

Technical Data Sheet

PROPELLING EXCELLENCE
PROXL[®]

generation[™]
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METAL PANEL BOND

A two component, room temperature curing, black coloured, odourless, thixotropic polyurethane adhesive specially designed for structural bonding of a wide range of materials as thermosetting and thermoplastic materials, steel, aluminium, concrete, wood and glass.

Codes - PROMET,
PROMET200

CHEMICAL BASE	PU
REACTION TIME	20 MINS
COLOUR	BLACK
HARDNESS	80 D
VISCOSITY	THIXOTROPIC



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Technical Data






PROPERTIES	COMPONENT A	COMPONENT B	MIXED
Chemical base	Polyol	MDI	Polyurethane
Mixing ratio by volume	1,00	1,00	
Mixing ratio by weight	0,87	1,00	
Colour	Black	Amber	Black
Appearance	Liquid	Liquid	Thixotropic
Viscosity (mPa*s)	1.700	3.000	40.000
Relative density	1,02	1,17	1,10
Application temperature (°C)			+10 / +30
Working time			20 min
Bonding time			60 min
Fully cured time			720 min
Temperature of exothermic reaction (°C)			30
Hardness (Shore)			80 D
Elongation (%)			15%
Service Temperature (°C)			-36 / +100
Shelf life (month)			12
Storage temperature (°C)			+20 / +30

Surface Preparation

The strength and durability of bonded joints depend on proper pre-treatment of the surfaces to be bonded

- Joint surfaces should be cleaned with a good degreasing agent 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 isopropanol. Use of strong solvents is not recommended due to the risk of damage to the plastic surface.
- Where possible, carry out a mechanical abrasion to remove paint from the surfaces (where necessary) and to increase strength and resistance of the adhesion. Let dry the pre-treated area before applying the adhesive.

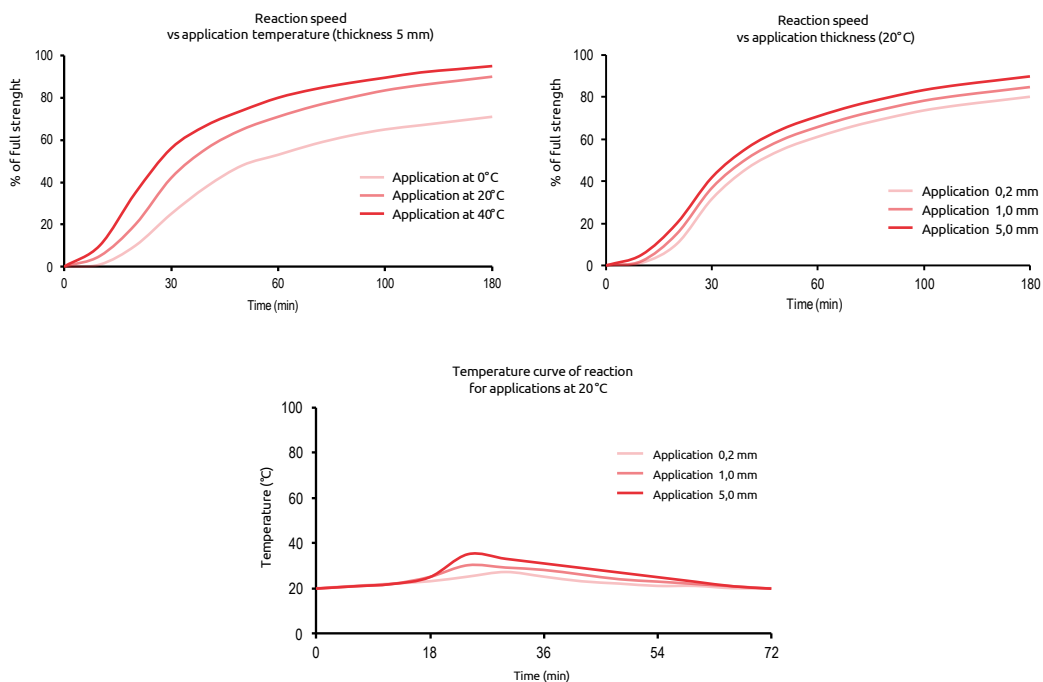
Application Guide

	<p>Clean the area with a suitable cleaner to remove any contaminants</p>
	<p>Using 80 grit disc sand both the surrounding areas of the repair.</p>
	<p>Re-clean repair areas and allow to dry.</p>
	<p>Remove the cap and push a small amount of the product to equalize the 2 components.</p>
	<p>Attach the nozzle and apply the plastic repair adhesive.</p>

Reaction Mechanism

The speed of the hardening 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 increase. 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.

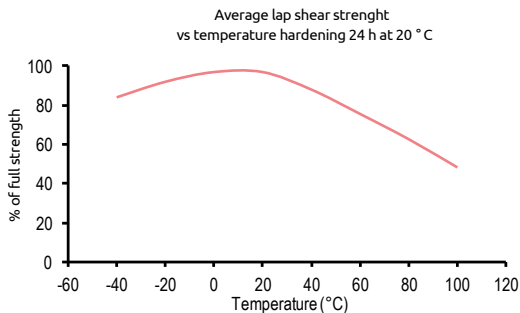
The maximal temperature of the reaction will be reached in 5 mm application thickness and is always lower than 80°C.



