

## ORFIT® CRYSTAL NS

### A. GENERAL PRODUCT INFORMATION

ORFIT CRYSTAL NS is a low temperature thermoplastic material intended for the fabrication of soft braces and orthoses.

ORFIT CRYSTAL NS is applied directly to the patient after it is activated.

**! ORFIT CRYSTAL NS is not suitable for internal use. It may not be used on open wounds or in the mouth.**

### B. PRODUCT RANGE

This product is available in sheets of different thicknesses, sizes and perforation types.

Art. No.	Sizes in mm	Type	Thickness
1438.1/NS	450 x 600	non perfo	2.4 mm
1434.1/NS	450 x 600	non perfo	3.2 mm

### C. PRECAUTIONS BEFORE USE

1. The workplace must be well-ventilated to avoid overheating.
2. The necessary tools should in no way put the patient at risk.
3. Encourage the patient to assume a comfortable position and make sure that you position yourself in an easy working position.

### D. WORKING PROPERTIES

#### 1. Cutting

ORFIT CRYSTAL NS is a very soft product. It can easily be cut with a suitable pair of sharp scissors.

#### 2. Activation

##### 2.1. Activation in a water bath

ORFIT CRYSTAL NS is softened by heating at a minimum temperature of **75°C – 77°C (167°F – 171°F)**.

Activation time: 10 min.

Take the material out of the water bath and cool down on a wet towel or on a cool and smooth surface before applying it to the patient.

**! Make sure that the temperature of the activated material will not burn the patient.**

##### 2.2. Activation in an oven or with a dry heating device

ORFIT CRYSTAL NS is softened by heating at a temperature of **80°C – 90°C (176°F – 194°F)**.

Activation time: 5 to 7 minutes.

When using a dry heater, heating plate or a hot air oven, the hot surface must be covered with a Teflon film.

When using a heat gun, do not exceed the set temperature of 250°C (482°F) to avoid breakdown of the material.

High temperatures up to a maximum of 180°C (356°F) do not damage ORFIT CRYSTAL NS, but are not user-friendly. Higher temperatures are allowed on the condition that the activation time is reduced accordingly.

**! Wear gloves and do not apply ORFIT CRYSTAL NS directly to the patient's skin at high activation temperatures.**

**! Never use an open flame to activate ORFIT CRYSTAL NS.**

### 3. Application

Let ORFIT CRYSTAL NS cool sufficiently before application on the patient.

ORFIT CRYSTAL NS is:

Temporarily cohesive when wet heated (min 80°C-176°F), dried thoroughly on a towel and pressed together firmly. Reactivation in hot water, by dry heater or in a hot air oven is possible.

Permanently cohesive when dry heated (min 80°C-176°F) after scraping off the NS coating.

### 4. Application of hook and loop tape:

Hook and loop tape can be used to make sure the patient can easily put the orthosis on and off whenever desired or necessary.

Use one of the following techniques to apply hook and loop tape onto the ORFIT CRYSTAL NS orthosis:

#### 4.a. Technique 1: D- strapping

1. Cut a piece (6-8 cm) of double-sided velour loop tape (art. No. 35444L).
2. Cut a small piece (2-3 cm) of double-sided micro hook tape (art. No. 35444H).
3. Cut a small longitudinal incision (25 mm length = width of the double-sided velour loop tape) at minimum 1 cm distance from the edge of the orthosis. Cut a second small incision at the contralateral edge of the orthosis at the same level of the first incision.
4. Glide one end of the double-sided velour loop tape into one of the incisions and glide the other end of the tape in the contralateral incision (from inside to outside).
5. Let both ends of the loop tape overlap each other (in the middle of the two orthoses edges) and attach the small piece of double-sided micro hook tape between them.
6. Make the orthosis fit the patient correctly by pulling the free ends of the loop tape towards each other and strap them tightly enough on the hook tape.

Example: result of technique 1



#### 4.b. Technique 2:

1. Cut a small piece of self-adhesive hook tape.
2. Scrape off the NS coating locally on the spot where you want to apply the tape.
3. Shortly dry heat the surface of the ORFIT CRYSTAL NS orthosis until the orthotic fabrication material becomes slightly brilliant and sticky.
4. Dry heat the sticky side of the self-adhesive hook tape until the glue starts to melt.
5. Glue the hook tape with the sticky side onto the heated spot of the ORFIT CRYSTAL NS orthosis and press firmly together to make sure both materials are well-bonded sufficiently.
6. Repeat the same technique on the contralateral orthosis edge side.
7. Connect both pieces of hook tape with a separate piece of loop tape to open and/or close the orthosis.
8. Make the orthosis fit the patient correctly by pulling the free end of the loop tape and strapping it onto the applied hook tapes.

Please note that the adherence of the self-adhesive hook tape onto the ORFIT CRYSTAL NS orthosis is not as durable as with other orthotic fabrication materials.

#### E. FINISHING AND REINFORCING

Give the edges of an ORFIT CRYSTAL NS orthosis a smooth and even finish by local reheating and rubbing with a wet finger.

As ORFIT CRYSTAL NS is a soft material, you might need to reinforce your orthosis. In order to reinforce your orthosis you

can add a piece of thermoplastic material, preferably sticky material (e.g. Orfit Classic, Orflight, ...). Cut out a strip and dry heat this piece. Afterwards mould it to your ORFIT CRYSTAL NS orthosis. Finally, dry heat a cover piece of ORFIT CRYSTAL NS and put it on top of the reinforcement strip. Make your cover piece large enough that it overlaps your reinforcement strip completely and so adhere to the orthosis itself. Make sure you always remove the NS coating locally before dry heating. This will allow you to make a permanent bonding between the edges of the cover piece and the ORFIT CRYSTAL NS orthosis.

#### F. MAINTENANCE AND WASTE MANAGEMENT

**When cleaning ORFIT CRYSTAL NS, avoid prolonged contact with detergents and acids.**

After use, ORFIT CRYSTAL NS can be disposed of with normal household waste without harming the environment.

#### G. STORAGE

ORFIT CRYSTAL NS sheets and leftovers must be stored individually in their original plastic packaging to avoid cohesion.

#### H. ADDITIONAL INFORMATION

For additional information such as distributor contact information, product brochures, Safety Data Sheets and regulatory information, please visit our website [www.orfit.com](http://www.orfit.com)

#### Note:

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