

PU 2KE 230

CHEMICAL NATURE: **POLYURETHANE**

OPEN TIME: **40 MIN**

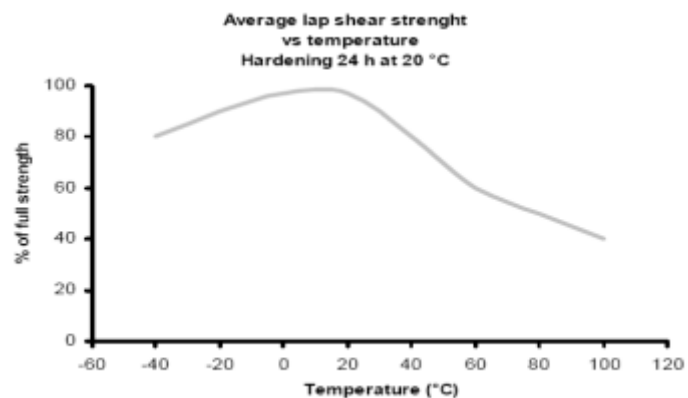
FIXTURE TIME: **150 MIN**

HARDNESS: **85 SHORE A**

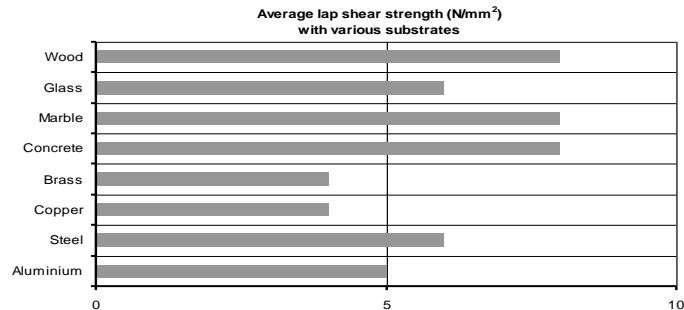
VISCOSITY: **40000 mPa*s**

PU 2KE 230 is a bi-component, thixotropic, **self-leveling**, odourless, black or translucent polyurethane adhesive that polymerizes at room temperature, used for the structural bonding of a wide range of materials such as thermoplastics and thermosetting materials, steel, aluminium, concrete, wood and glass.

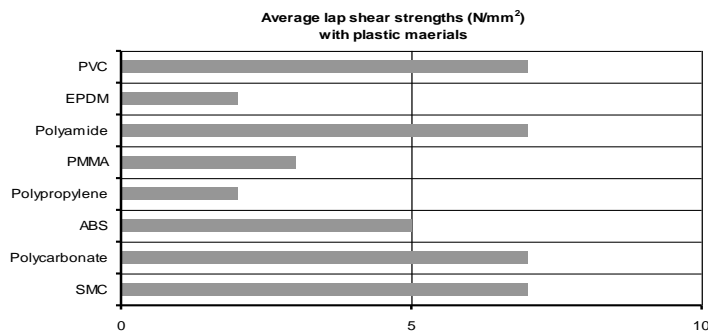
PROPERTIES	COMPONENT A	COMPONENT B
CHEMICAL NATURE	Polyol	MDI
COLOUR	Black / Translucent	Amber
APPEARANCE	Liquid	Liquid
DENSITY @ 25 °C	1,14 g/ml	1,20 g/ml
VISCOSITY @ 25 °C	5000 mPa.s	6000 mPa.s
MIXING RATIO BY VOLUME	1,00	1,00
MIXING RATIO BY WEIGHT	0,89	1,00
TYPICAL CHARACTERISTICS OF THE FINAL SYSTEM		
COLOUR	Black / Translucent	
APPEARANCE	Thixotropic	
DENSITY	1,17 g/ml	
VISCOSITY	40000 mPa.s	
APPLICATION TEMPERATURE	+10 / +30 °C	
OPEN TIME (10 g @ 20°C)	40 min	
FIXTURE TIME (10 g @ 20°C)	150 min	
FULLY CURED TIME (10 g @ 20°C)	12 h	
EXOTHERMIC PEAK OF REACTION	40 °C	
HARDNESS	85 Shore A	
MINIMUM GAP FILL	0,20 mm	
TENSILE STRENGTH	8 N/mm ²	
ELONGATION AT BREAK	190 %	
RESISTIVITY	1.2 x10 ¹¹ Ωxcm	
TEMPERATURE RESISTANCE	- 40 / + 90 °C	



