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/lt, and meets the requirements of LEED Certification: Indoor Environmental Quality – Credit 4.1 (Low-Emitting Materials: Adhesives and Sealants). See MSDS for VOC value.

Our Focus is Clear. Perfecting Adhesives.

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**Compatable Substrates**

<table>
<thead>
<tr>
<th>Material</th>
<th>Compatibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aluminum</td>
<td>Ceramic</td>
</tr>
<tr>
<td>Glass</td>
<td>Polystyrene/Styrofoam</td>
</tr>
<tr>
<td>Steel inc. Galvanized Steel</td>
<td>Timber</td>
</tr>
<tr>
<td>Colorbond®</td>
<td>Brick</td>
</tr>
<tr>
<td>Zincalume®</td>
<td>Fibreglass</td>
</tr>
<tr>
<td>Cement render</td>
<td>Ceramic</td>
</tr>
<tr>
<td>Concrete</td>
<td>Mirrors</td>
</tr>
<tr>
<td>Fibre cement sheet</td>
<td>Rubbers (Pretest)</td>
</tr>
<tr>
<td>FRP / GRP</td>
<td>Most plastics (Pretest)</td>
</tr>
<tr>
<td>Plasterboard</td>
<td>Coatings / finishes (Pretest)</td>
</tr>
</tbody>
</table>

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

**Performance Summary**

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

**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-rag method.

**Technical Data Sheet**

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

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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:

<table>
<thead>
<tr>
<th>Joint Width</th>
<th>Joint Depth</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt; 10 mm</td>
<td>Depth = Width</td>
</tr>
<tr>
<td>10mm-30mm max</td>
<td>10 mm - 15 mm</td>
</tr>
</tbody>
</table>

Modwood Specification

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