



TECHNICAL DATA

ZYROBOND® PUR 6205

Polyurethane Adhesive

PUR 6205 is a semi-rigid, odourless, polyurethane-based two component adhesive, which polymerises extremely quickly at room temperature.

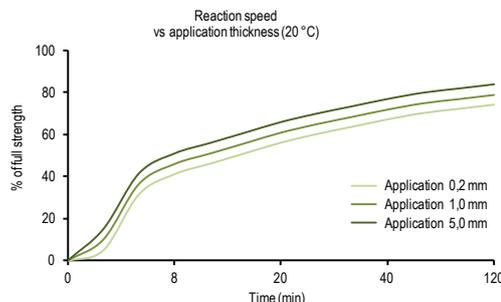
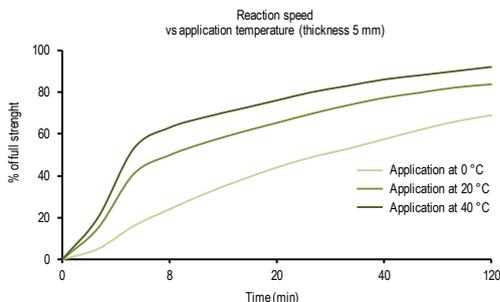
PUR 6205 is suitable for bonding a wide variety of materials such as thermoplastics, thermosetting plastics, steel, aluminium, concrete, wood and glass.

TECHNICAL DATA:

| | Part A | Part B | Mixed |
|-------------------------------|-------------------|---------------|--------------|
| Composition: | Polyol | MDI | Polyurethane |
| Mix Ratio: (Weight) | 1 | 1 | |
| Mix Ratio: (Volume) | 0,84 | 1 | |
| Colour: | Milky Transparent | Amber | Translucent |
| Consistency: | Liquid | Liquid | Thixotropic |
| Viscosity: @ 25°C, Brookfield | 2500 cps | 3000 cps | 50000 cps |
| Specific Gravity: | 0.98 kg/l | 1.17 kg/l | 1.08 kg/l |
| Shore Strength D: | 70 | | |
| Flammability: | > 200°C | 230°C | |
| Steam Pressure: | very low | 0.000004 mmHg | |
| Miscibility with Water: | Immiscible | Immiscible | |
| Working Temperature: | +10°C to +30°C | | |

Reaction Mechanism:

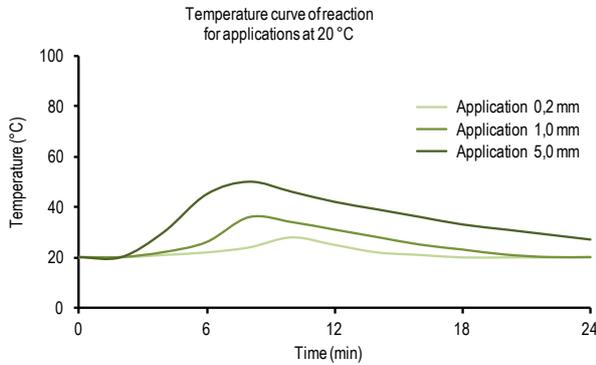
The speed of the hardening reaction is mainly influenced by two factors, the application temperature and the application thickness. Being an exothermic reaction, the speed decreases as the thickness and temperature application increase. Even if in a smaller measure, the substrate influences the speed of reaction. Materials with a high coefficient of thermal conductivity will tend to slow down the reaction. The maximal temperature of the reaction will be reached in 5 mm application thickness and is always lower than 50°C.





