Technical Data Sheet

Pattex Stabilit Express

I. Product:

Nature of product:
Resin: Methylmethacrylate
Hardener: Dibenzoylperoxide

Field of application:
For safe bonding of:

- Ceramics, porcelain, glass, concrete, stone, wood as well as all kinds of metals
- Polystyrene, acrylic glass, rigid PVC
- ABS- and SAN-plastics
- Polycarbonate, glass-fibre reinforced plastics
- Celluloseacetobutyrate
- Aminoplast-and Phenoplast -materials

Package size:
Boxes of 30 g and 80 g

Shipping unit:
PSE 12 = 12 boxes of 30 g
PSE 6 = 6 boxes of 80 g

II. Characteristics:

- 2 component adhesive
- High adhesive strength
- Fast curing time
- Levels uneven surfaces and fills cracks
- Can be painted
- Not suitable for Polyethylene, Polypropylene, Polytetrafluorethylene (Teflon®), Soft-PVC, rigid-foam materials and Polyamide

Final strength:
High final strength after approx. 1 hr at room temperature (18° - 25°C)

Application time:
Approx. 10 min.

Tensile-shearing strength:
Up to 25 N/mm²

Application temperature:
Not below 0°C and not above +30°C

Temperature resistance:
Temperature resistant from -20°C up to +80°C.
Bonding strength is reduced with rising temperature: 50°C: 60%,
80°C: 30%

Capacity for resistance:
Bonding of plastics is resistant at room temperature to water, diluted acids and bases, aliphatic hydrocarbons or white spirit, oil and grease.

On long contact with water and at high temperatures the bonding of metal, glass and ceramics has limited resistance.

Limited resistance to alcohol, benzene, toluene and fuels.

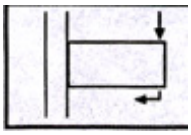
Short time resistance to aggressive solvents (acetone, ethyl acetate etc.).

Attainable stability and constructions:

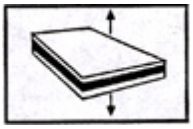
1. General

If high bonding strength is required ensure that only shearing stress is put on the couplings, as resistance against bending and peel stress is generally lower. The resistance to tensile stress is also not as high as to shearing stress.

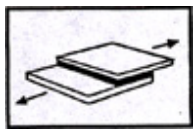
peel stress



bending stress

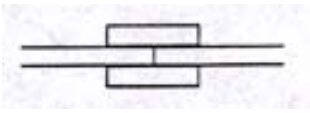


tensile stress

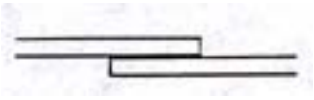


shearing stress

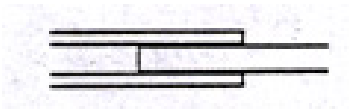
Following connection types are recommended:



double butt-strap connection

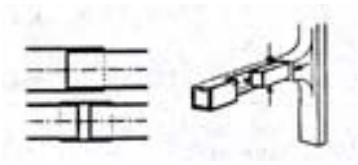


simple overlapping



double overlapping

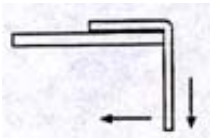
seamed joint



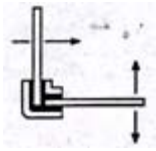
sleeve joint

groove joint

Comparison of different connections:



favourable



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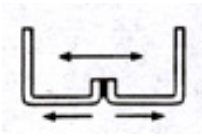
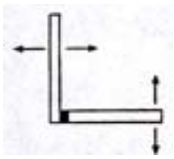


unfavourable



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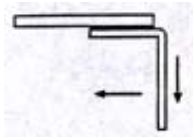
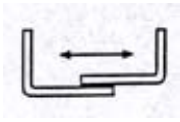


more favourable



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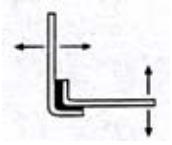

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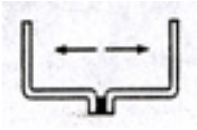

unfavourable

2. Lap shear strength

For aluminium approx. 20 N/mm²

3. Strength of metal and plastic bonding:

Following results are for two stripes of metal or plastic (80 x 25 mm) which were stuck together using simple overlapping (10 mm).