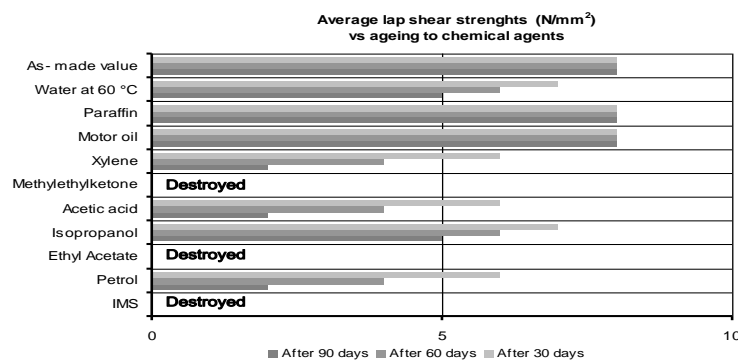
Technical Data Sheet – February 2016



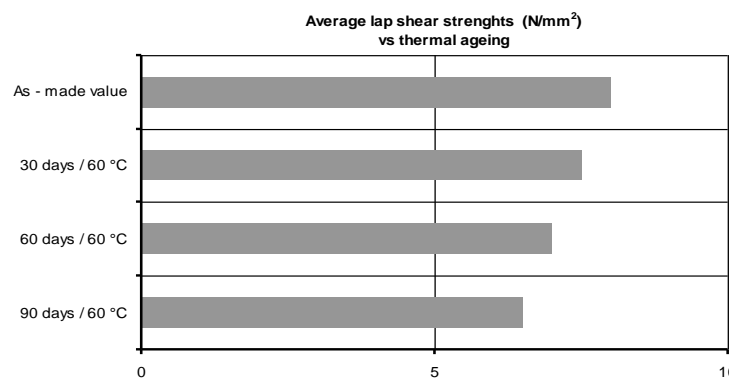
Tests have been carried out at 20°C on metal-metal joints, which have been hardened for 48 hours at 20°C. Pre-treatment has been made by sanding and degreasing with acetone.



Tests have been carried out at 20°C on plastic-plastic joints, which have been hardened for 48 hours at 20°C. Pre-treatment has been made by sanding and degreasing with isopropyl alcohol.



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.



Tests have been carried out at 20°C on steel-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.

Application



Blending should be made through static mixer composed by a minimum of 16 elements. A lower number of components doesn't allow a complete mixing. A higher number of components would increase speed of the chemical reaction of hardening. Static mixers are for a unique use only.

Despite the good thixotropy of the product, the syringes can be easily used without the aid of mechanical tools. The cartridges can be used with specific manual or pneumatic applicators depending on the capacity and shape of the cartridge.

For process and in continuative applications, automatic dosage system for low viscosity materials can be used.

The mixture must be applied directly from the mixer on the pre-treated dry surface. The optimal layer of adhesive that will guarantee the highest resistance for the joint should have at least 0.2 mm of thickness. The components have to be assembled within the first minute of extrusion of the adhesive and sealed with a steady pressure over the gluing area.

Surface preparation



The strength and durability of bonded joints are dependant on proper pre-treatment of the surfaces to be bonded that should be cleaned with a good degreasing agent in order to remove all traces of dust, dirt, oil and grease.

