

ORFIT® CRYSTAL NS 2.4 mm (3/32")

| | | |
|-------------|-------------|---------------|
| Thickness | mm (inches) | 2.4 (3/32) |
| Perforation | % (type) | 0 (non perfo) |

Thermoforming conditions

| | | |
|--|---------|---------------------|
| Optimum activation temperature (in water bath) | °C (°F) | 75 - 85 (167 - 185) |
| Activation time (in water bath) | minutes | 5 - 6 |
| Transparent when activated | | yes |
| Working time | minutes | 1 ¾ - 2 ½ |
| Hardening time | minutes | 4 - 6 |
| Time to completion | minutes | 13 - 15 |
| Resistance to stretch | | moderate |
| Drape | | high |
| Memory (after 200 % elongation) | % | high |
| Maximum elongation when activated | % | 1250 |
| Memory (after maximum elongation) | | high |
| Sticks to itself when activated and wet | | no |
| Sticks to itself when activated, after drying | | no |
| Adhesion (velcro strip) using heat gun | | no |

Mechanical properties at 21°C

| | | |
|------------------|-----|----------|
| Flexural modulus | MPa | 20 |
| Elastic modulus | MPa | 8.5 |
| Tensile strength | MPa | 3.0 |
| Strain at break | % | no break |

General properties

| | | |
|--------------------|--------------------|-----------------|
| Density | g cm ⁻³ | 0,87 |
| Hardness (shore A) | | 73 |
| Surface feeling | | slightly sticky |
| Color | | transparent |
| Odor | | none |
| Fatigue | cycles | > 10000 |
| Biocompatible | | yes |

ORFIT® CRYSTAL NS 3.2 mm (1/8")

| | | |
|-------------|-------------|---------------|
| Thickness | mm (inches) | 3.2 (1/8) |
| Perforation | % (type) | 0 (non perfo) |

Thermoforming conditions

| | | |
|--|---------|---------------------|
| Optimum activation temperature (in water bath) | °C (°F) | 75 - 85 (167 - 185) |
| Activation time (in water bath) | minutes | 5 - 6 |
| Transparent when activated | | yes |
| Working time | minutes | 2 - 2 ½ |
| Hardening time | minutes | 6 - 8 |
| Time to completion | minutes | 22 - 24 |
| Resistance to stretch | | moderate |
| Drape | | high |
| Memory (after 200 % elongation) | | high |
| Maximum elongation when activated | % | 1500 |
| Memory (after maximum elongation) | | high |
| Sticks to itself when activated and wet | | no |
| Sticks to itself when activated, after drying | | no |
| Adhesion (velcro strip) using heat gun | | no |

Mechanical properties at 21°C

| | | |
|------------------|-----|----------|
| Flexural modulus | MPa | 15 |
| Elastic modulus | MPa | 8.25 |
| Tensile strength | MPa | 3.0 |
| Strain at break | % | no break |

General properties

| | | |
|--------------------|--------------------|-----------------|
| Density | g cm ⁻³ | 0.87 |
| Hardness (shore A) | | 73 |
| Surface feeling | | slightly sticky |
| Color | | transparent |
| Odor | | none |
| Fatigue | cycles | > 10000 |
| Biocompatible | | 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.
- 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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