



# Scotch-Weld™

## Structural Acrylic Adhesives and Activator

SA24 • SA30 • AC380D

Technical Data

March, 2010

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### Product Description

3M™ Scotch-Weld™ Structural Acrylic Adhesives are two component, two step, toughened acrylic adhesive systems which must be cured with 3M™ Scotch-Weld™ Liquid Activator AC380D. These adhesives do not require mixing prior to use. Adhesive is applied to one surface and activator to the other. A quick cure that gives a tough, impact-resistant bond with good peel strength is achieved when the two components come into contact during the assembly process. These adhesives were designed to provide fixturing for moderate speed production lines.

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### Specific Features

- 3M™ Scotch-Weld™ Structural Acrylic Adhesive SA24 gives excellent adhesion to all metals, glass, ferrite, and composite materials. Generally, best applications include flat bond lines. Here tough, durable bonds that perform well under moderate temperatures are formed. Typical bonded substrates include electronic components, speaker magnets, firearm components, metal to wood items, and mirror and glass bonding. Fixture can be achieved in as little as one minute.
- 3M™ Scotch-Weld™ Structural Acrylic Adhesive SA30 is a higher viscosity adhesive than 3M™ Scotch-Weld™ Structural Acrylic Adhesive SA24. It can bond rough surfaces such as concrete and stone. Typical uses are found in appliance manufacturing, electronic assemblies, and attaching metal signs to buildings. Fixture time can be as little as thirty seconds.
- 3M™ Scotch-Weld™ Structural Acrylic Activator AC380D is a solventless, non-flammable liquid primer that is used to cure 3M™ Scotch-Weld™ Structural Acrylic Adhesives on any surface. Its flashpoint is greater than 255°F (124°C).

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## Typical Uncured Physical Properties

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

	3M™ Scotch-Weld™ Structural Acrylic Adhesives and Activator		
	SA24	SA30	AC380D
<b>Color</b>	Amber	Straw	Dark Brown
<b>Chemistry</b>	Urethane Methacrylate	Methacrylate Ester	Aldehyde/Aniline
<b>Appearance</b>	Liquid	Liquid	Liquid
<b>Specific Gravity (g/ml)</b>	1.13	1.03	0.98
<b>Viscosity (cps)</b>	10,000 - 25,000	50,000 - 80,000	5
<b>Time to Handling Strength (min)</b>	1 to 5	0.5 to 2	N/A
<b>Full Cure Time (hr)</b>	24	24	N/A

## Typical Cured Properties

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

	3M™ Scotch-Weld™ Structural Acrylic Adhesives	
	SA24	SA30
<b>Temperature Range (°F)</b>	-65 to 275	-65 to 250
<b>Gap Fill (in)</b>	0.040	0.030
<b>Overlap Shear Strength (psi)*</b>	2,500	2,100

\*ASTM D1002 using cold rolled steel substrates with MEK wipe, Scotch-Brite™ abrade, MEK wipe bonding surface prep and 3-5 mil spacer beads.

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## Handling Information

### Surface Preparation

For optimum strength surfaces should be clean and free of all surface contaminants including paint, oxide films, oils, dust, mold release agents, etc. However, the amount of surface preparation depends on the required bond strength and the environmental resistance desired by the user. Typical quick surface preparation would include wiping with a clean solvent (such as isopropyl alcohol\*), abrading the surface with a clean fine abrasive, and then wiping again with a clean solvent to remove loose particles.

**\*Note:** When using solvents, extinguish all ignition sources, including pilot lights, and follow the manufacturer's precautions and directions for use.

### Directions for Use

For best results, ensure that parts are clean, dry, and free from oil and grease. However, bonds can still be achieved on 'as received' or slightly oily parts.

3M™ Scotch-Weld™ Structural Acrylic Activator AC380D should be applied to the less absorbent (less porous) substrate. If necessary, it may be applied to both bonding surfaces.

3M™ Scotch-Weld™ Structural Acrylic Adhesive should be applied to the more absorbent (more porous) surface in beads or spread as a thin layer using a flat edge.

The two parts should then be brought together and clamped or held in position to achieve best results.

Due to its anaerobic nature, any 3M™ Scotch-Weld™ Structural Acrylic Adhesive squeezed outside of the joint will remain soft.

### Cured Bond Characteristics

Full bond strength will typically be achieved within a 24 hour cure time.

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## Storage

Store product in a cool, dry area out of direct sunlight.

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## Shelf Life

Twelve months when stored at 60° to 80°F (16° to 27°C) in the original unopened container.

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## 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 or (651) 737-6501.

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## Technical Information

The technical information, recommendations and other statements contained in this document are based upon tests or experience that 3M believes are reliable, but the accuracy or completeness of such information is not guaranteed.

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## Product Use

Many factors beyond 3M's control and uniquely within user's knowledge and control can affect the use and performance of a 3M product in a particular application. Given the variety of factors that can affect the use and performance of a 3M product, user is solely responsible for evaluating the 3M product and determining whether it is fit for a particular purpose and suitable for user's method of application.

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**ISO 9001:2000**

This product was manufactured under a quality system registered to ISO 9001:2000 standards.



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