3M Scotch-Weld™ Structural Adhesive 7240 B/A FR

Preliminary Product Data Sheet

September 2022

Supersedes: November 2018

Product Description

3M™ Scotch-Weld™ Epoxy Structural Adhesive 7240 B/A is a two-part, 1:2 mix ratio adhesive and contains glass beads for perfect control of minimal bond line thickness.

Key Features

- Long open time for large surface application
- Non sag properties
- Contains glass beads for thickness control
- High resistance to environmental exposure

Typical Uncured Properties

	Accelerator (Part A)	Base (Part B)	
Base Resin	Modified Amine	Modified Epoxy	
Mix Ratio - by volume - by weight	100 100	50 52	
Colour	White	Black	
Glass beads for bond line control	Yes, diameter 180 – 300 μm		
Full Cure	2 days at 23 °C		
Application temperature range	15 °C to 30 °C		

	Test method	Unit	Accelerator (Part A)	Base (Part B)
Specific Gravity		g/cm3	1.1	1.07
Viscosity	Brookflied at 23 °C sp 5 2rpm	mPa.s	106.000	158.000
Work Life	ISO 10364	-	60 minutes for 20g 45 minutes for 50g	

Performance Characteristics

Single Lap Shear - NF EN 1465

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Substrate	Temp.	OLS (MPa)
Aluminium 2024 T3 (etched)	-40 °C	23.3
Aluminium 2024 T3 (etched)	23 °C	28.0
Aluminium 2024 T3 (etched)	70 °C	14.7

Floating roller Peel - ISO 2243-2

Substrate	Temp.	Peel (N/cm)
Aluminium 2024 T3 (etched)	23 °C	91.8

Surface preparation

A thoroughly cleaned, dry grease-free surface is recommended for maximum performance. Cleaning methods, which will produce a break free water film on metal surfaces, are generally satisfactory.

- Abrading can be done using 3M[™] ScotchBrite[™] General Purpose Hand Pad 7447 for metallic fixtures and 3M[™] ScotchBrite[™] Roloc Surface Conditioning Disc TR Amed (ø 50.8 mm) for substrates.
- Sandblasting can be done with 6 bar pressure using FEPA 220 (53µm) white corundum at an angle of 45° relative to the surface.

The following cleaning methods are suggested for common surfaces:

Steel and Aluminium

- 1. Wipe free of dust with oil-free solvent such as acetone or isopropyl alcohol.
- 2. Sandblast or abrade using clean grit abrasives (180grit or finer).
- 3. Wipe again with solvent to remove loose particles.

If a primer is used, it should be applied within 4 hours after surface preparation.

If $3M^{TM}$ Structural Adhesive Primer 1945 B/A is used, apply a thin coating (10µm) on the metal surface to be bonded, air dry at 24 °C for 1hr, then cure for 30 minutes at 82 °C, 5 minutes at 120 °C or 3 hours at 25 °C

<u>Note:</u> Aluminium may also be acid sandblasted. Follow the manufacturer's precautions and directions for this procedure).

Plastic/Rubber

- 1. Wipe with isopropyl alcohol*.
- 2. Abrade using fine grit abrasive (180 grit or finer)
- Remove residue by wiping again with isopropyl alcohol*.

Glass

1. Solvent wipe surface using isopropyl alcohol.*

<u>Note:</u> When using solvents, be sure to extinguish all ignition source and follow manufacturer's precautions and directions for use.

Important Notice

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Values presented have been determined by standard test methods and are average values not to be used for specification purposes. Our recommendations on the use of our products are based on tests believed to be reliable but we would ask that you conduct your own tests to determine their suitability for your applications. This is because 3M cannot accept any responsibility or liability direct or consequential for loss or damage caused as a result of our recommendations

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3M United Kingdom PLC

2M Centre, Cain Road, Bracknell RG12 8HT United Kingdom

3M Ireland Ltd

The Iveagh Building, 3rd Floor The Park, Carrickmines 18 Ireland

3M Belgium bvba/sprl

Hermeslaan 7 1831 Diegem Belgium

3M Nederland B.V.

Molengraaffsingel 29 2629 JD Delft The Netherlands

3M Svenska AB

Herrjärva torg 4 170 67 Solna Sweden

3M a/s

Hannemanns Allé 53 DK-2300 Copenhagen S. Denmark

3M Norge AS

Tærudgata 16 2004 Lillestrøm Norway

Suomen 3M Oy

Keilaranta 6 02150 Espoo Finland

3M Eesti OÜ

Pärnu mnt. 158 11317 Tallinn Estonia

3M Latvia SIA

K.Ulmaņa gatve 5 Rīga, LV-1004 Latvia

3M Lietuva UAB

A.Goštauto g. 40 Vilnius LT- 03163 Lithuania