Material	Surface treatment	Lap shear strength (N/mm²)
Aluminium	roughened with Sandpaper (K50)	20
Aluminium	roughened with Sandpaper (K240)	24
Aluminium	sanded	25
Aluminium	pickling	27
Steel	sanded	20
Brass	sanded	22
Acrylic glass	-	6 – 10
Acrylic glass	sanded	14 – 19*
Rigid PVC	-	6 – 9*

III. Directions for use:

Surface preparation:

1. Metals

The bonding surfaces must be free of dirt, rust, oil and grease, oxidation and eloxated layers.

Clean surfaces with acetone or white spirit and roughen them with abrasive paper.

Leave on well-fixed coatings if the required bonding strength is not very high.

2. Plastics

Carefully remove oil and grease with adequate solvent, e.g. white spirit or alcohol. For rigid-PVC, ABS, polystyrene and SAN roughening of surfaces is not necessary. Roughening of acrylic glass and celluloseacetobutyrate increases bonding strength. To remove separating agents roughening is absolutely necessary with glass-fiber reinforced plastics.

3. Glass, ceramics, porcelain, marble, stone

Clean surfaces with acetone, ethanol, white spirit or clean with scouring agent, rinse with water and allow to dry. Glass or ceramics surfaces (e.g. tiles) can be left smooth, roughening of surfaces will considerably increase bonding strength.

4. Concrete

Concrete has to set completely (> 28 days) and dry.

Clean surface from separating agents with soap water. Remove dirt using a wire brush. To remove ingrained paint use ammonium chloride or sand paper.

5. Wood

Clean surfaces from dust and other separating agents. Sand down varnish coatings. Remove oil and grease with solvent.

6. Further

With most materials, cracks will not need any special preparation as long as the surfaces are dry and free of grease.

Adhesive mixing:

The working set of 30 g consists of one ready-for-use mixing trough, the 80 g set contains three ready-for-use mixing troughs. Depending on amount of Pattex Stabilit Express needed, put one, two or three spoons of hardener powder into the mixing trough. Then fill up the mixing trough completely with resin and thoroughly mix together the two components with the spatula.

Adhesive application:

Application time:

Apply within 10 min. after the two components have been mixed. Application time extends at lower temperatures.

Apply Pattex Stabilit Express with plastic spatula onto both surfaces to be bonded. If both surfaces are smooth only apply on one.

Then join the two surfaces applying moderate pressure and fix until initial bonding strength is reached (approx. 20 min.)

If the bonding are under high stress it is recommended to fix until final strength is attained (1 hr.). Remove any adhesive remnants immediately, use acetone if necessary.

Note that adjusting is only possible during the application time of 10 minutes.

IV. Important remarks:

Tools cleaning:

To remove adhesive remnants from the mixing trough press its bottom part.

Dissolving of bonding:

Hardened adhesive has very high bonding strength. To dissolve bonding, heat up the surfaces to 150°C. Or put the bonded surfaces into a solvent containing bath, allow solvent to react.

Precautionary measure:

Both components are combustible if not hardened. Keep away from sources of ignition. Do not smoke during adhesive application. Use only in well ventilated areas! (At high concentration and long influence monomers from resin could cause irritation). Harmless when cured.

Storage:

Store in a cold, dry place. Freezing is possible (heightens shelf life). Avoid temperatures above +30°C.

Shelf life:

Approx. 12 months at 20°C.

Warning:

F = highly inflammable

Xi = irritant.

Keep out of the reach of children.

The above instructions are based on thorough trials and on general experience gained in this field. As it is impossible to survey all installation methods and in view of various different working conditions, we cannot, however, claim that the information given is complete. We therefore recommend that tests should be carried out on your own to ensure the greatest possible success. We guarantee a uniform quality standard for this product.

Henkel KGaA