



# Scotch-Weld™

## Pipe Sealants

PS65 • PS67 • PS92 • HP45 • HP69

Technical Data

July, 2007

---

### Product Description

3M™ Scotch-Weld™ Pipe Sealants are one-component anaerobic sealants that cure and seal hydraulic and pneumatic pipes and fittings to withstand high temperatures and pressures.

---

### Features

- 3M™ Scotch-Weld™ Pipe Sealant PS65 is a general purpose, low to medium breakaway torque strength paste pipe sealant. It is formulated to lock and seal medium to coarse straight and tapered pipe threads on pipes of diameter from approximately 5/8" to 3". It is used for applications that require easy disassembly.
- 3M™ Scotch-Weld™ Pipe Sealant PS67 is a fast cure, low breakaway torque strength, high temperature paste pipe sealant for metal connections in applications such as pressure vessels, air compressors, hydraulic, and pneumatic systems. It works on inactive surfaces (such as stainless steel) and provides an almost instant low pressure seal. A high pressure seal results when the bond is fully cured.
- 3M™ Scotch-Weld™ Pipe Sealant PS92 is a slow cure, medium breakaway torque strength, high temperature paste sealant for most hydraulic, pneumatic, oil, water, and gas connections. It provides an almost instant seal at moderate pressure, but also allows re-alignment of assembled parts up to 24 hours later. It is designed for sealing tapered and parallel threaded components.
- 3M™ Scotch-Weld™ Pipe Sealant HS45 is a low breakaway torque strength, medium viscosity liquid sealant for most high pressure hydraulic and pneumatic fittings. It has excellent solvent resistance.
- 3M™ Scotch-Weld™ Pipe Sealant HS69 is a low viscosity liquid sealant especially suited for fine-threaded air and hydraulic fittings. It has a fast fixture time and excellent solvent resistance.

# 3M™ Scotch-Weld™

## Pipe Sealants

PS65 • PS67 • PS92 • HP45 • HP69

---

### 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™ Pipe Sealants				
	PS65	PS67	PS92	HP45	HP69
<b>Color</b>	White	White	White	Purple	Brown
<b>Chemistry Type</b>	Dimethacrylate	Dimethacrylate	Dimethacrylate	Dimethacrylate	Dimethacrylate
<b>Appearance</b>	Paste	Paste	Paste	Liquid	Liquid
<b>Viscosity (cP)</b>	150,000 - 450,000 <sup>1</sup>	350,000 - 900,000 <sup>1</sup>	200,000 - 500,000 <sup>2</sup>	12,000 - 16,000 <sup>3</sup>	350 - 500 <sup>4</sup>
<b>Fixture Time (min)</b>	2 hours	15 - 30	10 - 30	4 hours	10 - 25
<b>Fixture Time with Activator (min)</b>	< 10	< 10	< 10	< 30	< 10
<b>Full Cure Time (hr)</b>	24	24	24	24	24

<sup>1</sup> Brookfield RVT 'T'-spindle D @ 2.5 rpm and 25°C.

<sup>2</sup> Brookfield T-bar E @ 5 rpm and 25°C.

<sup>3</sup> Brookfield RVT #3 spindle @ 2.5 rpm and 25°C.

<sup>4</sup> Brookfield RVT #3 spindle @ 2.5 rpm and 25°C.

---

### Typical Cured 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™ Pipe Sealants				
	PS65	PS67	PS92	HP45	HP69
<b>Color</b>	White	White	White	Purple	Brown
<b>Max Pipe Diameter</b>	3"	3"	3"	2"	2"
<b>Breakaway Torque (in.lb)<sup>4</sup></b>	18 - 70	18 - 35	40 - 60	8 - 24	37 - 62
<b>Temperature Range (°F)</b>	-65 to 300	-65 to 400	-65 to 400	-65 to 300	-65 to 300

<sup>4</sup> Reference ISO 10964.

# 3M™ Scotch-Weld™ Pipe Sealants

PS65 • PS67 • PS92 • HP45 • HP69

## Handling Information

### Directions for Use

Not recommended for use on most plastics due to potential cracking of plastic parts. Also, not recommended for use in piping systems that contain pure oxygen or oxygen-rich environment, chlorine, or strong oxidizing substances.

