



TOOLBOX™ ORIGINAL

Description

Toolbox™ is a hybrid moisture curing adhesive and sealant with high grab strength for use in a wide variety of critical adhesive and sealing applications. Toolbox™ cures to form a tough, waterproof seal and will adhere to a wide range of substrates. Its versatility means it can replace most water based and solvent based construction adhesives, polyurethane adhesive and sealants as well as silicones in construction, marine, transport and industrial assembly applications. Toolbox™ is supplied in white, grey and black colours.

Benefits

- Cures to form a permanently flexible and elastic bond.
- Rapid skinning and curing.
- High bond strength - suited to Professional and DIY, construction, marine and automotive environments.
- Primer-free adhesion to wide range of surfaces.
- Paintable with most water based paints (Refer painting for alternative systems)
- Interior / exterior – High UV resistance
- Heat resistant to 100°C.
- Solvent and isocyanate free
- Resistant to salt and chlorinated water
- Suitable for bonding wet non-porous substrates (refer Surface Preparation details).
- Shore A: 55±5. Suitable as an anti-pick sealant/adhesive in correctional facilities
- Trafficable sealant

- Suitable for natural stone, blue stone, granite (refer limitations).
- Mould resistant – Will not support fungal growth
- Safe on mirrors, except safety backed mirrors

Uses

- Adhesive for fixing wall panels to studs, floor boards to joists.
- Use in gasket type applications in water tank flanges.
- Bonding insulation and decorative panels to solid surfaces.
- Re-fixing loose ceramic tiles.
- Multiple high performance bonding and sealing applications in transport – trains, buses, special purpose vehicles, caravans, 4 wheel drive trailers etc.
- Adhering and sealing acrylic/ABS shower units
- Adhering end-caps to retaining walls
- Sealing gaps and expansion joints in concrete, brick, mortar, metal and stonework.
- Sealing lap joints in air-conditioning ducts and wet areas
- Sealing fillet joints in box guttering
- Panel-stiffening adhesive on aluminium and fibre cement panels to metal top hats in external façade systems, including AS5113-approved façade systems*
- Toolbox™ is suitable for Green Building applications requiring VOC of maximum 30g/ltr, and meets the requirements of LEED Certification: Indoor Environmental Quality – Credit 4.1 (Low-Emitting Materials: Adhesives and Sealants). See MSDS for VOC value.

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*Consult HB Fuller Technical department for specific advice concerning panel-stiffening in external façade systems.

Compatible Substrates

Aluminum	Ceramic
Glass	Polystyrene/Styrofoam
Steel inc. Galvanized Steel	Timber
Colorbond®	Brick
Zincalume®	Fibreglass
Cement render	Ceramic
Concrete	Mirrors
Fibre cement sheet	Rubbers (Pretest)
FRP / GRP	Most plastics (pretest)
Plasterboard	Coatings / finishes (Pretest)

Note: Colorbond® and Zincalume® are the registered trademarks of Bluescope Steel Limited.

Performance Summary

S.G.	1.47 g / mL
Skin Time	10-15 minutes at 22 degrees,
Reposition Time	25 minutes @ 20°C
Cure Rate	2-3mm per day
Tear Strength DIN 53504	3.2MPa
Elastic recovery	75%
Modulus of Elasticity DIN 53504 @100%	1.6MPa
Elongation at break DIN 53504	400%
Maximum joint movement capability	±20%
Thermal Conductivity	ca. 0.5 W.m-1K-1
Hardness Shore A	55±5

Coverage

400g cartridge will give approximately 15 lineal metres of a 5mm bead.

Service Temperature

Toolbox™ can withstand service temperatures between -40°C and 100°C.

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. In cases of wet non-porous substrates; Toolbox™ can be applied directly to wet Aluminium, Zincalume® and Colorbond®. However, application must be in such a manner that Toolbox™ completely dispels the water and achieves complete coverage on the non-porous substrate. A second substrate (dry, or previously listed wet non-porous substrate) must be brought into contact with Toolbox™ in a manner it also gains complete contact with Toolbox™. Other non-porous wet surfaces should be pre-tested to ensure satisfactory adhesion prior to use. In all other cases all substrates must be dry.

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

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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. Use a suitable sized foam backing rod or polyethylene bond breaker tape to prevent three sided joint contact impeding the free and even deformation of the sealant in a cyclic joint.

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 1mm.

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

Modwood Specification

Toolbox™ is approved for use with ModWood decking provided it is used in conjunction with the Klevaclip concealed fixing system. Refer to Klevaklip for installation details.

Panel-stiffening for external façade systems

Toolbox™ Original is approved for use in several external façade systems as a panel-stiffening adhesive between the aluminium or fibre cement façade panels and the metal top hats, in conjunction with mechanical fastenings as per the individual system requirements. Toolbox™ Original may also be suitable for use in external façade system required to be in compliance with AS5113.2016 Fire Propagation testing and classification of external walls of buildings. Please consult with the HB Fuller Technical

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Department for advice concerning Toolbox™
Original as a panel-stiffening adhesive in
external façade systems.

As a sealant for lap joints

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

Toolbox™ is designed as a sealant for wide
and active joints with movement of less than
±20%.

Application temperature

Toolbox™ should be applied below 35°C, and
can be applied in temperatures below 0°C.
However, ensure that the substrates are clean
and dry when Toolbox™ is applied (unless
wet substrate is appropriate as covered in this
document) 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™ will form a tack free skin in 10-15
minutes depending upon conditions. Cure rate
is 2-3mm per day depending upon
temperature and humidity.

Painting

Toolbox™ may be painted wet on wet or after
it has cured with most WB paint systems.
Direct over coating with Solvent-Based paint
systems is not recommended. A WB primer
must first be used to over coat ToolBox™
before any application of Solvent-Based paint.

Test if unsure, especially when industrial
grade coatings are used, to ensure that:

- The coating bonds to Toolbox satisfactorily
- The coating does not affect the curing of Toolbox (e.g. allows moisture to reach the Toolbox surface if applied over a non porous surface)
- That Toolbox does not affect the cure of the coating (e.g. result in a sticky surface)
- The coating does not craze after application over Toolbox

Clean Up

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

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 white marble due to potential staining
- Not recommended for safety backed mirrors
- Not suitable for use in roofing lap joint applications where the sealant is feathered down to zero application weight – for such applications consider the use of silicone.
- Not suitable for glazing

Safety Information

Toolbox is not classified as hazardous according to criteria of Worksafe Australia. A Material Safety Data Sheet is available from the H.B. Fuller representative your state, HB

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Version 9
TDS Date: 13/01/2020

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