

NYLON BONDING ADHESIVE - TA4550



Permabond TA4550 is a two-part, 2:1 low-odour structural acrylic adhesive which has been specifically designed for nylon bonding.

TA4550 requires no surface primers or additional surface treatment before bonding, facilitating high-speed production and efficiency. TA4550 bonds nylon exceptionally well, and is also highly suited for bonding other substrates, especially plastics, composites and metals. Its shear and peel strength on nylon is outstanding. The adhesive is very easy to apply via cartridge with a static mixing nozzle and cures quickly at room temperature.

Highly viscous and thixotropic, TA4550 is ideal for vertical applications, as the adhesive will not slump or sag once applied. This high viscosity provides great flow control properties, leading to a more controlled, accurate dispensing and alignment of parts. Not only this, but the adhesive's high level of toughening give it outstanding resistance to impact and vibration. Lastly, its low-odour formulation increases worker comfort and overall product satisfaction.



KEY FEATURES:

- ▶ Bonds nylon to metals, plastics, & composites
- ▶ Excellent adhesion to nylon
- ▶ Toughened, great impact & vibration resistance
- ▶ Non-flammable - easy to store & transport
- ▶ Minimal surface preparation required
- ▶ Outstanding shear & peel strength
- ▶ Fast, room temperature cure
- ▶ Non-slumping
- ▶ Low-odor
- ▶ Easy to apply

IDEAL FOR BONDING:

- Acrylic
- Aluminum
- CFRP
- FRP
- GRP
- Mild Steel
- Nylon 6 & 6,6
- PBT
- PMMA
- PVC
- PC
- Stainless Steel
- *And many more*





DESCRIPTION

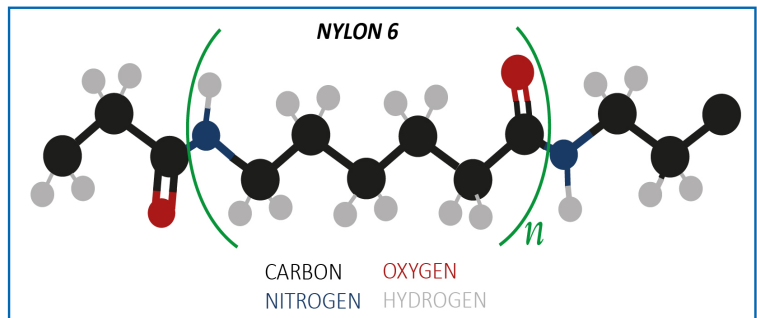
The following technical data for Permabond TA4550 is a guideline and does not constitute a specification. For full technical information, please refer to the technical data sheet, available at www.permabond.com. Please contact Permabond to discuss your nylon bonding project.

	TA4550
Description	Two-part nylon bonding acrylic adhesive
Appearance	Dark green (mixed)
Features	Outstanding strength on nylon & other substrates. Very tough, non-slumping & no primers needed.
Viscosity	100,000 cP mPas (thixotropic)
Shear Strength	Nylon/PA 6: >6 N/mm ² (>870 psi) (Substrate Failure) / Mild Steel: 24 N/mm ² (3500 psi)
Fixture time	5 minutes @ 23°C (73°F)
Working Strength	2 hours @ 23°C (73°F)
Storage	Temperatures between 2 and 7°C (35 to 45°F)
Packaging	10 x 50ml, 6 x 400ml, Bulk on request

WHY IS NYLON SO HARD TO BOND?

Traditionally, nylon (polyamide) has been considered very challenging to bond. This is mainly due to its low surface wettability, (also known as low surface energy), hydrophobic nature and low chemical reactivity, all of which mean that it's quite difficult for an adhesive to properly wet, and therefore bond, the substrate. Amongst other reasons, nylon also tends to absorb moisture from the air around it, which ultimately can alter its material properties, reducing adhesive effectiveness.

Permabond has really spearheaded the breakthrough in nylon bonding adhesives, creating products such as TA4550 that overcome these inherent challenges with this substrate - an adhesive so strong that the nylon will fail before the bond does!



TYPICAL APPLICATIONS:

- ▶ Aerospace
- ▶ Automotive housings
- ▶ Defense
- ▶ EV battery pack sealing
- ▶ Sports equipment
- ▶ 3D Printed nylon
- ▶ Personal electronics
- ▶ Electronics, sensors
- ▶ Composite components

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