

## ORFIT® ECO NS

### A. GENERAL PRODUCT INFORMATION

ORFIT ECO NS is a low temperature thermoplastic sheet material for the fabrication of orthoses, external immobilisation devices and rehabilitation aids.

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

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

### B. PRODUCT RANGE

ORFIT ECO NS is available in sheets of different thicknesses, sizes and types of perforation.

Art. no.	Thickness in mm	Sizes in mm	Perforation type
8938N.1/NS 8938N.4/NS	2.4	450 x 600	non-perforated mini
8934N.1/NS 8934N.4/NS 8954N.1/NS 8954N.4/NS	3.2	450 x 600  900 x 600	non-perforated mini non-perforated mini

### 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 ensure that you yourself are in an easy working position.
- ! **4. Make sure that the temperature of the activated material will not burn the patient.**

### D. ACTIVATION TECHNIQUE

1. ORFIT ECO NS is softened by heating at a minimum temperature of 65°C (149°F). Possible activation sources are: Suspan water bath, heat gun, heating plate, microwave oven.  
The activation time depends on the heat source and varies from 2 to 5 minutes.
2. When dry heating ORFIT ECO NS, it is recommended to rub both sides of the material with a small amount of talcum powder before activation.  
When using a heating plate or an oven, the hot surface should be covered with a Teflon film. When using a heat gun, do not exceed the temperature of 250°C (482°F) to avoid breakdown of the material.
- ! **3. Be careful: temperatures of 65°C (149°F) or more can also be reached in the patient's daily life. Think of a closed car in the summer, the surface of a hot radiator, a sauna or the proximity of an open fireplace.**
4. High temperatures up to a maximum of 120°C (248°F) do not damage ORFIT ECO 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 ECO NS directly to the patient's skin at these high activation temperatures.
- ! **5. Never use an open flame to activate ORFIT ECO NS.**

### E. WORKING PROPERTIES

#### Cutting

1. Draw the orthosis pattern on the ORFIT ECO NS sheet by means of a marker.
2. Cut the pattern roughly with a suitable pair of scissors, or use a cutter. When using a cutter, carve a straight line and break the sheet in two.

! **Be careful of possible cuts when using a cutter; always keep the assisting hand away from the cutting line.**

3. Heat the ORFIT ECO NS sheet until it is formable but not yet stretchable and cut the precise orthotic pattern by means of a pair of scissors.

#### Applying

1. Activate the ORFIT ECO NS pattern until it becomes soft and stretchable. Let it cool sufficiently before applying it to the patient and dry it in case hot water was used for activation.
2. Several application techniques are possible:
  - manual moulding: moulding by manual stretching and holding.
  - closed technique: form the material around the extremity and overlap the edges.
  - bandaging technique: secure the orthosis by means of a bandage.
Utilise the stretch and elastic properties of ORFIT ECO NS as much as possible.
3. In case of accidental bonding, let ORFIT ECO NS harden completely so that the parts that are stuck can be separated. Reactivation in hot water is then safe again.

4. Do not remove the orthosis from the patient before ORFIT ECO NS is sufficiently hard. ORFIT ECO NS sets relatively quickly and therefore the excessive material should be trimmed before complete hardening. To do so, use a suitable pair of bandage scissors. The setting time can be shortened by means of cold air, a cold bandage or a cold spray. The setting time can be prolonged by covering the ORFIT ECO NS with an insulation material such as a towel.

#### F. FINISHING

There are several ways to give the edges of the orthosis a smooth and even finish:

- local reheating and rubbing with the finger,
- after hardening, edge finishing can be done by means of a deburring knife,
- grinding by using a suitable grinding tool at a low turning speed.

#### G. MAINTENANCE AND WASTE MANAGEMENT

Orthoses made of ORFIT ECO NS must be cleaned daily. Use lukewarm water and liquid soap, biological detergent or toothpaste, and rinse well. Rub the orthosis with talcum powder before applying to the patient.

#### ! **Never use solvents. Avoid acid detergents.**

Sterilization of ORFIT ECO NS orthoses in an autoclave is impossible.

Disinfection is possible with alcohol, quaternary ammonium or a solution of commercial disinfecting soaps (HAC®, Sterilium®, etc.). Do not leave in contact with these soaps for a prolonged period of time, rinse abundantly.

After use, an orthosis can be disposed of with normal household waste without harming the environment. ORFIT ECO NS is biodegradable.

#### H. ADVICE FOR THE PATIENT

#### ! **Give the patient sufficient information about the exact use and the possible constraints of the orthosis.**

#### I. STORAGE

- ORFIT ECO NS can be stored vertically, if supported, or horizontally.
- It must be stored in a dark, cool, dry place at a temperature of min. 10°C (50°F) and max. 30°C (86°F) and in the original packaging.
- Once removed from the packaging, the left-overs should be stored back in the packaging to avoid biodegradation.

Low temperature thermoplastics can only be kept for a limited period of time and must be protected as much as possible from light, heat and humidity. The material ages in relation to storage circumstances. When too old, it becomes brittle and soft when activated.

#### J. GENERAL SAFETY ADVICE

- ! \* **ORFIT ECO NS is not suitable for internal use. It may not be used on open wounds or in the mouth.**
- ! \* **Never use an open flame to activate ORFIT ECO NS.**
- ! \* **To make orthoses and rehabilitation aids, ORFIT ECO NS may only be used by qualified health professionals.**

#### K. 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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