

NANOR 1.2 mm (1/21")

Thickness Perforation	mm (inches) % (type)	1.2 (1/21) 13 (micro)	
Thermoforming conditions			
Optimum activation temperature (in water bath)	°C (°F)	65 (149)	
Activation time (in water bath)	minutes	2-3	
Transparent when activated		yes / opaque	
Working time	minutes	0 ½ – 1	
Hardening time	minutes	1 – 1 ½	
Time to completion	minutes	9 – 10	
Resistance to stretch		low	
Drape		high	
Memory (after 200 % elongation)		moderate	
Maximum elongation when activated	%	2400	
Memory (after maximum elongation)		moderate	
Sticks to itself when activated and wet		no	
Sticks to itself when activated, after drying		no	
Adhesion (velcro strip) using heat gun		n.a.	
Mechanical properties at 21°C			
Flexural modulus	MPa	750	
Elastic modulus	MPa	410	
Tensile strength	MPa	14.0	
Strain at break	%	75	
General properties			
Density	g cm ⁻³	1.17	
Hardness (shore D)	8 0111	61	
Surface feeling		smooth	
Color		beige	
Odor		none	
Fatigue	cycles	+ 10 000	
Biocompatible	•	yes	



NANOR 1.6 mm (1/16")

Thickness Perforation	mm (inches) % (type)	1.6 (1/16) 17 (micro)	
Thermoforming conditions	_		
Optimum activation temperature (in water bath)	°C (°F)	65 (149)	
Activation time (in water bath)	minutes	3 – 4	
Transparent when activated		yes / opaque	
Working time	minutes	0 ½ – 1	
Hardening time	minutes	1 ½ - 2	
Time to completion	minutes	9 – 10	
Resistance to stretch		low	
Drape		high	
Memory (after 200 % elongation)		moderate	
Maximum elongation when activated	%	2400	
Memory (after maximum elongation)		moderate	
Sticks to itself when activated and wet		no	
Sticks to itself when activated, after drying		no	
Adhesion (velcro strip) using heat gun		n.a.	
Mechanical properties at 21°C			
Flexural modulus	MPa	750	
Elastic modulus	MPa	410	
Tensile strength	MPa	14.0	
Strain at break	%	50	
General properties			
Density	g cm ⁻³	1.17	
Hardness (shore D)	6 -····	61	
Surface feeling		smooth	
Color		beige	
Odor		none	
Fatigue	cycles	+ 10 000	
Biocompatible	.,	yes	



NANOR 2.0 mm (1/12")

Thickness	mm (inches)	2.0 (1/12)	
Perforation	% (type)	25 (micro+)	
Thermoforming conditions			
	00 (07)	G= (4.40)	
Optimum activation temperature (in water bath)	°C (°F) 	65 (149)	
Activation time (in water bath)	minutes	3 – 4	
Transparent when activated		yes / opaque	
Working time	minutes	0 ½ – 1	
Hardening time	minutes	1 1/2-2	
Time to completion	minutes	8 – 9	
Resistance to stretch		low	
Drape		high	
Memory (after 200 % elongation)		moderate	
Maximum elongation when activated	%	1800	
Memory (after maximum elongation)		moderate	
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Sticks to itself when activated and wet		no	
Sticks to itself when activated, after drying		no	
Adhesion (velcro strip) using heat gun		n.a.	
Mechanical properties at 21°C			
Flexural modulus	MPa	400	
Elastic modulus	MPa	310	
Tensile strength	MPa	8.85	
Strain at break	%	25	
General properties			
Density	g cm ⁻³	1.17	
Hardness (shore D)		61	
Surface feeling		smooth	
Color		beige	
Odor		none	
Fatigue	cycles	+ 10 000	
Biocompatible	- /	yes	
Process of		,	



NANOR 2.4 mm (3/32")

Thickness Perforation	mm (inches) % (type)	2.4 (3/32) 25 (micro+)	
Thermoforming conditions	_		
Optimum activation temperature (in water bath)	°C (°F)	65 (149)	
Activation time (in water bath)	minutes	3 – 4	
Transparent when activated		yes / opaque	
Working time	minutes	0 ½ - 1	
Hardening time	minutes	2 ½ - 3	
Time to completion	minutes	11 – 12	
Resistance to stretch		low	
Drape		high	
Memory (after 200 % elongation)		moderate	
Maximum elongation when activated	%	1700	
Memory (after maximum elongation)		moderate	
Sticks to itself when activated and wet		no	
Sticks to itself when activated, after drying		no	
Adhesion (velcro strip) using heat gun		n.a.	
Mechanical properties at 21°C			
Flexural modulus	MPa	400	
Elastic modulus	MPa	310	
Tensile strength	MPa	9.5	
Strain at break	%	50	
General properties			
Density	g cm ⁻³	1.17	
Hardness (shore D)	· ·	61	
Surface feeling		smooth	
Color		beige	
Odor		none	
Fatigue	cycles	+ 10 000	





INFORMATION

The hardening time indicates the time period during which the material remains flexible, but no longer mouldable.

The time to completion indicates the length of time until the precut is hardened and can be removed from the patient.

The memory indicates the ability of the material to regain its original shape after reheating.

The flexural modulus indicates the resistance of the material to a force causing it to bend.

The elastic modulus defines the ratio of the applied tensile stress to the change in shape of the material.

The tensile strength is the pulling force required to break the material.

The strain at break is the length increase of the material when stretched until failure.

The hardness indicates the resistance of the material to compression.

Fatigue indicates the minimum number of stress cycles the material sustains when bending over 90 degrees without failure.

The biocompatibility is studied according the guidelines of the International Organization for Standardization 10993 – Biological Evaluation of Medical Devices:

- o Primary skin irritation study.
- o Delayed dermal contact sensitization study.
- Cytotoxicity study.

Note:

Although the information in this publication is believed to be accurate and reliable, the data shown are for guidance only. Orfit Industries gives no guarantees about the results and assumes no liability in connection with them. The properties reported here are intended primarily to facilitate comparison among Orfit products. Standard testing methods often allow alternative measuring methods. Therefore, data from other sheet manufacturers may not be directly comparable. For additional information, please contact Orfit Industries.





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