



Soudaseal 605 Duo

Product description

Soudaseal 605 Duo is a fast curing high quality two component hybrid polymer based adhesive. For use in elastic bonding applications where fast curing is required or for those applications where the bond design does not allow the normal penetration of atmospheric moisture.

Soudaseal 605 Duo cures by means of a chemical reaction between A- and B-component and therefore is not dependent on (atmospheric) moisture.

Properties

- Fast strength build-up
- Fast curing, independent of residual moisture
- Good mechanical characteristics
- Permanently elastic after curing
- For in- and outdoor use
- Good weathering, ageing and UV-resistance
- Low odour
- Does not shrink
- Good applicability and toolability
- Can be painted with all water based paints and many other systems (to be tested)

Applications

- Soudaseal 605 Duo is suitable for several industrial and building applications like elastic bonding in car body work, caravan, bus and container industry.
- Supple bonding and sealing in vibrating constructions in carbodies, caravans and containers.
- Elastic bonding applications where fast curing and strength build-up is required.
- Full surface bonding of large areas between non-porous substrates
- Flexible connections in automotive applications.
- Suitable for highly demanding industrial bonding and gap filling

Technical data

Base	SMX Hybrid Polymer	
Curing system	Polymerisation by hardener (2nd component)	
Elasticity modulus	ISO 37	ca. 1.20 MPa
Elongation at break	ISO 37	ca. 250 %
Maximum tension	ISO 37	ca. 2,0 N/mm ²
Component A	-	
Component A colour	White Black	
Component A consistency	Paste	
Component A density	ca. 1.69 g/ml	
Component B	-	
Component B colour	White	
Component B consistency	Paste	
Component B density	ca. 1.65 g/ml	

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Mixture	-
Mixing ratio by volume	A:B = 10:1
Mixture colour	Anthracite grey White
Mixture consistency	Paste
Mixture density	ca. 1.69 g/ml
Potlife	ca. 5 minutes
Open time	ca. 15 minutes
Hardness	ca. 50 ± 5 Shore A
Can be loaded after	After 24 hours
Shear strength	After 2h: 0,25 N/mm ² After 8h: 0,62 N/mm ² After 24h: 0,95 N/mm ² After 48h: 1,12 N/mm ² After 7d: 1,35 N/mm ² (GFK-UP-GFK-UP)
Application temperature	+5°C → +35°C
Temperature resistance	-40°C → +90°C

Footnote: Skinning time and curing speed may vary depending on environmental factors such as temperature, moisture, and type of substrates.

Substrates

- **Substrate condition**
The surface must be rigid, clean, dry, free of dust and grease.
- **Substrate preparation**
Surface treatment depends on the specific nature of the substrates and is crucial for a long-lasting bond. Clean non-porous substrates with Soudal Surface Cleaner. Prepare non-porous surfaces with a Soudal activator or cleaner (see Technical Data Sheet). Prepare porous and absorbing surfaces with Primer 100 prior to application of Soudaseal 605 Duo. While producing plastics very often releasing agents, processing aids and other protective agents (like protection foil) are used. These should be removed prior to bonding or sealing. Tests with actual substrates and conditions must be performed and documented to ensure adhesion and material compatibility.
- **Substrate types**
Soudaseal 605 Duo has a good adhesion to following substrates: aluminium, electrolytic galvanized steel, anodized aluminium, flame galvanised steel, stainless steel, polyamide, PVC, fiberglass reinforced epoxy, polyester, brick, ceramic. Soudaseal 605 Duo has no good adhesion or is not suitable for PE, PP, PTFE (Teflon®), PMMA, bituminous substrates, copper or copper containing materials such as bronze and brass. Bonding plastics like PMMA (e.g. Plexi® glass), polycarbonate (e.g. Makrolon® or Lexan®) in stress loaded applications can give rise to stress cracking and crazing in these substrates. The use of Soudaseal 605 Duo is not recommended in these applications. We recommend a preliminary adhesion and compatibility test on every surface.

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Application method

■ Application method

To ensure a high performing bond, regardless of application method, both components need to be mixed homogeneously (air bubble free) in the correct mixing ratio as indicated with an accuracy of +/- 10%. The speed of the reaction depends mainly on the temperature, lower temperatures slow down the curing process, while higher temperatures speed it up.

Processing out of pails or drums:

Most commercially available dosing and mixing equipment are suitable. To ensure that the mixing is correct, the user must perform the tests mentioned below before applying Soudaseal 605 Duo. The results should be registered and archived for at least 1 year. If the results deviate from the values mentioned in this technical data sheet, Soudal must be informed immediately.

Tests to be performed:

pot life, butterfly test, mixing ratio by weight A:B, shore A at different points in time and an adhesion test after 24h on both substrates.

These tests must be repeated every time the mixing installation is put into service or when a drum or pail is replaced.

