

## **TECNOFIT™ 2.5 mm (3/32")**

Thickness Perforation	mm (inches) % (type)	2.5 (3/32) 0 (non perfo)	2.5 (3/32) 3.5 (mini)	2.5 (3/32) 25 (maxi)
hermoforming conditions				
Optimum activation temperature (in water bath)	°C (°F)	65 (149)	65 (149)	65 (149)
Activation time (in water bath)	minutes	3 - 4	3 - 4	3 - 4
Transparent when activated		yes	yes	yes
Working time	minutes	2 1/4 - 2 3/4	2 - 2 ½	1 - 1 ½
Hardening time	minutes	5 ¼ - 5 ¾	4 ¾ - 5 ¼	2 ½ - 3
Time to completion	minutes	22 - 23	19 - 20	10 - 11
Resistance to stretch		high	high	high
Drape		high	high	high
Memory (after 200 % elongation)		full	full	full
Maximum elongation when activated	%	440	365	285
Memory (after maximum elongation)		full	full	full
Sticks to itself when activated and wet		temporarily	temporarily	temporarily
Sticks to itself when activated, after drying		reliable under low stress	reliable under low stress	reliable under low stress
Adhesion (velcro strip) using heat gun		yes	yes	yes
Aechanical properties at 21℃				
Flexural modulus	MPa	445	325	290
Elastic modulus	MPa	235	200	145
Tensile strength	MPa	18.5	14.0	10.0
Strain at break	%	no break	no break	110
eneral properties				
Density	g cm <sup>-3</sup>	1.14	1.14	1.14
Hardness (shore D)		57	57	57
Surface feeling		smooth	smooth	smooth
Color		natural	natural	natural
Odor		none	none	none
Fatigue	cycles	> 10000	> 10000	> 10000
Biocompatible				



