



Technical Data Sheet U-Bond 301
Ver. 5.0 January 2021

U-Bond 301

one-part polyurethane liquid adhesive

IMO FTPC Part 5 certified



DESCRIPTION

U-Bond 301 is a one-part, solvent-free moisture curing polyurethane liquid adhesive suitable for flexible bonding of wood, wood derivatives and different protection and insulation materials in sandwich panel assembly. Excellent resistance to water, temperatures, weathering and ageing conditions according to EN 204 D4.

Certified to:

IMO Resolution MSC.307(88)-Fire Testing Procedures Code (2010 FTP Code) – Annex 1 Part 5

Compliant to:

EN 204 D4

AREAS OF APPLICATION

U-Bond 301 is suitable for panel lamination and assembly, outdoor applications for woodworking, structural bonding of wood and derived products; chipboard, plywood, high pressure laminate, insulating materials like XPS, PU and PVC rigid foam, GRP, metals, aluminum, stainless steel, galvanized steel, construction materials like natural stone, marble, ceramics.

FEATURES

- One-component polyurethane
- Cold applied
- Easy-to-use. Pourable from twist-cap bottle to automatic dispensing industrial equipment
- Controlled foaming grade with good filling capacity
- Excellent adhesion on numerous substrates like insulating material, wood, plastic and metal
- Solvent free – Odorless
- Weathering resistance according to DIN 204 D4
- Resistant to ageing
- Resistant to chemicals



TECHNICAL DATA

Appearance	Liquid
Color	Amber translucent
Chemical nature	Polyurethane
Curing Mechanism	Moisture-curing
Viscosity [mPa·s] (23°C; cone/plate)	ca. 6000
Density [g/cm ³] (NPT method 06) (23°C and 50% RH)	ca. 1.13
Film formation time [min] (23°C and 50% RH)	ca. 20
Pressing time [min] (23°C and 50% RH)	ca. 60
Pressing force [N/mm ²]	ca. 1.0
Final setting time [h] (23°C and 50% RH)	ca. 24
Application temperature [°C]	From +5 to +40
Temperature Resistance [°C]	From -40 to +100

APPLICATION

The surfaces to be treated should be perfectly clean, dry and free from dust and grease. It is necessary to treat the bonding surface according to NPT application guidelines, eventually using a specific CLEANER or ACTIVATOR from NPT range. It is advisable to carry out preliminary adhesion tests on the support.

The low viscosity of the product enables accurate bonding due to easy coupling of different supports. Apply the product on one of the two surfaces (usually the less absorbent substrate) using a roller or by beading. Press parts firmly together for a perfect bonding. To guarantee a controlled hardening, when bonding nonabsorbent materials or materials with < 8% humidity, is recommended to vaporize water (approx. 10g water/m² for 150g adhesive/m²). U-Bond 301 swells (foams) during the setting process. For the bonding of non-absorbent surface layers, please take care that no air is included when joining the surfaces.



CLEANING OF EQUIPMENT AND PERSONAL PROTECTIVE MEASURES

Clean the tools used with acetone or solvent. When the adhesive has not yet hardened, it can be removed using paper or a cloth. Once hardened, the product can only be removed mechanically. Avoid skin contact by using latex, rubber or polyethylene gloves. If it comes in contact with the skin, remove immediately and wash with soap and water

PACKAGING

PE bottle 500g - 12 pieces per box

PE bottle 1kg - 12 pieces per box

Drums 320 kg

IBC Tank 1t

STORAGE AND SHELF LIFE

U-Bond 301 can be stored for 12 months in its original packaging (unopened container) between 10°C and 25°C in a cool, dry place. The storage temperature should not exceed 25°C for extended periods of time. Keep away from wet areas, direct sunlight and heat sources.

GENERAL INFORMATION

The information contained in this technical data sheet is to the best of our knowledge correct, being based on our knowledge and experience to date and cannot be used as a guarantee, due to the various different materials present on the market and the fact that the application conditions are not under our direct control and supervision. NPT srl, however, guarantees constant product quality. NPT srl, has the right to modify or up-date this technical data sheet according to requirements. Customers are kindly requested to verify that they are in possession of the latest version.

ALWAYS CONSULT THE MATERIAL SAFETY DATA SHEET BEFORE USING THE PRODUCT