Processing out of side-by-side cartridge:

The best extrudability rate is achieved with a pneumatic 2C dispenser with a thrust force > 5kN, type Cox Airflow 1 VBA 400A (Soudal article 152560). The use of a manual gun is not recommended.

First remove the screw cap and then the (green) nozzle plug. Place the side-by-side cartridge in a suitable 2C dispenser and extrude the product, without static mixer, until both components come out of the cartridge equally (=leveling the pistons). Then place the included static mixer on the cartridge to obtain an optimal mixing ratio. Check the homogeneity of the mixed product when extruding (= the colour stated on the cartridge). When using the pneumatic 2C dispenser set the pressure to max. 6.8 bar (5.25 kN), though 6 bar is the most recommended pressure.

Apply Soudaseal 605 Duo (in the respective joint).

Both application methods:

In order to obtain optimum adhesion and good mechanical properties, the entrapment of air during application must be avoided. Tooling and finishing must be carried out within the pot life (see table) of the Soudaseal 605 Duo. When tooling freshly applied product, press the adhesive to the joint flanks in order to ensure a good wetting of the bonding surface. Do not use Soudal Finishing Solution. The time the material can remain in the mixer without flushing or extruding product (=pot life mixer) is significantly shorter than the pot life of the product itself. Change the static mixer when the pot life mixer has been reached. Consider that under normal conditions the A-component is stable, and the B-component is moisture-sensitive and must therefore only be exposed briefly to air.

■ Cleaning method

Uncured Soudaseal 605 Duo can be removed from substrates and tools with Soudal Surface Cleaner or Soudal Swipex. Cured product can only be removed mechanically.

■ Repair method

Repair with the same material.

Health- and Safety Recommendations

Take the usual labour hygiene into account. Consult the packaging label and safety data sheet for more information.

Always wear gloves and goggles.

Packaging/Logistics

Colour: Please consult the product catalogue, the Soudal website or a Soudal representative.

Packaging: A + B 490 ml side-by-side cartridge, other packaging on request

Shelf life: 12 months in unopened packaging in a cool and dry storage place at temperatures between +5°C and +25°C, Once opened the product has only a limited shelf life., If the products are stored and/or transported at higher temperatures/humidity for longer periods (= weeks), the shelf-life may

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decrease, and the material properties may change.

Storage conditions: Store in unopened original packaging in a cool and dry storage place at temperatures between +5°C and +25°C.

Environmental clauses

- Leed regulation: Soudaseal 605 Duo conforms to the requirements of LEED. Low -Emitting Materials: Adhesives and Sealants. SCAQMD rule 1168. Complies with USGBC LEED 2009 Credit 4.1: Low-Emitting Materials – Adhesives & Sealants concerning the VOC-content.

Remarks

- This product is suitable for experienced professional users only.
- Potlife and processing time depend on the room temperature, the temperature of both components, the temperature of the substrate and the mixing quantity. Lower temperatures and smaller quantities lead to longer potlife and open time.
- Higher temperatures and larger amounts of mixed adhesive accelerate potlife.
- The bonding of materials with different expansion coefficients must be evaluated as to their long-term behaviour, especially when exposed to fluctuating temperature ranges.
- The final water resistance is achieved in 7 days after gluing.
- Soudaseal 605 Duo may be overpainted with water based paints, however due to the large number of paints and varnishes available we strongly suggest a compatibility test before application.
- The drying time of alkyd resin based paints may increase.
- Soudaseal 605 Duo can be applied to a wide variety of substrates. Due to the fact that specific substrates such as plastics, like polycarbonate , etc., may differ from manufacturer to manufacturer, we recommend a preliminary compatibility test.
- Soudaseal 605 Duo can not be used as a glazing sealant.
- Do not use on natural stones like marble, granite,...(staining).
- When using different reactive joint sealants, the first joint sealant must be completely hardened before the next one is applied.
- Not suitable for bonding aquariums.
- Do not use in applications where continuous water immersion is possible.
- Discoloration of the product due to chemicals, high temperatures, UV-radiation may occur.
- Contact with bitumen, tar or other plasticizer releasing materials such as EPDM, neoprene, butyl, etc. is to be avoided since it can give rise to discoloration and loss of adhesion.

This technical data sheet replaces all previous versions. The directives contained in this documentation are the result of our experiments and of our experience and have been submitted in good faith. It is general in nature and does not constitute any liability. Because of the diversity of the materials and substrates and the great number of possible applications which are out of our control, we cannot accept any responsibility for the results obtained. Since the design, the quality of the substrate and processing conditions are beyond our control, no liability under this publication is accepted. It is the responsibility of the user to determine by his own tests whether the product is suitable for the application. In every case it is recommended to carry out preliminary experiments. The manufacturer reserves the right to modify products without prior notice.