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English-Canada

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Technical Data Sheet

3M™ Scotch-Weld™ Epoxy Adhesive 7240FR

Product Description

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

Product Features

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

Technical Information Note

The following technical information and data should be considered representative or typical only and should not be used for specification purposes.

Typical Uncured Physical Properties

Attribute Name	Value
Accelerator Resin	Modified Amine
Base Resin	Modified Epoxy
Mix Ratio by Volume (B:A)	2:1
Mix Ratio by Weight (B:A)	1.9:1
Accelerator Colour	White
Base Colour	Black
Components	Glass beads for bond line control, diameter 180 - 300 µm

Attribute Name	Temperature	Value
Accelerator Density		1.11 g/cm³
Base Density		1.06 g/cm³
Base Viscosity	22 °C (72 °F)	150 cP [1]
Accelerator Viscosity	22 °C (72 °F)	100 cP [1]

[1] Brookfield sp. #5 @ 2 rpm

Typical Mixed Physical Properties

Temperature: 22 °C (72 °F)

Attribute Name	Test Method	Value
Time to Full Cure		2 days
Worklife, 50g mixed	ISO 10364	60 min
Worklife, 20g mixed	ISO 10364	75 min

Typical Performance Characteristics

Substrate: Aluminum 2024 T3
Surface Prep: Etched
Temperature: 22 °C (72 °F)

Attribute Name	Test Method	Test Condition	Value
Bell Peel	ISO 2243-4		84.4 N/cm
Overlap shear strength	NF EN 1465	-40 °C	23.6 MPa
Overlap shear strength	NF EN 1465	22 °C	26.5 MPa
Overlap shear strength	NF EN 1465	70 °C	12.4 MPa

Attribute Name	Value
Application Temperature	15° C - 30°C

Handling/Application Information

Directions for Use

3M™ Scotch-Weld™ Epoxy Adhesive 7240 B/A FR is supplied in dual syringe plastic duo-pak cartridges as part of the 3M™ EPX™ Applicator System. The duo-pak cartridges are supplied in 400 ml configurations. To use the EPX cartridge system simply insert the duo-pak cartridge into the EPX applicator. Next, remove the duo-pak cartridge cap and expel a small amount of adhesive to be sure both sides of the duo-pak cartridge are flowing evenly and freely. If simultaneous mixing of Part A and Part B is desired, attach the EPX mixing nozzle to the duo-pak cartridge and begin dispensing the adhesive.
When mixing Part A and Part B manually the components must be mixed in the ratio indicated in the typical uncured properties section of this data sheet. Complete mixing of the two components is required to obtain optimum properties.
Two-part mixing/proportioning/dispensing equipment is available for intermittent or production line use. These systems are ideal for line uses because of their variable shot size and flow rate characteristics and are adaptable to most applications.

Apply adhesive to clean, dry surfaces, joint parts and secure until adhesive sets (see rate of strength build up).

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 Aluminum
1. Wipe free of dust with oil-free solvent such as acetone or isopropyl alcohol.
2. Sandblast or abrade using clean grit abrasives (180 grit 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™ 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 1 hour, then cure for 30 minutes at 82 °C, 5 minutes at 120 °C or 3 hours at 25 °C

Note: Aluminum 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)
3. Remove residue by wiping again with isopropyl alcohol*.

Glass
1. Solvent wipe surface using isopropyl alcohol*

*Note: When using solvents, be sure to extinguish all ignition sources and follow manufacturer's precautions and directions for use.

Storage and Shelf Life

Store at 16 °C - 25 °C and 40-65 % relative humidity in its original box. The product can be stored up to 36 months after production. Note: The shelf life may be shortened if the original packaging is not properly sealed or stored in an environment with high temperatures or humidity. Rotate stock on a "first in - first out" basis.

Precautionary Information

Refer to Product Label and Material Safety Data Sheet for health and safety information before using this product. For additional health and safety information, call 1-800-364-3577

Automotive Disclaimer

Select Automotive Applications:
This product is an industrial product and has not been designed or tested for use in certain automotive applications, such as automotive electric powertrain battery or high voltage applications, which may require the product to be manufactured in an IATF certified facility, meet a Ppk of 1.33 for all properties, undergo an automotive production part approval process (PPAP), or fully adhere to automotive design or quality system requirements (e.g. IATF 16949 or VDA 6.3). Customer assumes all responsibility and risk if customer chooses to use this product in these applications.

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ISO Statement

This product was manufactured under a 3M quality system registered to ISO 9001 standards.

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