SOUDAFLEX 621

Sealant/Adhesive

Technical Data:

Base	Polyurethane
Colour	White, Black
Consistency	Paste, easy to extrude
Skin formation (20°C/65% R.H.)*	20 - 30 min.
Curing System	Moisture Cure
Curing Rate (20°C/65% R.H.)*	4 mm/24h
Hardness (DIN 53505)	45 ± 5 Shore A
Specific Gravity (DIN 53479)	1,28 g/ml
Temperature Resistance	-40°C to +90°C
Elastical Recovery (ISO 7389)	> 80%
Maximum allowed Distortion	20%
Elasticity Modulus 100% (DIN 53504)	0,60 N/mm^2
Tensile strength (DIN 53504)	1,85 N/mm^2
Elongation at Break (DIN 53504)	700 %
Solids Content	> 90%

(*) these values may vary depending on environmental factors such as temperature, moisture, type and size of substrates

Product:

Soudaflex 621 has been specially developed for Indian subtropical conditions after a decade of research, practical application understanding of Indian climate conditions, it is most suitable in high temperature & extreme humid conditions.

Soudaflex 621 is specifically designed for sealing application in the Bus & Coach, Truck, Earth Moving Equipments, Tractor, Forklift, OEM, Repair Auto After Markets, Metro, Railway, Defence, Aviation, Marine & various other commercial and industrial vehicles.

It bonds a variety of material like are FRP, GRP, timber, plywood, metals, particularly aluminium (including anodized components), sheet steel (including phosphated, chromated and zinc-plated components), coated metals and paint coatings (two-part systems), ceramic materials & plastics.

Characteristics:

- Bonds well to a wide variety of substrates.
- Excellent resistance to many chemicals.
- Can be over-painted & non-sag consistency.
- Especially developed for automotive and bus industry, bodywork, container applications.
- Suitable for making permanent elastic seals of high adhesive strength.
- High mechanical/dynamic stress resistance – shock/impact resistant.
- Increases torsional stiffness of final assembly.
- Excellent resistance to aging, weathering – suitable for indoor and outdoor.
- Vibration and sound damping properties.
- Sandable & over-paintable with many water, solvent based paints (preliminary tests recommended).








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Application:

- All sealing & bonding applications in the automotive industry (car, bus, truck, train & marine applications).
- Repair and refinishing purpose in automotive/ car industry.
- General coach-building, caravans & motor-homes assembly and repairing.
- Bus & truck industries, container construction, including pipe-work and fittings.
- Thermal & acoustic insulation technology in refrigeration, air-conditioning.
- Suitable substrate materials are timber, metals, particularly aluminium (including anodised components), sheet steel (including phosphated, chromated and zinc-plated components), metal primers and paint coatings (two-part systems), ceramic materials and plastics.
- For elastic bonding to untreated metals & plastics the use of Primers is recommended.

Packaging & Colour:

Colour: Black, White

Packaging: 310ml Cartridge & 600ml sausage

Storage/Shelf Life:

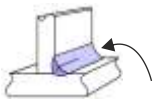
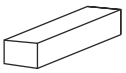
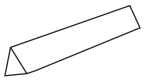
The storage and application of PU sealant affect the shelf life and usage. The shelf life of all given is understood to be 12 months from the date of manufacturing if kept in the temperature from 5°C to 35°C.

In the specific case of India, since practically the temperature rises up to 45°C to 50°C, the sealant can still be used, due to extreme heat or humidity, the skin formation time of the same may be little faster in those specific conditions, yet the sealant can still be used with effectiveness.

Surface Preparation:

The surfaces to be treated should be perfectly clean, dry and free from dust, oil and grease. It is necessary to apply Soudal Universal Cleaner 165 on glass.

The adhesion on normal vehicle varnishes generally does not require the use of Soudal Universal Primer 175. It is advisable to carry out preliminary adhesion tests on the support. Specific guidance regarding the use of Primers may be obtained by submitting substrate samples to our laboratory.

