

# NUO | PROCESSING INFORMATION

Update: September 2021 // Subject to change and errors without notice.

## STORAGE

### HANDLING

NUO can be stored as a roll for a short period of time. For longer storage periods, lay out flat and covered without folds. NUO should be stored dust-free, splash-proof and protected from UV light.



### CONDITIONING

NUO reacts with slight dimensional changes to strong changes in humidity. Storage and processing conditions should therefore be in accordance with the subsequent conditions of use.

## PROCESSING

### CUTTING

The cutting tools used should be sharp. Furthermore, the cutting tools should be used exclusively for textiles. Both manual fabric shears, scalpels from the leather industry and automatic battery-powered shears are suitable for cutting NUO.



### LASERING

NUO can be processed by laser beam cutting. Clean cutting is possible with continuous or pulsed beam. Cutting speeds of up to approx. 1500 m/min can be achieved with standard laser cutting machines.



### SAWS

Generally it is possible to cut NUO using a sliding table saw. In this case it is important to ensure that the wood is on top and that the saw blade projection is maintained. A saw blade projection of 11 mm is recommended. To guarantee the highest edge quality we recommend a sharp cutting tool or the use of laser beam cutting technology.



### PUNCHING

Depending on the available pressure, NUO can be punched in several layers.



### BONDING

NUO is a porous material and requires special attention for bonding. When bonding over a large area, the probability of glue penetration is high and we recommend using NUO with a double textile. When using NUO with microfibre, the material remains closed and a second textile is not necessary. The bonding of cotton is possible with various adhesives. We recommend PVA white glue. Before jointing the PVA should be spread evenly and thinly on the substrate. Basically NUO and the carrier material must be cleaned before gluing. The materials must be free of dust, grease, oil and perspiration stains before the adhesive is applied. The adhesive is hardened using pressure. The instructions of the adhesive manufacturer must be followed. We recommend that a preventive test be carried out before each application of the adhesive. If you have any further questions, please contact the application engineers of NUO GmbH. If industrial laminating equipment is available, we also recommend the use of PU hot melt and thermoplastic adhesive films.

### SEWING

We recommend the needle tips LR and R from leather processing. Needle R is recommended for double fabric.

### COATING

We deliver NUO coated and uncoated. Resistant to wear such as scrubbing, contact with water and soiling. For automotive applications, where the material is not used as a „soft part“, we recommend cooperation with the company ICRO. It is possible to dye NUO. We are happy to offer customized colours. Please contact us so we can prepare an individual offer for you. It is also possible to paint NUO afterwards. To maintain flexibility it is necessary to keep the thickness of the coating low. A layer

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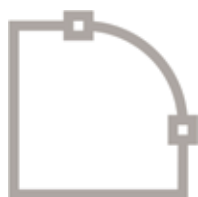
thickness of more than 25- 30 µm solidifies the material. This means an application quantity of approx. 60-100 g/m<sup>2</sup>. A test production for the appropriate settings of the respective equipment is explicitly recommended.

## NUO AS UPHOLSTERY FABRIC

Due to the increased elasticity we recommend NUO with microfibre when used as upholstery fabric. In addition, the mechanical properties such as tensile strength and tear resistance are increased by the microfibre (see technical data sheet).

## BENDING

NUO does not have a homogeneous surface. Insufficient bend radius exposes the individual wood pixels. A shear load on individual wood pixels can damage the NUO surface. In particular, dynamic shear forces are critical. For example this is the case in the vamp area of a shoe. If the shoe wrinkles too much during foot movement, dynamic shear forces can occur. To avoid this, we recommend a minimum buckling radius of 0.5 cm.



## CLEANING

### WASHING

NUO can be washed in a washing machine at 40 °C in normal washing cycle. Dry cleaning is possible. Bleaching of NUO is not recommended.

### DRYING

NUO should be air dried after washing. The use of technical drying or household dryers is not recommended.

### IRONING

NUO should always be ironed on medium heat on the left side. NUO is manufactured with heat-sensitive adhesives. At temperatures above 80-90 °C, these adhesives soften and damage may occur. For this reason, we recommend ironing NUO only with caution and leaving

the iron on the NUO surfaces only as long as necessary. We do not recommend using steam in the process.

## SURFACE CLEANING

NUO requires no special care. Especially when NUO is coated, no further treatment is necessary. If it comes to soiling by food or drinks, it should be wiped off directly with a soap solution. A longer exposure time can lead to permanent colour changes. The cleaning agent used should not contain any abrasive components. Do not use aggressive cleaning agents such as acetic acid etc. Protect NUO from direct heat and never place hot cooking pots etc. directly from the stove / oven on the NUO wooden surface. Furthermore, placing burning objects such as cigarettes on surfaces will cause surface damage. NUO should never be used as a cutting surface. Knife cuts can cause severe damage to the surface.



## SEALING OF CUT EDGES

Open edges can be sealed with edge paint (e.g. from Giardini). If this is not possible, a constructive solution must be found.

## BACK INJECTION OF NUO

Usually it is possible to back-inject NUO. This requires, however, a modified material structure, which is adapted to the specific project on customer request. Our application engineers will be pleased to advise you on this.