Technical Characteristics of Cured Products

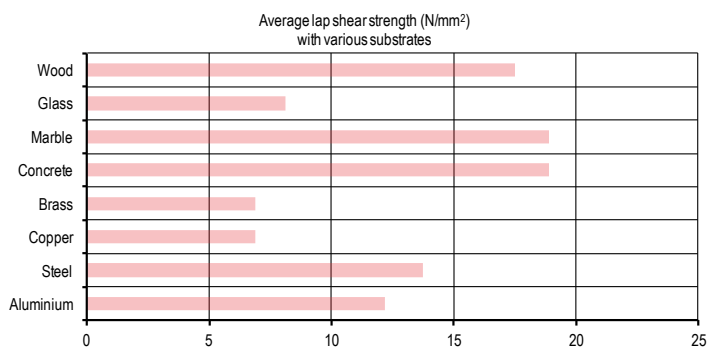
The below properties have been measured through standard samples tests, made bonding by overlapping samples of different materials of dimensions 100 × 20 × 20 mm with an adhesion area of 20 × 20 mm. The values, obtained with standard methods on typical lots, are exclusively provided as technical information, and not as product specification.

In any case, it will be up to the user to test the product for a specific situation and then give his final approval.



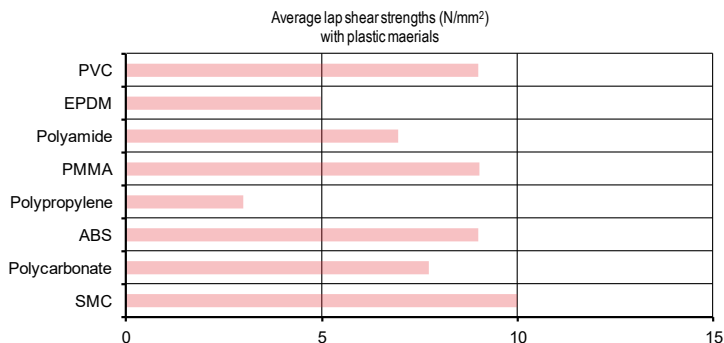
PHYSICAL PROPERTIES AT 20 °C

Tensile strength (N/mm ²)	23
Resistivity (Ω • cm)	1,2x10 ¹⁵
Dielectric constant	3,8
Dielectric strength (kV/mm)	25
Thermal conductivity (W/m•K)	0,21



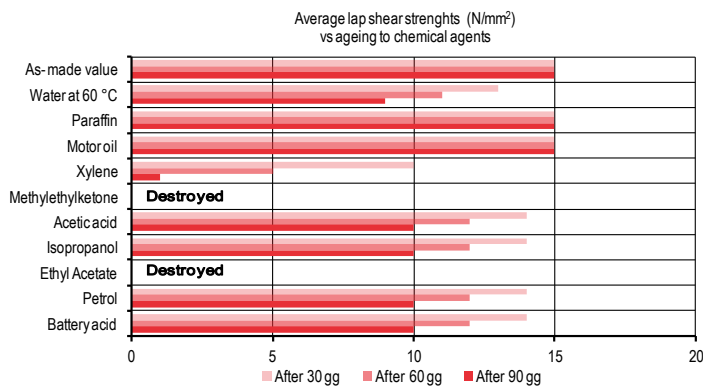
The tests have been conducted at 20°C on metal to metal joints, which have been hardened for 48 hours at 20°C.

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

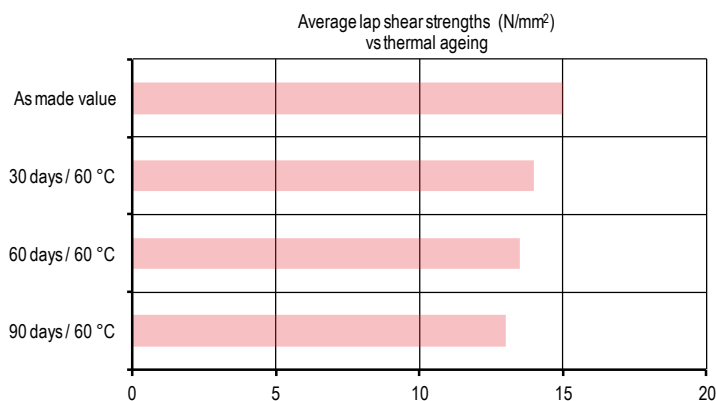


The tests have been conducted at 20°C on plastic to plastic joints, which have been hardened for 48 hours at 20°C.

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.

PRODUCT STORAGE

ProPlas Rapid Adhesive has a shelf life of 12 months from the initial production as long as it is stored in a cool and dry place, between +20 °C and +30 °C. Expiry date is indicated on the label.

Once opened, the cartridges will last until the expiry date (as long as the above conditions are met) leaving the last mixer used onto the cartridge.

PRODUCT HANDLING CAUTIONS

ProXL products are harmless to handle provided that certain precautions are taken when handling chemicals. 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.

DISCLAIMER OF LIABILITY

The information and, in particular, the recommendations relating to the application and end-use of ProXL products, are given in good faith based on ProXL current knowledge and experience of the products when properly stored, handled and applied under normal conditions. ProXL 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. ProXL specifically disclaims all warranties expressed or implied, including warranties of merchantability or fitness for a particular purpose, arising from sale or use of ProXL products. ProXL 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.