Fillet bead	Flat bead	Triangular bead
		

General chart for bead size for various parts:		
Location	**Type of bead**	**Dimension of bead**
Windows: 3 sides (not at the bottom)	Flat bead	6 mm
Roof top joints	Flat bead	10 mm
Wheel arches	Fillet	6-8 mm
Tail lamps	Fillet	4-6 mm
Internal or interior panel joints or gaps	Fillet	8-10 mm
Between the structure and inner panels before window fitment	Fillet	8-10 mm
Glass pasting/bonding	Triangular	8-10 mm





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Product User Guidelines for Best Result:

Step 1:

- Remove the foreign particle (like paint, dust) from the frame of the bus. Apply grinder to make surface even.

Step 2:

- Apply Soudaflex Universal Cleaner 165 cum surface activator.

Step 3:

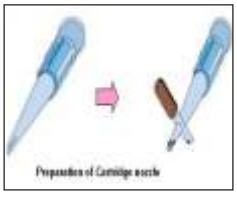
- Apply Soudal Universal Primer 175 (note shake well bottle till the steel ball inside container is clearly audible, for more detail refer check list).

Step 4:

- Apply Soudal Universal Primer 175.

Sausage/Nozzle Opening:

- Pierce cartridge membrane and peel back completely.
- Place the sausage in the application gun and snip off the closure clip. Cut off the tip of the nozzle to give desired adhesive bead geometry. For satisfactory results the adhesive must be applied with a hand operated cartridge gun, piston-type compressed-air gun or pump operated bulk dispensing equipment.



Step 5:

- Apply Soudaflex 621 sealant on structure.

Other Miscellaneous Applications:

- Wheal under arc sealing.

- Ceiling components - thermocol, ACP sheet, Plywood, light assembly etc. sealing & bonding.

- Floor sealing on vinyl edges.

- Sealing of metal sheets on the ceiling.

- Sealing of foot steps.

Remark: The directives contained in this documentation are the result of our experiments and of our experience and have been submitted in good faith. 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. In every case it is recommended to carry out preliminary experiments.





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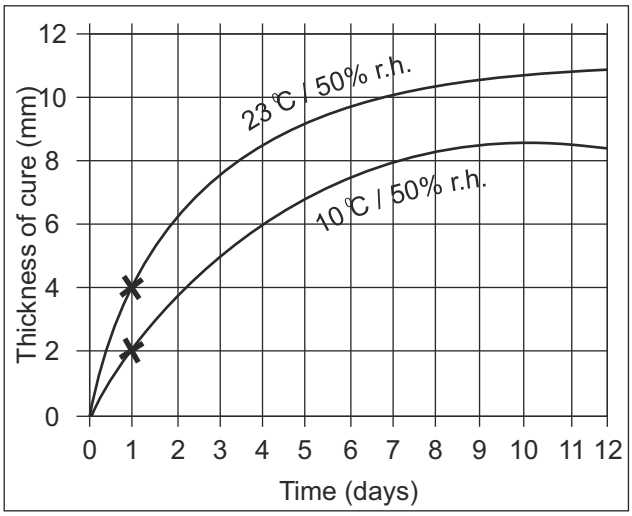
On site test procedure for sealant behavior during climate change:

Skin formation time test:
Indian sub continent is land of climate diversity. Skin formation time varies from region to region depending on the climate. It is advised to the user to check the skin formation time during climate variations.

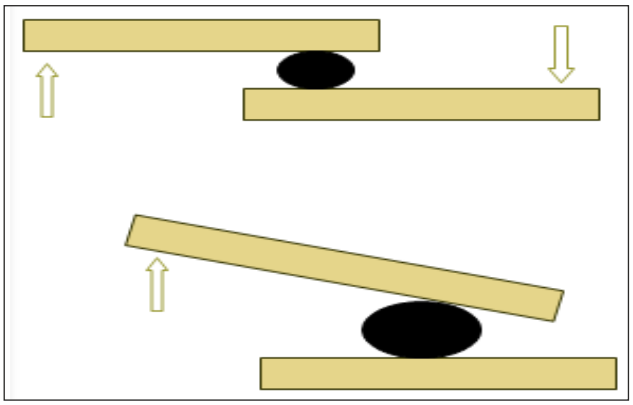
This helps the end user in deciding tooling time for the finishing of the beads.