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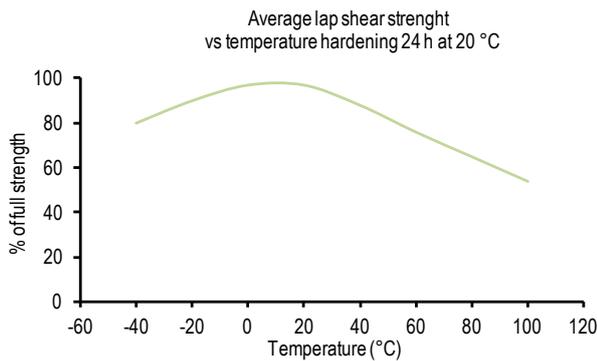


Typical Reaction Values
10 gr. Product at 20°C

| Properties | Value |
|------------------------------------|----------|
| Working Time | 5 min |
| Curing Time | 15 min |
| Time until Reaction End | 480 min. |
| Temperature of exothermic reaction | 50°C |

Typical Curing Properties:

The mentioned properties have been measured through standard samples tests, made bonding by overlapping samples of different materials of dimensions 100 × 20 × 20 mm with an adhesion area of 20 × 20 mm. The values, obtained with standard methods on typical lots, are exclusively provided as technical information, and not as product specification. It is up to the user to test the product for a suitability for their requirements.



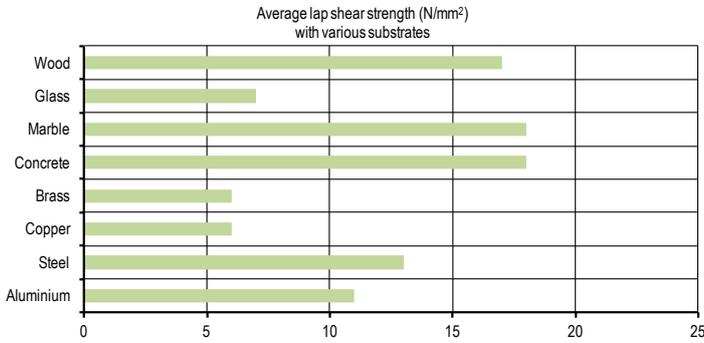
Typical Product Values at 20°C

| Properties | Value |
|----------------------|-----------------------------|
| Dielectric constant | 3,5 |
| Tensile Strength | 22 N/mm ² |
| Dielectric Strength | 24 kV/mm |
| Specific Resistance | 4,8x10 ¹⁵ Ω x cm |
| Thermal Conductivity | 0,22 W/m*K |



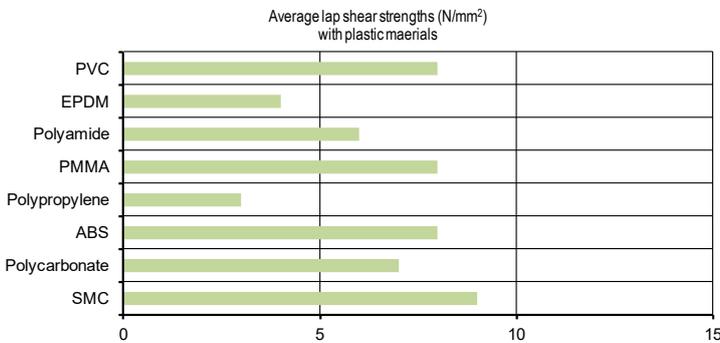
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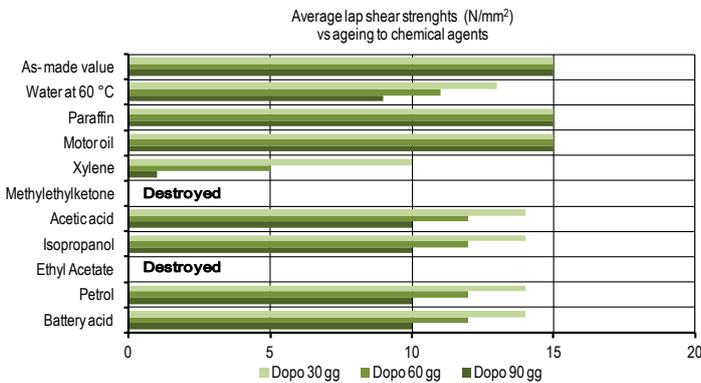
The tests have been conducted at 20°C on metal to metal joints, which have been hardened for 48 hours at 20°C.

Pre-treatment has been made by sanding and degreasing with acetone.

