



***Alliance
Films***
STRETCH FILM REIMAGINED

Nano 67

**LEADING EDGE TECHNOLOGY
FOR STRETCH FILM**

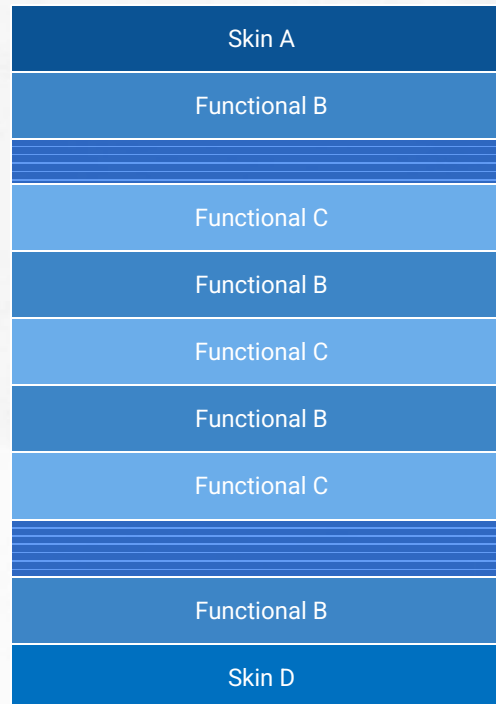


Nanolayer History

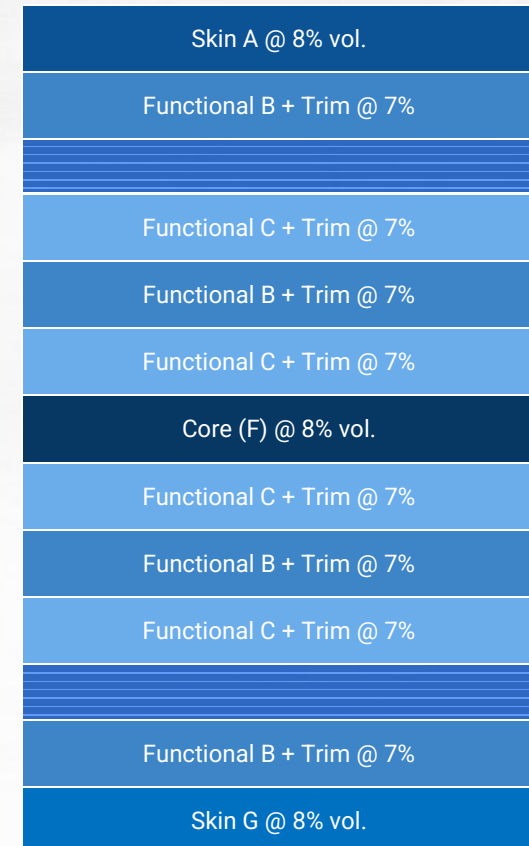
5 EXTRUDER 27 LAYER



6 EXTRUDER 31 LAYER



7 EXTRUDER 33 LAYER

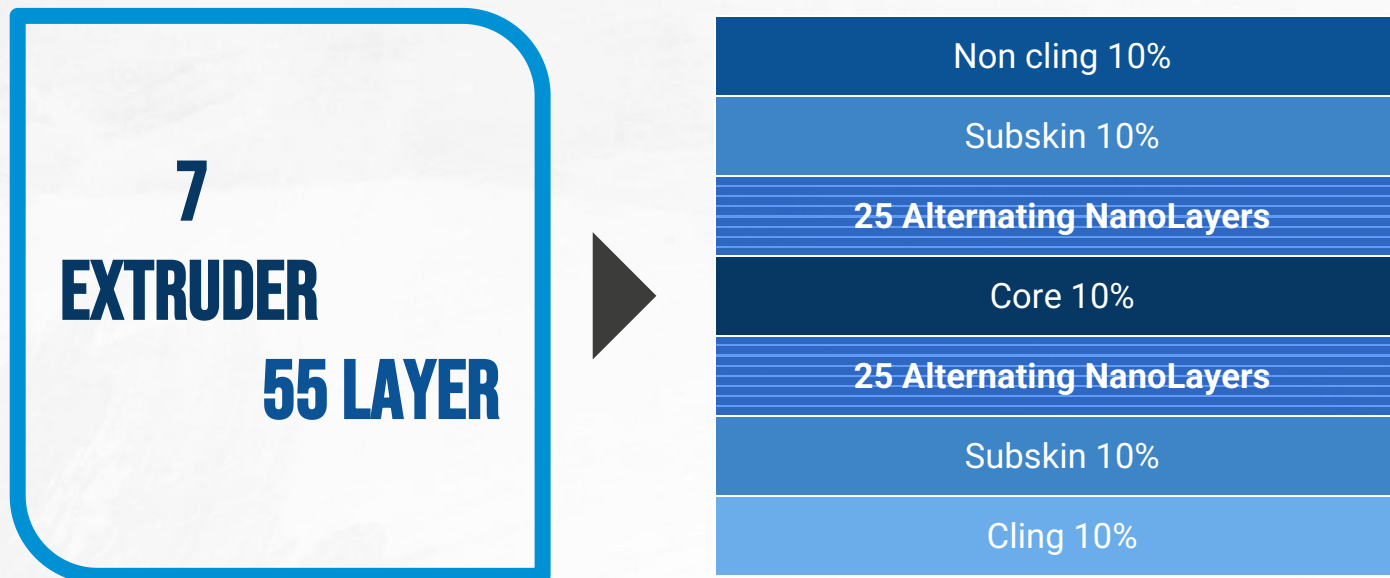


- Only 20% nanostructure
- 2 extruder with 10% each
- **Difficult to use due to high pressure**

Nanolayer History

55 NANO layer with 50% nanostructure was developed in 2016

HIGH PRESSURE WAS SOLVED, THUS MUCH MORE FLEXIBILITY



67 Nanolayer Structure

ALLIANCE FILMS is the **FIRST** company who developed 67 nanolayer with 70 % nano structure in North America.