Skin formation time is the time consumed at which the sealant do not stick to the finger.
(see figure no. 3)

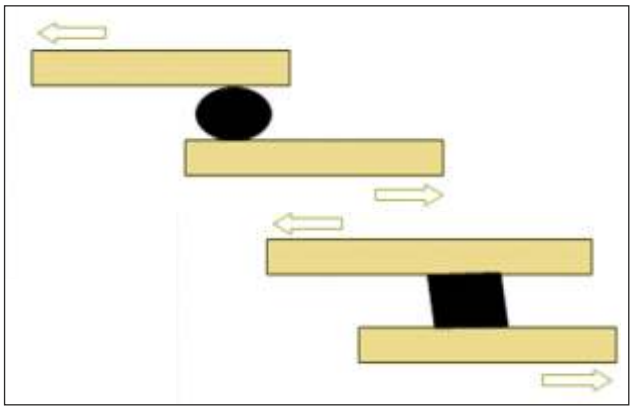
Cure mechanism::
Soudaflex 621 cures by reaction with atmospheric moisture. Due to variation of the moisture contents the curing rate changes (see diagram). In ideal condition curing rate is 4mm/24 hrs.



Peel Test:
Peel test is recommended to test periodically to ensure application sequence consistency.



Lap Shear Test:



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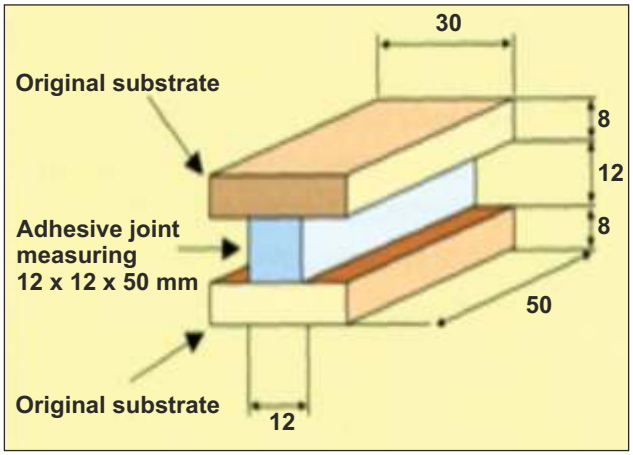
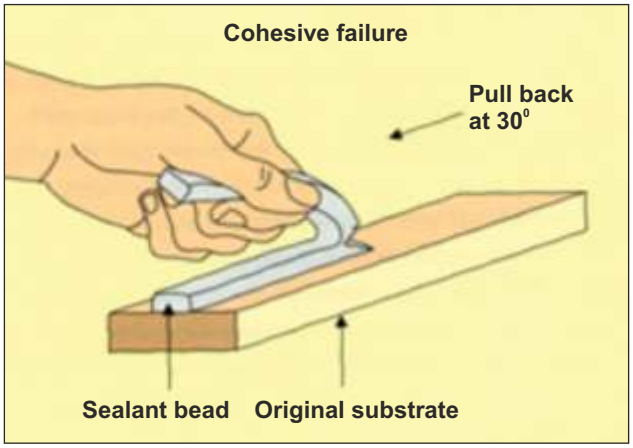
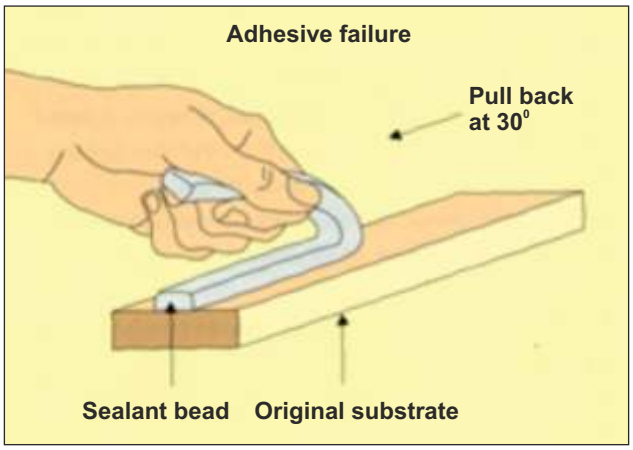
Adhesion/Cohesion/Shear Test:







Removal:

Uncured sealant may be removed from tools and equipment, worker hands with McCoy Soudal Swipex.

(A specially designed tissue paper compatible with sealant chemicals and which cleans the sealant 100% without leaving any mark and without damaging painted surface). Contains skin friendly aloe vera & sweet fragrance.

Once cured, the material can only be removed mechanically.