### For Assembly

1. Ensure parts are clean, dry and free from oil, grease and dirt. For best results, clean and dry parts with 3M™ Scotch-Weld™ Activator. (Activator can also be used to bond inactive surfaces or to accelerate the cure on active surfaces.)
2. If not sure of surface type, always use activator. Refer to Material Surface Activity and Cure Speed section for more information.
3. Apply sealant onto the second and third threads (not the first thread) of the male fitting so as to avoid introducing uncured sealant into the system. (However, should uncured sealant get into the piping system, it will not cure or cause blockage and can be flushed out.) Avoid touching the metal surfaces with the bottle tip since the metal ions may react with the adhesive upon contact and eventually may clog the bottle tip.
4. Spread adhesive evenly around the male fitting.
5. Assemble parts and tighten as required.
6. Allow assemblies to set for sufficient time so that handling strength or full cure will occur before further processing or testing.

### For Disassembly

1. Loosen or remove with regular hand tools.
2. If hand tools do not work due to the assembled parts being well tightened, apply localized heat (approximately 490°F) to the bonded parts and disassemble while parts are still hot. Use extreme caution when working with heat sources (e.g. heat gun, flame, etc.).

## Material Surface Activity and Cure Speed

Active (Fast) ←	←————→	→ Inactive (Slow)
<ul style="list-style-type: none"> <li>• Brass</li> <li>• Bronze</li> <li>• Commercial aluminum</li> <li>• Copper</li> <li>• Iron</li> <li>• Kovar®</li> <li>• Manganese</li> <li>• Monel®</li> <li>• Nickel</li> </ul>		<ul style="list-style-type: none"> <li>• Anodized aluminum</li> <li>• Cadmium</li> <li>• Chemical black oxide</li> <li>• Galvanized steel</li> <li>• Gold</li> <li>• Inconel®</li> <li>• Magnesium</li> <li>• Magnetite steel</li> <li>• Plated parts</li> <li>• Pure aluminum</li> <li>• Silver</li> <li>• Stainless steel</li> <li>• Zinc</li> </ul>

# 3M™ Scotch-Weld™

## Pipe Sealants

PS65 • PS67 • PS92 • HP45 • HP69

---

### Storage

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

---

### Shelf Life

3M™ Scotch-Weld™ Pipe Sealants have a shelf life of twelve months when stored at 60° to 80°F (16° to 27°C) in the original unopened container.

---

### 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.

---

### Product Use

All statements, technical information and recommendations contained in this document are based upon tests or experience that 3M believes are reliable. However, many factors beyond 3M's control can affect the use and performance of a 3M product in a particular application, including the conditions under which the product is used and the time and environmental conditions in which the product is expected to perform. Since these factors are uniquely within the user's knowledge and control, it is essential that the user evaluate the 3M product to determine whether it is fit for a particular purpose and suitable for the user's method of application.

---

### Warranty and Limited Remedy

Unless stated otherwise in 3M's product literature, packaging inserts or product packaging for individual products, 3M warrants that each 3M product meets the applicable specifications at the time 3M ships the product. Individual products may have additional or different warranties as stated on product literature, package inserts or product packages. 3M MAKES NO OTHER WARRANTIES OR CONDITIONS, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR ANY IMPLIED WARRANTY, OR CONDITION ARISING OUT OF A COURSE OF DEALING, CUSTOM OR USAGE OF TRADE. User is responsible for determining whether the 3M product is fit for a particular purpose and suitable for user's application. If the 3M product is defective within the warranty period, your exclusive remedy and 3M's and seller's sole obligation will be, at 3M's option, to replace the product or refund the purchase price.

---

### Limitation of Liability

Except where prohibited by law, 3M and seller will not be liable for any loss or damage arising from the 3M product, whether direct, indirect, special, incidental or consequential, regardless of the legal theory asserted, including warranty, contract, negligence or strict liability.

**ISO 9001:2000**

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



### Industrial Adhesives and Tapes Division

#### 3M Canada Company

Post Office Box 5757  
London, Ontario N6A 4T1  
Canada  
1 800-364-3577  
www.3M.ca

3M and Scotch-Weld are trademarks of 3M.  
Kovar is a registered trademark of Carpenter Tech Corp.  
Monel is a registered trademark of Special Metals Corporation.  
Inconel is a registered trademark of INCO.  
Used under license in Canada.

© 2007, 3M. All rights reserved.  
0711-0213E