

HOW TO SOLVENT WELD WITH SOLVENT CEMENTS

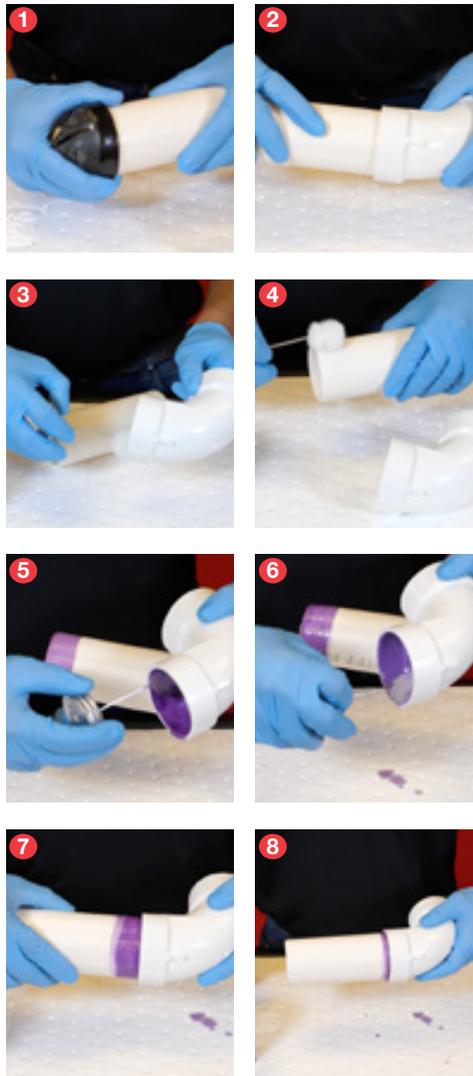
How To Solvent Weld

PRIOR TO USE:

Read all product labels carefully.

Stir or shake cement before using. If gelled, do not use. Keep container closed when not in use. Avoid eye and skin contact. Wear safety glasses with side shields and wear rubber gloves.

1. Cut pipe ends square, deburr the inside and chamfer the outside of pipe ends, remove all dirt from pipe ends and fitting hubs.
2. Interference fit between pipe and fitting hub must be completed prior to primer and cement application. Pipe should easily go 1/3 to 2/3 the way into the fitting hub.
3. Choose suitable application at least 1/2 the size of the pipe diameter. For larger pipe diameters, use a natural bristle brush or roller.
4. Clean pipe and fitting hub with a listed cleaner.
5. First apply primer inside the fitting hub, then the exterior of pipe end and once again the fitting hub.
 - Once the primer has been applied to both surfaces, the cement must be applied within 5 minutes. If not, you **MUST** prime the surfaces again before applying cement.
 - Do **NOT** use primer on ABS pipe and fittings.
6. First apply liberal coat of cement to exterior of the pipe end beyond fitting hub depth, then inside the fitting hub and once again to the outside of the pipe end.
 - Remember that a thin coating of cement is recommended inside the fitting hub to prevent puddling. Puddling can cause weakening and lead to joint failure.
 - Assemble parts **QUICKLY**. Cement must be fluid. Dried cement **CANNOT** be re-coated.
7. Turn pipe 1/4 turn as you push the pipe end into the fitting hub.
8. Make sure pipe end bottoms out inside the fitting hub and hold for 30 seconds to prevent push-out. Wipe off excess cement
 - Lower temperatures and larger diameter pipes may need a little extra hold time
 - Allow 15 minutes for good handling strength and 2 hours cure time at temperatures above 60°F before pressure testing up to 180 psi. Longer cure times may be required at temperatures below 60°F or with pipe above 3". **DO NOT TEST WITH COMPRESSED AIR OR GAS.**



Pipe Types

CPVC: Chlorinated Poly Vinyl Chloride
Typically used for pressure piping applications, including hot and cold potable water distribution. Can also be used for corrosive fluid handling in industrial or chemical applications.

ABS: Acrylonitrile Butadiene Styrene
Typically used for non-pressure piping applications.