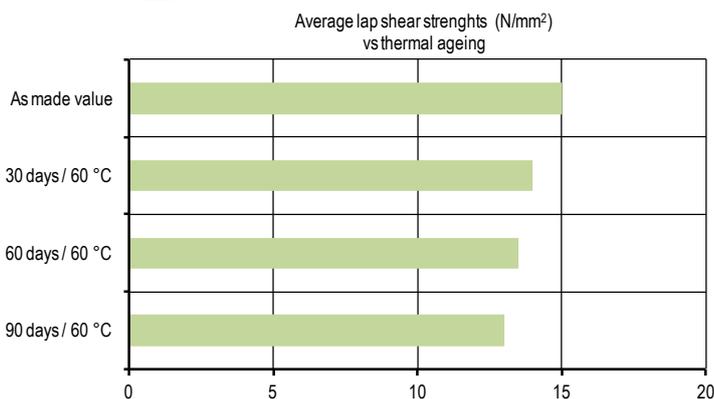


The tests have been conducted at 20°C on plastic to plastic joints, which have been hardened for 48 hours at 20°C.

Pre-treatment has been made by abrading and degreasing with iso-propanol.



If not otherwise specified, the tests have been carried out at 20 °C after immersion for 30, 60 and 90 days at 20 °C on steel to steel joints which have been hardened for 48 hours at 20°C.



The tests have been carried out at 20°C on steel to steel joints, which have been aged at 60°C.

At the end of the 3 thermo cycles of 24 hours each ranging from -40°C to 100°C, there has been no variation in the average lap shear strength.

Pre-treatment has been made by sanding and degreasing with acetone



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Preparation: The strength and durability of the bond depends on proper preparation of the surfaces to be bonded. The surfaces must be cleaned with a suitable cleaner and free of dust, dirt, oil and grease. For the preparation of thermoplastic materials such as PVC, polycarbonate, polypropylene, polymethylmethacrylate (PMMA) etc., a mixture of light ether or isopropyl alcohol (IPA) can be used. Do not use solvents, as they could damage the surface. Acetone can be used for the pre-treatment of all other suitable surfaces. Petrol or other solvents should not be used under any circumstances. If possible, grind or sand the surfaces, removing any paint residue from the surface to be glued in order to increase the strength and durability of the bond. The surfaces must be completely dry before adhesive application.

Instructions for Use: The mixing must be done with a mixing nozzle with at least 16 elements. A smaller number of elements does not guaranteed a homogeneous mixing of the adhesive. A higher number of elements will cause an increase in the reaction speed of chemical curing. The mixing nozzles are disposable products and can be used only once. The two-component cartridges can be used with corresponding manual or pneumatic guns, depending on the size and shape of the cartridge. Special automatic dispensing equipment for materials with low viscosity can be used for application in industrial manufacturing plants. The mixed adhesive should be applied from the mixer directly to the primed and dry surface. The optimum thickness of the adhesive layer for maximum adhesion and durability of bonding is 0.2 mm. The components must be assembled within a minute after application of the adhesive and compressed with a constant contact pressure on the entire adhesive surface.

Storage: PUR 6205 has a shelf life of 12 months after preparation, provided that the product is stored in a cool and dry place at a temperature between + 20°C and + 30°C. The cartridges must be kept in a sealed plastic bag in a dark place and away from heat sources in the original packaging.

General information: The information contained herein serves merely as an indication and is given to the best of knowledge. The users must test the suitability of the product for her/its/their respective application independently however. All products purchased from or supplied by Nohtec are subject to terms and conditions set out in the contract. Nohtec warrants only that its product will meet those specifications designated as such herein or in other publications. All other information supplied by Nohtec is considered accurate but are furnished upon the express condition the customer shall make its own assessment to determine the product's suitability for a particular purpose. Nohtec makes no other warranty, either express or implied, including those regarding such other information, the data upon which the same is based, or the results to be obtained from the use thereof, that any product shall be merchantable or fit for any particular purpose; or that the use of such other information or product will infringe any patent.