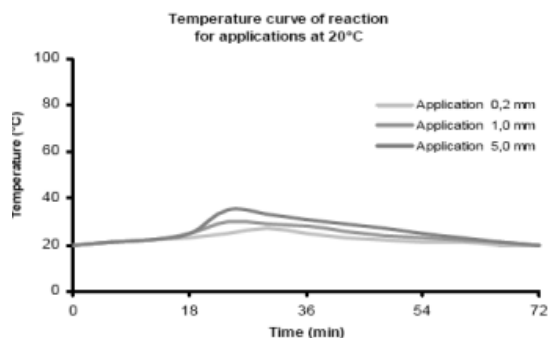
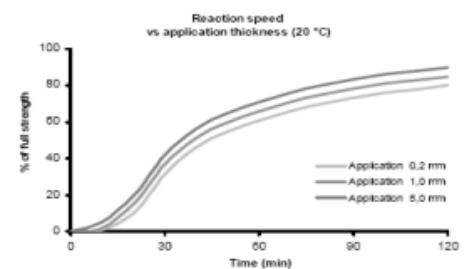
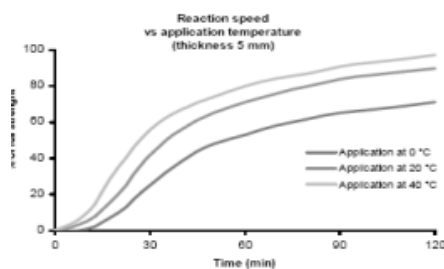
Pre-treatment of thermoplastics materials such as PVC, polycarbonate, polypropylene, PMMA, etc., can be made using a mixture of light ethers or with isopropyl alcohol. Use of strong solvents is not recommended due to the risk of damage to the plastic surface. Pre-treatment of other surfaces can be made using acetone or trichloroethylene. Petrol or other solvents should never be used. Where possible, carry out a mechanically abrading to remove paint from the surfaces (where necessary) and to increase strength and holding gluing. Let dry the pre-treated area before applying the adhesive.

Reaction Mechanism



The speed of the harden reaction is mainly influenced by two factors: the application temperature and the application thickness. Being the reaction exothermic, the speed decreases as the thickness and temperature application decreases.

Even if in smaller measure, the substrate influences the speed of reaction. Materials with a high coefficient of thermal conductivity will tend to slow down the reaction.



Storage & Packaging



- The product has a shelf life of 12 months from the production date when stored correctly in the original and sealed containers, kept in a cool and dry place. We recommend a storage temperature between + 12 ° C and + 25 ° C. Avoid direct contact with sunlight.
- It can be supplied in a two-component syringe, in a two-component cartridge (side by side or coaxial) or in drums of various sizes and capacities.

Precautions for use



- Mastikol products are generally quite harmless to handle provided that certain precautions are normally taken when handling chemicals are observed.
The uncured materials must not be allowed to come into contact with foodstuffs or food utensils, and measures should be taken to prevent the uncured materials from coming in contact with the skin, since people with particularly sensitive skin may be affected.
The wearing of impervious rubber or plastic gloves will normally be necessary; likewise the use of eye protection.
The skin should be thoroughly cleaned at the end of each working period by washing with soap and warm water. The use of solvents has to be avoided. Disposable paper should be used to dry the skin. Adequate ventilation of the working area is recommended.
These precautions are described in greater detail in the safety data sheet for the individual products and should be referred to for further information.

Notes



- The information and the recommendations relating to the application and end-use of Mastikol products, are given in good faith based on Mastikol's current knowledge and experience of the products when properly stored, handled and applied under normal conditions.
Mastikol cannot assume responsibility for the results obtained by others over whose methods we have no control.
It is the user's responsibility to determine suitability for the user's purpose of any production method mentioned herein and to adopt such precautions as may be advisable for the protection of property and of persons against any hazards that may be involved in the handling and use thereof.
Mastikol specifically disclaims all warranties expressed or implied, including warranties of merchantability or fitness for a particular purpose, arising from sale or use of Mastikol's products. Mastikol specifically disclaims any liability for consequential or incidental damages of any kind, including lost profits.
Users should always refer to the most recent issue of the technical data sheet for the product concerned, copies of which will be supplied on request