

# 3M Scotch-Weld™ 3534 B/A

<b>Introduction</b>	Scotch-Weld™ 3534 B/A is a two part , room temperature curing , low density void filling compound. It offers the following advantages :	<ul style="list-style-type: none"> <li>• 100 % solids</li> <li>• Low slump during application</li> <li>• Fast curing capability</li> </ul>	<ul style="list-style-type: none"> <li>• High compressive strength from - 55°C to + 80°C</li> <li>• Excellent water and chemical resistance</li> </ul>
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<b>Description</b>	(This is not a specification)		
	<b><u>Base compound</u></b>	<b><u>Accelerator compound</u></b>	
<b>Colour :</b>	Blue	Off-white	
<b>Base :</b>	Modified epoxy	Modified amine	
<b>Mix ratio by weight :</b>	100	100	
<b>Consistency :</b>	Thixotropic paste	Thixotropic paste	
<b>Uncured density (approx.) :</b>	0.50 g/ml	0.50 g/ml	
<b>Worklife :</b>	5 to 15 minutes at 15-25°C		
<b>Volatiles loss on cure :</b>	Less than 1.00 % after 24 hours cure at 23 ± 2°C		
<b>Cure cycle :</b>	Handling strength after 90 minutes at 23 ± 2°C Full cure after 24 hours at 23 ± 2°C		
<b>Cured density :</b>	Less than 0.5 g/ml		

<b>Applications</b>	<ul style="list-style-type: none"> <li>• Designed for reinforcement of honeycomb sandwich constructions</li> </ul>	<ul style="list-style-type: none"> <li>• Ideal for engine repair and fast through put production lines</li> <li>• Edge panels sealing</li> </ul>	<ul style="list-style-type: none"> <li>• Inserts bonding</li> <li>• Aerodynamic "smoother"</li> </ul>
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<b>Product performance</b>	<p><b>Gel time :</b> Combining 100 grams of the Base compound (B) with 100 grams of the Hardener compound (A) and mixing the materials 2 minutes ± 10 seconds to obtain a homogeneous sphere, the gel time shall be reported as time elapsed from completion of blending to the initial formation of a non-fluid mass. A needle of 2 to 3 mm diameter is used to perforate the sphere until it becomes impossible due to the hardening of the centre of the sphere.</p> <p>Typical gel time is between 5 and 15 minutes at 23 ± 2°C.</p> <p><b>Cured density :</b> The cured density of Scotch-Weld™ 3534 B/A was measured on six (12.5 x 12.5 x 25 ) mm specimens cut from a cured (24 hours at 23 ± 2°C) test block. The average cured density was 0.44 g/ml.</p>
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**Compressive strength :**

(12.5 x 12.5 x 25 ) mm specimens were cut from a cured (24 hours at 23 +/- 2°C) test block of Scotch-Weld™ 3534 B/A. Compression was run with the force applied to the 12.5 mm square surface at a rate of 1.0 mm/minute.

Test temperatures	Typical compressive strength (average of 5 individual specimens)
+ 23 ± 2°C	20.5 MPa
+ 100 ± 2 °C	3.3 MPa

**Filler strength (Ejection test) :**

A 40 mm length of 10 mm diameter optimized FPL etched aluminium rod is bonded into a (30 x 30 x 10) mm block of void filler such that 20 mm and 10 mm of the rod protudes on either side. After curing for 24 hours at 23 +/- 2°C, the force necessary to push out the rod is measured for a load rate of 0.5 mm/minute.

Test temperature	Typical Filler Strength (average of 6 specimens)
+ 23 ± 2°C	2060 N
+ 100 ± 2°C	440 N
+ 100 ± 5°C (after 1000 hrs at 100°C)	670 N

**Fluid resistance :**

Compressive and filler strength specimens of cured Scotch-Weld™ 3534 B/A were prepared in accordance with the above conditions and were immersed or exposed to the following environments. The results reported are the % weight absorption measured on the compressive specimens and the filler strength on the other specimens. The results are average of six specimens.

Test conditions	% weight absorption (compressive specimens)	Filler strength at 23 ± 2°C
30 days exposure at 50 ± 3°C & 95 % R.H.	3.4	N.T.
2 hours in boiling water	2.4	N.T.
1000 hours in Skyrol 500B at 23 ± 2°C	N.T.	1680
1000 hours in Fuel JP4 at 23 ± 2°C	N.T.	1937
1000 hours in Lubricating hydraulic oil (MIL-H-5606 C) at 23 ± 2°C	N.T.	2150

N.T. Not tested

**Product application****Surface preparation :**

A thoroughly cleaned, dry, grease-free surface is essential for maximum performance.

**Mixing :**

Scotch-Weld™ 3534 B/A may be mixed by hand until an uniform blue colour is obtained. A 100 g mix has a worklife of approximately 10 minutes. Larger mix quantities will give a shorter worklife.

**Adhesive application :**

Scotch-Weld™ 3534 B/A can be applied by spatula or trowel. The most appropriate work temperature is comprised between 20 and 25°C.

**Recommended cure cycle :**

A minimum room temperature cure time of 90 minutes at 15-25°C is recommended to obtain the handling strength. The optimum mechanical properties of the product are obtained after 24 hours at 15-25°C. Scotch-Weld™ 3534 B/A can be worked out after 90 hours at room temperature.

**Cleanup :**

Excess adhesive and equipment can be cleaned with a solvent like Methyl-Ethyl-Ketone (M.E.K.).<sup>1)</sup>

1) When using solvents, extinguish all ignition sources in the area and observe precautionary measures.

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<b>Storage stability</b>	Store the product at room temperature or below. Storage life at 15-25°C is 6 months for the two components in their original unopened containers. Rotate stock on a "first in - first out" basis.		
<b>Precautionary Information</b>	<b>See Material Safety Data Sheet for precautionary information.</b>		
<b>Important notice to purchaser</b>	All statements, technical information and recommendations in this Data Sheet are based on tests 3M believes to be reliable, but the accuracy or completeness of those tests is not guaranteed. The following is made in lieu of all warranties, express or implied.	The seller's and manufacturer's only obligation will be to replace the quantity of the product proved to be defective. Neither the seller nor 3M will be liable for any injury, loss or damage, direct or consequential, arising out of the use of or the inability	to use the product. Before using, the user must determine the suitability of the product for his or her intended use. The user assumes all risk and liability in connection with the use of the product.
<b>Product Information source</b>	3M Specialties, Tapes & Adhesives EBU European Adhesives Laboratory, Aerospace Materials, France Phone 33 / 1 47 32 88 01		
<b>Reasons for change</b>	New revision		
<b>Issued by :</b>	S. DUQUESNE	<b>Approved by :</b>	P. JANNIC

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**3M Reference** XA 9333 B/A