## **TECNOFIT™ 3.2 mm (1/8")**

Optimum activation temperature (in water bath)         "C ("F)         65 (149) </th <th>Thickness Perforation</th> <th>mm (inches) % (type)</th> <th>3.2 (1/8) 0 (non perfo)</th> <th>3.2 (1/8) 3.5 (mini)</th> <th>3.2 (1/8) 25 (maxi)</th>	Thickness Perforation	mm (inches) % (type)	3.2 (1/8) 0 (non perfo)	3.2 (1/8) 3.5 (mini)	3.2 (1/8) 25 (maxi)
Activation time (in water bath)         minutes         3 - 4         3 - 4         3 - 4           Transparent when activated         yes         yes         yes           Working time         minutes         2 % - 3 %         2 ½ - 3         2 - 2 ½           Hardening time         minutes         7 % - 8 %         6 ½ - 7         5 % - 6           Time to completion         minutes         21 - 22         18 - 19         16 - 17           Resistance to stretch         high         high         high         high           Drape         high         high         high         high           Memory (after 200 % elongation)         full         full<	Thermoforming conditions				
Transparent when activated         yes         yes         yes           Working time         minutes         2 ⅓ - 3 ⅓         2 ⅓ - 3         2 − 2 ⅓           Hardening time         minutes         7 ⅓ - 8 ⅓         6 ⅓ - 7         5 ⅓ - 6           Time to completion         minutes         21 - 22         18 - 19         16 − 17           Resistance to stretch         high	Optimum activation temperature (in water bath)	°C (°F)	65 (149)	65 (149)	65 (149)
Working time         minutes         2 ½ - 3 ½         2 ½ - 3         2 - 2 ½           Hardening time         minutes         7 ½ - 8 ½         6 ½ - 7         5 ½ - 6           Time to completion         minutes         21 - 22         18 - 19         16 - 17           Resistance to stretch         high         high         high         high           Drape         high         high         high         high           Memory (after 200 % elongation)         full         full <td>Activation time (in water bath)</td> <td>minutes</td> <td>3 - 4</td> <td>3 - 4</td> <td>3 - 4</td>	Activation time (in water bath)	minutes	3 - 4	3 - 4	3 - 4
Hardening time minutes 7 % - 8 % 6 % - 7 5 % - 6 Time to completion minutes 21 - 22 18 - 19 16 - 17  Resistance to stretch high high high high high high high hi	Transparent when activated		yes	yes	yes
Time to completion minutes 21 - 22 18 - 19 16 - 17  Resistance to stretch high high high high high high high hi	Working time	minutes	2 3/4 - 3 1/4	2 ½ - 3	2 – 2 ½
Resistance to stretch Drape	Hardening time	minutes	7 3/4 - 8 1/4	6 ½ - 7	5 ½ - 6
Drape high high high Memory (after 200 % elongation) full full full full full Maximum elongation when activated % 400 300 250 Memory (after maximum elongation) full full full full full full full ful	Time to completion	minutes	21 - 22	18 - 19	16 – 17
Memory (after 200% elongation)       full	Resistance to stretch		high	high	high
Memory (after 200% elongation)       full	Drape		high	high	high
Memory (after maximum elongation)       full       full       full         Sticks to itself when activated and wet       temporarily       temporarily       temporarily         Sticks to itself when activated, after drying       reliable under reliable under reliable under reliable under low stress       reliable under leughout under u	Memory (after 200 % elongation)			full	
Sticks to itself when activated and wet Sticks to itself when activated, after drying Sticks to itself when activated and wet Sticks to itself when activated, after drying Sticks to itself when activated and wet Feliable under Fe	Maximum elongation when activated	%	400	300	250
Sticks to itself when activated, after drying reliable under low stress low stress  Adhesion (velcro strip) using heat gun yes yes yes  Mechanical properties at 21°C  Flexural modulus MPa 445 345 250 Elastic modulus MPa 235 205 185 Tensile strength MPa 18.5 14.5 10 Strain at break % no break no break no break  General properties  Density g cm³ 1.14 1.14 1.14 Hardness (shore D) 57 57 57 Surface feeling smooth smooth smooth color natural natural natural oddr  Oddr none none none Fatigue cycles > 10000 > 10000	Memory (after maximum elongation)		full	full	full
low stress   low	Sticks to itself when activated and wet		temporarily	temporarily	temporarily
Plexural modulus	Sticks to itself when activated, after drying				
Flexural modulus         MPa         445         345         250           Elastic modulus         MPa         235         205         185           Tensile strength         MPa         18.5         14.5         10           Strain at break         %         no break         no break         no break           General properties           Density         g cm-3         1.14         1.14         1.14           Hardness (shore D)         57         57         57           Surface feeling         smooth         smooth         smooth           Color         natural         natural         natural           Odor         none         none         none           Fatigue         cycles         > 10000         > 10000         > 10000	Adhesion (velcro strip) using heat gun		yes	yes	yes
Elastic modulus MPa 235 205 185 Tensile strength MPa 18.5 14.5 10 Strain at break % no break no break no break  General properties  Density g cm-3 1.14 1.14 1.14 Hardness (shore D) 57 57 57 Surface feeling smooth smooth color natural natural natural Odor none none Fatigue cycles > 10000 > 10000 > 10000	Mechanical properties at 21°C				
Tensile strength Strain at break  MPa  18.5  14.5  10  no break  no break  Reneral properties  Density  Density  Hardness (shore D)  Surface feeling  Color  Color  Odor  Fatigue  Cycles  MPa  18.5  14.5  10  11.14  1	Flexural modulus	MPa	445	345	250
Strain at break % no break no break no break  General properties  Density g cm-3 1.14 1.14 1.14 Hardness (shore D) 57 57 57 Surface feeling smooth smooth color natural natural none none fatigue cycles > 10000 > 10000	Elastic modulus	MPa	235	205	185
General properties           Density         g cm-3         1.14         1.14         1.14           Hardness (shore D)         57         57         57           Surface feeling         smooth         smooth         smooth           Color         natural         natural         natural           Odor         none         none         none           Fatigue         cycles         > 10000         > 10000         > 10000	Tensile strength	MPa	18.5	14.5	10
Density         g cm <sup>-3</sup> 1.14         1.14         1.14           Hardness (shore D)         57         57         57           Surface feeling         smooth         smooth         smooth           Color         natural         natural         natural           Odor         none         none         none           Fatigue         cycles         > 10000         > 10000         > 10000	Strain at break	%	no break	no break	no break
Hardness (shore D) 57 57 Surface feeling smooth smooth smooth color natural natural none none fatigue cycles >10000 >10000 >10000	General properties				
Hardness (shore D) 57 57 Surface feeling smooth smooth smooth color natural natural none none fatigue cycles >10000 >10000 >10000	Density	g cm <sup>-3</sup>	1.14	1.14	1.14
Surface feelingsmoothsmoothsmoothColornaturalnaturalnaturalOdornonenonenoneFatiguecycles> 10000> 10000> 10000	•	-	57	57	57
ColornaturalnaturalnaturalOdornonenonenoneFatiguecycles> 10000> 10000> 10000					
OdornonenonenoneFatiguecycles> 10000> 10000> 10000	_				
Fatigue cycles > 10000 > 10000 > 10000					none
		cycles			
	Biocompatible	-	yes	yes	yes



## **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 orthosis is finished and can be worn by 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:

- 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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