m
No.7	1000 m
No.9	800 m
No.13	600 m

NB: Please note all types may not be available in all the above thicknesses or may require minimum extrusion quantities.

Advantages of KREHALON FS50 and FS90 films when used in the Form Shrink system

Seal Integrity

Fully hygienic hermetic seals, minimising repacking, reducing product returns, increasing shelf life and ensuring no unhygienic product drip during distribution, display or handling.

Extended Protection

KREHALON FS50 and FS90 films together with full vacuuming, and gas injection for delicate foods, keeps all types of food products fresh through the distribution chain and gives extended product protection and shelf life.

Superior Presentation

The smooth second skin effects of KREHALON FS50 and FS90 shrink films with a minimised, trimmed, seal area gives the neatest shrink pack ever. High gloss transparent or coloured films are available. Form Shrink allows, for the first time in a shrink pack, the combination of clear and coloured films. Flexographic printing is also available.

Cost Effective

The Form Shrink system is high volume, fully automated and labour saving. It allows easy loading, minimising seal contamination, or even robotic loading. Film usage is minimised with the innovative KREHALON FS50 and FS90 films allowing the use of reduced thicknesses and the Form Shrink skilled engineering maximising the number of packs per unit of film area.

Consumer Friendly

The Form Shrink pack ensures full product quality, which can be inspected by the consumer. An easy open feature can also be incorporated, if required.

Environmentally Friendly

KREHALON FS50 and FS90 films and the Form Shrink system reduces product waste, repacking and returns, as well as minimising film waste at the packer, distribution and consumer levels. The neat, tight packs also take up less space and therefore reduce costs for storage, transportation and display. FS50 and FS90 films are made from chlorine-free material.