General Information:

The information contained in this technical data sheet is to the best of our knowledge based on our knowledge and experience till date and cannot be used as a guarantee, due to the various different materials present on the market and the fact that the application conditions are not under our direct control and supervision.

McCoy Soudal guarantees constant product quality. McCoy Soudal has the right to modify or up-date this technical data sheet according to requirements. Customers are kindly requested to verify that they are in possession of the latest version.

Always consult the material safety data sheet before using the product.

SEALANT APPLICATION CHECKLIST

To ensure perfect sealing and bonding application, you can use this check list for your internal audit.

Masking:

- Clear the surface with lint free cotton fabric to remove dust. ☐
- Apply masking tape at distance of 1mm from the application area. ☐
- Press the masking tape firmly for better finish. ☐
- Complete the masking-sealant sealing-tooling-de-masking with in 3 hrs. ☐
- Remove masking tape immediately after tooling and before the sealant skins over. ☐
- For better finish use five line sealant masking tape. ☐

Mouth opening:

- Sausage lock- removes this lock completely by cutting it. ☐
- Open sausage/ cartridge just before the application (max.5 minutes before). ☐
- Aluminum cartridge – puncture its mouth with thick round nail/ tool, puncture it with max diameter for the smooth flow of sealant. ☐
- Do not hit the bottom of cartridge to avoid the damage of bottom plunger. ☐

Nozzle cutting:

- Plastic nozzle - cut it as per the groove of filling (in cross direction) ☐
- Adjust the nozzle depth as per the groove, change nozzle if required.(A) Round bead for sealing, (B) triangular bead for glass bonding with base of 10 mm & height of 12-15mm. ☐
- For bead size refer to the table given by McCoy Soudal as per size and weight of component. ☐

Sealing:

- Adjust the pneumatic gun air pressure. (6 Bar). ☐
- Fill the sealant in constant bead. ☐
- Do not over fill or under fill sealant. ☐
- Try to make joint less bead. ☐

Tooling:

- Finish tooling before skin formation. ☐
- Please check skin formation during season variation. ☐
- Do not leave tooling during lunch or day close. ☐

De-masking:

- Remove the masking tape after tooling and finishing. ☐
- Try to complete tape application & removing activity within 3 hrs. ☐
- Avoid hand touch to the body to avoid sealant marks. ☐

Finishing:

- Do finishing in two parts (A)- before de-masking (B) after de-masking. ☐
- Use soapy water solution. ☐
- Avoid excess bubble formation due to soap. ☐

Cleaner & primer:

- Shake the bottles well before use. ☐
- Always keep the mouth of the bottle close and tight, do not leave it open. ☐
- Keep the material in original container for storage, do not change aluminum bottle. ☐
- Take the primer out as and when needed in desired quantity. ☐
- Do not put unused primer back in bottle. ☐
- Keep it away from fire/welding area. Do not smoke, do not drink, do not inhale. ☐
- Use cleaner and give 2-3 minutes to dry it completely. ☐
- Use primer and give 5-10 minutes to dry it completely. ☐

Glass bonding:

- Check the glass & body aperture / frame by just keeping it together for size & its variation (if needed it varies company to company policy & practice). ☐
- Remove paint particles from frame. ☐
- Remove tape spacers from glass. ☐
- Clean both glass & frame perimeter by Soudal Universal Cleaner 165. Cleaning width 50mm, wait for 2-3 minutes till chemical evaporates completely. ☐
- Apply Soudal Universal Primer 175 on the periphery of glass & frame, application width 20 mm. Wait for 5-10 minutes till it dries completely. ☐
- Apply sealant on the frame in V-shape cut nozzle to achieve triangular bead of 10mm base x 12- 15mm height. ☐
- Fix the glass by lifting it with vacuum cup lifter, hold the glass on the spacer, also put small spacer throughout the sealant periphery of sealant to keep it away from the body frame. (spacer shore A-hardness should be 30-45). ☐
- Keep the glass on hold with the help of tape & other support for 4-8 hours minimum. ☐

NOTE IT

- *Wash your hands completely before taking food.*
- *Read the instructions mentioned on the packing carefully.*
- *Always check the product expiry date before use.*
- *Read all safety instructions carefully and follow them.*
- *Keep the product in the original packing.*
- *For more information refer to material safety data sheet.*
- *Follow the storage conditions for long lasting life & best use of the material.*

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