## Description

N-PU 5610 is a reactive hotmelt adhesive formulated based on polyurethane pre-polymers. It is pressure sensitive and it provides instant bonding strength when joining two substrates. It is ideal for structural bonding of mobile electronic devices such as tablets and laptops.

## Features

- Recommended substrates: ABS, PC, ink-coated substrates
- Good thermal and moisture resistance

## Uncured Properties

| | |
|---|---|
| **Chemical Type** | Polyurethane |
| **Appearance** | White/Yellow |
| **Viscosity** @ 110°C [mPa·s]<br>Brookfield Thermosel, spindle 27# @ 20rpm | 4,000-6,000 |
| **Specific Gravity** [g/cm$^3$] | ~1.10 |
| **Open Time** [mins] | 2-4 |

## Curing Conditions

| | |
|---|---|
| **Tack free** @ 25°C, 50%RH [mins] | 3 |
| **Full Strength** @ 25°C, 50%RH [days] | 5 |

## Cured Properties

| | |
|---|---|
| **Hardness** [Shore D]<br>ASTM D2240 | 30 |
| **Lap Shear Strength** [MPa]<br>Steel<br>PCB<br>ASTM D1002 | <br>5<br>8 |
| **Elongation at Break** [%]<br>ASTM D638 | >600 |
| **Tensile Strength** [MPa]<br>ASTM D638 | >4 |

## Directions for Use

1. **Surface Treatment**

   Surfaces to be bonded should be free of dust, oil, grease or any other contaminants in order to achieve a reproducible bond. For slightly contaminated surfaces, it is sufficient to wipe with isopropanol or ethanol. Substrates with a low surface energy (e.g. polyethylene, polypropylene, Teflon) need to be pre-treated physically (e.g. atmospheric plasma or corona) in order to achieve sufficient adhesion.

2. **Application**

   To apply the material, melting equipment is recommended. Longer exposure to higher temperature may lead to a viscosity increase.
   - Preheating conditions: 30 mins @ 90-100°C
   - Application Temperature: 110-130°C

   After the adhesive is applied, the substrates should be joined within the specified open time. Keep parts from moving until adhesive is adequately set.

   N-PU 5610 cures exclusively by moisture and gains its final strength in 1-5 days, while exhibiting high handling strength instantly after joining. The following conditions will impact the curing reactions:
   - Humidity level of the storage room
   - Humidity level of the process room
   - Moisture content on the substrates
   - Permeability of the substrates to be bonded
   - Volume / layer thickness of the adhesives

3. Suggested working temperature range is -30 to 120°C.

## Storage

Maximum shelf life may be obtained when product is stored in a cool, dry location at a temperature between **10°C to 28°C**.

TO PREVENT CONTAMINATION OF UNUSED PRODUCT, DO NOT RETURN ANY PRODUCT TO ITS ORIGINAL CONTAINER.

## Materials Handling

Refer to the Material Safety Data Sheet (MSDS) for this product.

*Disclaimer*
*The information provided here including the recommendations for use and application of the product is based on internal laboratory test conditions and should only be used as a reference. CollTech does not assume responsibility for the test or performance results obtained by the user. It is the responsibility of the user to perform their own evaluations to confirm whether this product is suitable for their application.*