

Description

N-PU 5605 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 smartphones, tablets and laptops.

Features

- Recommended substrates: PC, ABS, metal, ink-coated substrates
- Reworkable
- Good environmental, chemical and aging resistance

Uncured Properties

Chemical Type	Polyurethane
Appearance	White/Yellow
Viscosity @ 110°C [mPa·s] Brookfield Thermosel, spindle 27# @ 20rpm	4,000-6,000
Specific Gravity [g/cm³]	~1.15
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] ASTM D2240	35
Lap Shear Strength [MPa] Steel	5
Aluminum	5
PCB	5
ASTM D1002	

Elongation at Break [%] ASTM D638	>600
Tensile Strength [MPa] 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 5605 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.