**SML
PowerCast
XL**

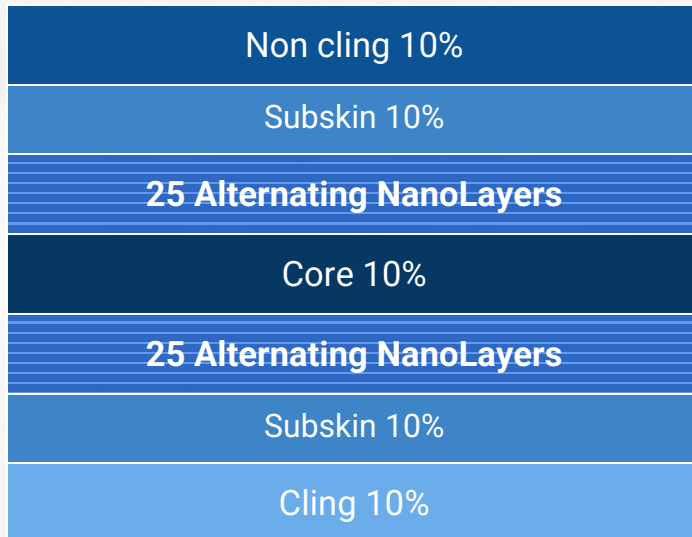
**7 EXTRUDER
67 LAYER**



**NORTH
AMERICA'S
1st 67-LAYER
STRETCH FILM**

55 Layer vs 67 Layer

CONVENTIONAL 55 LAYER



SML NANO 67 LAYER



Feedblock

Conventional 55 layer
SINGLE FEEDBLOCK



SML Nano 67 layer
DOUBLE FEEDBLOCK





Nano 67

THE DIFFERENCE

TESTING 12 MICRON 55 LAYER VS. 67 LAYER

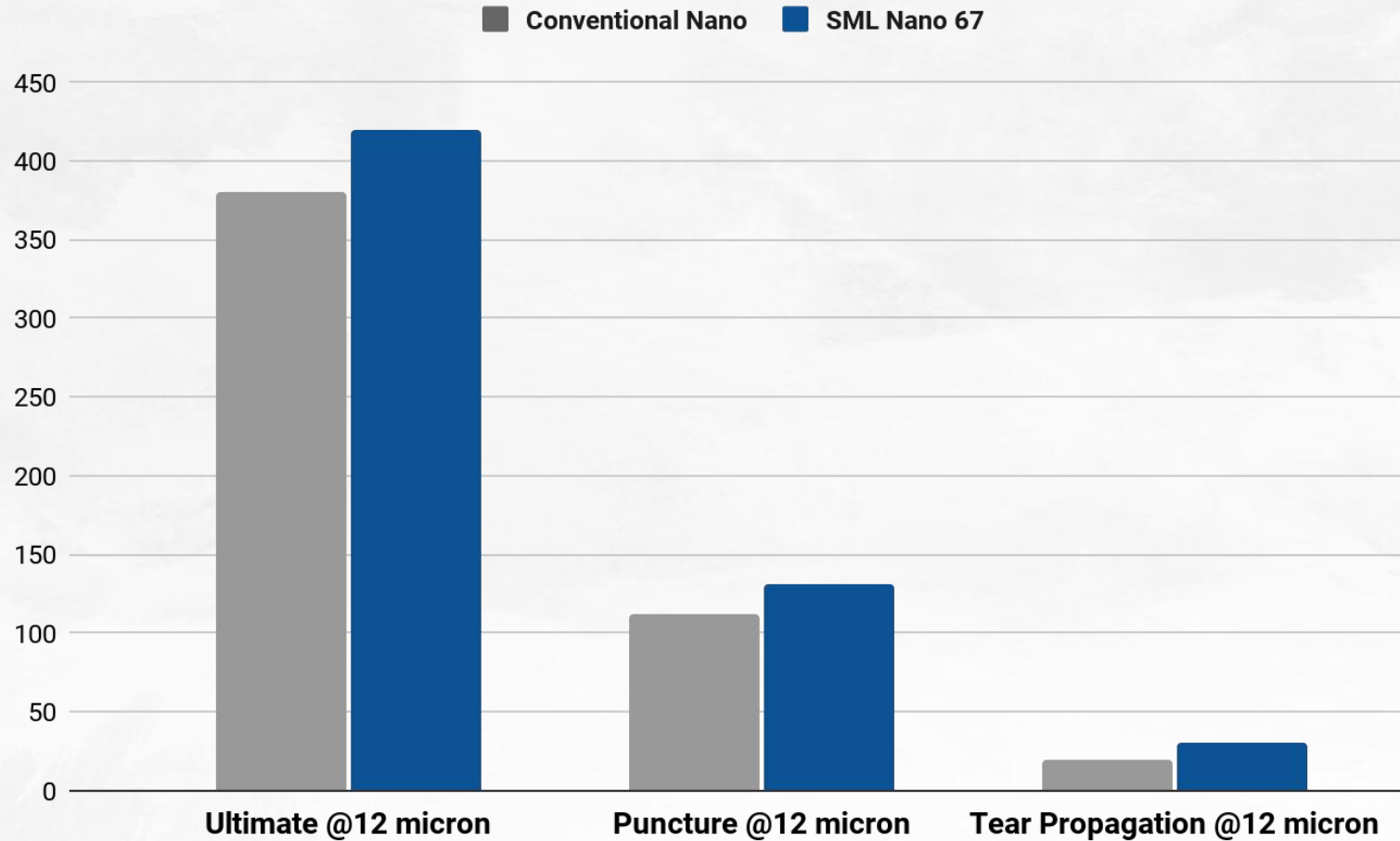
- 12 micron
- 400 m/min
- 500 m/min
- 600 m/min

Extruder	Dosing station	Weight ratio (%)	Producer material	Density (g/cm3)	Thickness ratio (%)
A 75/33D	1	99.7	C4	0,919	10,0
	4	0,3	PPA		
B 90/33D	1	100	mLLDPE MFI 4,5	0,918	25,0
	2	0			
C 90/33D	1	100	mLLDPE MFI 3,5	0,918	25,0
	2	0			
D 75/33D	1	100	mLLDPE MFI 4,5	0,918	10,0
	2				
E 75/33D	1	100	mLLDPE MFI 3,5	0,918	10,0
	2				
F 90/33D	1	100	RC-PP	0,905	10,0
	2				
G 75/33D	1	99,7	Cling	0,906	10,0
	4	0,3	PPA		

12 micron

THE DIFFERENCE

SML Nano 67 - 12 micron



11% HIGHER



16% HIGHER



57% HIGHER

Summary

NORTH AMERICA'S 1st 67-LAYER STRETCH FILM



NANO 67 is the **FIRST** in the market and the **FIRST** with 70% nanostructure.

ADVANTAGES



Higher Tear propagation



Higher Puncture resistance



Higher Ultimate

Skin Layer 10%

Nano pack 1

Nano pack 3

Core layer 10%

Nano pack 4

Nano pack 2

Skin layer 10%



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