



TOOLBOX™ INVISIBLE

Description

Toolbox™ Invisible is a colourless hybrid moisture curing adhesive and sealant for use in a wide variety of adhesive and sealing applications. Toolbox™ Invisible cures to form a tough, waterproof seal that is invisible. Toolbox™ Invisible is ideal for invisible, transparent joints and bonding applications.

Benefits

- Solvent-free
- Isocyanate-free
- Free of phthalate plasticisers
- Cures to form a permanently flexible and elastic bond.
- Rapid skinning and curing.
- Colour/Invisible after curing
- Interior / exterior – High UV resistance
- Heat resistant to 80°C
- Non-corrosive
- Resistant to chemicals – mineral oils, solvents, acids and alkalis (consult HB Fuller for job-specific information)
- Mould resistant

Uses

- External and internal construction
- Sealing and bonding a wide variety of substrates
- For transparent, colourless results
- Sealing gaps in concrete, brick, mortar, metal and stonework.
- Toolbox™ Invisible is suitable for Green Building applications requiring VOC of maximum 30g/l.

Coverage

300g cartridge will give approximately 15 lineal metres of a 5mm bead.

Compatible Substrates

Aluminum	Coatings / finishes (Pretest)
Glass	Plasterboard
Steel inc. Galvanized Steel	Timber
Most plastics (pretest)	Brick
Rubbers (Pretest)	Fibreglass
Cement render	Fibre cement sheet
Concrete	

Service Temperature

Toolbox™ Invisible can withstand temperatures between -40°C and 80°C.

Limitations

- Maximum gap 30 mm and maximum movement of +/-20%
- Not suitable as a joint sealant or adhesive for permanent immersion in chlorinated water
- Not suitable for glazing
- Not suitable as a trafficable sealant

Surface Preparation

All surfaces must be clean, dry (except for non-porous application indicated below), sound and free of dust, oil, old sealant or other contamination.

Lightly contaminated surfaces should be wiped with Isopropyl Alcohol (IPA) using the 2-rag wipe method. Apply IPA to a clean lint-

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free cloth and wipe onto the surface to be cleaned to solubilise and remove the majority of the contaminant. A clean dry cloth should then be applied to remove remaining contamination and dry the surface. Ensure wet cleaner is not allowed to dry on surface. For more heavily contaminated surfaces or where the IPA does not remove the contaminant, a generic wax and grease remover should be applied using the same 2-rag wipe method. Once this has been completed the surface should be given a final clean with IPA using the 2-rag wipe method to ensure the surface is adequately prepared. Adhesion to metals and some surface finishes can be further improved by light abrasion prior to cleaning with IPA using the 2 rag-wipe method. Manufacturers of plastics should be consulted about suitable cleaning solvents. Adhesion to plastics should be pre-tested. Mask either side of joint to produce a neat finish.

Product Application – Adhesive

Cut tip off cartridge. Angle cut nozzle to desired size. Screw nozzle onto cartridge. Apply product to one surface to be bonded. Before product skins, mate with other surface. When bonding a sheet or panel to a large, flat surface, apply 5mm diameter beads every 30-40cm along the entire length. Press into position and brace until set. Any flooring application to full surfaces (e.g. concrete or plywood) must be fully bonded, that is a full layer of adhesive over entire area (spot gluing or bead application is not recommended). Temporary or mechanical fixing may be required depending upon substrates. Bond will develop dependant upon thickness of adhesive, and ambient conditions. Higher humidity and warmer temperatures will hasten

bond development. Minimum film thickness for bonding applications is approx 2mm.

Product Application - Sealant

Cut tip off cartridge. Angle cut nozzle to desired size. Screw nozzle onto cartridge. Apply product in a steady, continuous flow by pushing the sealant ahead of the nozzle so that it completely fills the joint and is in contact with both sides. Immediately after application, tool the sealant using a spatula. Avoid contact with alcohol or other solvent cleaners during cure. Remember to remove masking tape before the sealant skins.

A good joint design is imperative if a sound, durable seal is to be achieved.

Joint Design: In general, joints should be designed to be at least 4 times as wide as the anticipated movement. Joint width and depth should not be less than 6 mm and depth should never exceed width.

Joint Depth to Width Ratios:

Joint Width	Joint depth
< 10 mm	Depth = Width
10mm-30mm max	10 mm - 15 mm

As a sealant for lap joints

Apply Toolbox™ Invisible to one surface as a bead then rapidly assemble the components. For best results, use mechanical fastening. Pre-drill all holes. Toolbox™ Invisible will skin in approx 10-15 minutes (depending on temperature) and is repositionable for up to 40 minutes (again depending on temperature and moisture).

Toolbox™ Invisible is designed to accommodate joints with movement of less than $\pm 20\%$.

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Application temperature

Toolbox™ Invisible should be applied between 5°C and 35°C. Ensure that the substrates are clean and dry when Toolbox™ Invisible is applied and do not apply where conditions may interfere with good bonding / sealing e.g. do not apply if frost or ice is present.

Cure Time

Toolbox™ Invisible will form a tack free skin in 10-15 minutes depending upon conditions. Cure rate is 4mm per day depending upon temperature and humidity.

Performance Summary

S.G.	ca. 1.06
Skin Time	ca. 10-15 minutes at 23°C
Reposition Time	25 minutes @ 20°C
Cure Rate	4mm per day @ 23°C
Tear Strength DIN 53504	2.74MPa
Modulus of Elasticity DIN 53504 @ 100%	1.92MPa
Elongation at break DIN 53504	ca. 200%
Maximum joint movement capability	±20%
Hardness Shore A	ca. 49

Clean Up

Clean up uncured adhesive with mineral spirits. Cured material can be removed by trimming with a knife or scraper.

Safety Information

Toolbox™ Invisible is not classified as hazardous according to criteria of Worksafe

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