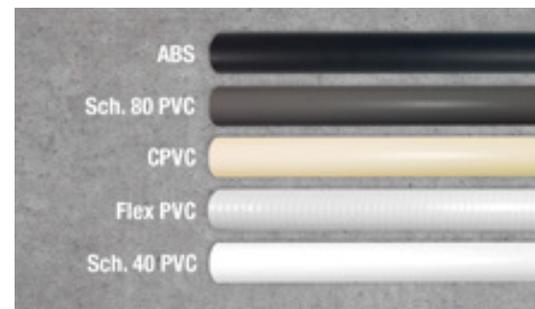
PVC: Poly Vinyl Chloride
Typically used for pressure or non-pressure piping applications.

Solvent Cements for any Application

High-quality Hercules solvent cements are trusted by professionals who bond joints with precise solvent welding, creating the strongest part of the system. From hot to cold, wet to dry, there is a Hercules solvent cement to meet your exact requirement for any plastic pipe installation.

Product Development

Backed by years of extensive research and leadership in the plumbing industry, Hercules' undying quest to innovate creates top-performing solvent cements that make the professional plumber's job easier and faster. In addition, no company works as hard as Oatey on behalf of the professional plumber with regulatory and coding agencies.



Set Up & Curing Times

The **set up/cure time** is dependent on several factors. The pipe size, socket fit, ambient temperature, relative humidity, solvent cement used and the system operating pressure should all be considered when determining set up/cure times.

Average Handling/Set Up Times for PVC/CPVC Solvent Cements

Handling/set up time is the time required prior to handling the joint. In damp or humid weather, allow 50% additional time.

Pipe Diameter	Temperature during assembly			
	60° to 100°F	40° to 60°F	20° to 40°F	0° to 20°F
½" to 1¼"	2 minutes	5 minutes	8 minutes	10 minutes
1½" to 3"	5 minutes	10 minutes	12 minutes	15 minutes
4" to 5"	15 minutes	30 minutes	1 hour	2 hours
6" to 8"	30 minutes	90 minutes	3 hours	6 hours

Contact Oatey Technical Services for set up times for pipe larger than 8" diameter.

These figures should only be used as a general guide. Conditions in the field may vary.

Average Number of Joints Per Quart of Solvent Cement

Pipe Diameter	½"	¾"	1"	1¼"	1½"	2"	3"	4"	6"	8"
Number of Joints	325	250	150	125	90	70	50	30	10	8

These figures are estimates based on laboratory testing. Conditions in the field may vary.

Average Joint Cure Times for PVC, ABS and CPVC Solvent Cements

PVC & ABS					
Pipe Diameter		Temperature during assembly and cure period			
		60° to 100°F	40° to 60°F	20° to 40°F	0° to 20°F
½" to 1¼"	Up to 180 psi	15 min	20 min	30 min	Please contact Oatey Technical Services for cure time information
	180 psi +	4 hours	8 hours	3 days	
1½" to 3"	Up to 180 psi	30 min	45 min	1 hour	
	180 psi +	8 hours	16 hours	3 days	
4" to 5"	Up to 180 psi	2 hours	4 hours	3 days	
	180 psi +	12 hours	24 hours	4 days	
6" to 8"	Up to 180 psi	8 hours	16 hours	3 days	
	180 psi +	24 hours	2 days	9 days	

CPVC					
Pipe Diameter		Temperature during assembly and cure period			
		60° to 100°F	40° to 60°F	20° to 40°F	0° to 20°F
½" to 1¼"	Up to 180 psi	1 hour	2 hours	Please contact Oatey Technical Services for cure time information	
	180 psi +	6 hours	12 hours		
1½" to 3"	Up to 180 psi	2 hours	4 hours		
	180 psi +	12 hours	24 hours		
4" to 5"	Up to 180 psi	6 hours	12 hours		
	180 psi +	18 hours	36 hours		
6" to 8"	Up to 180 psi	8 hours	16 hours		
	180 psi +	24 hours	48 hours		

Contact Oatey Technical Services for cure times for pipe larger than 8" diameter.

This data is applicable only for new piping installations and not recommended for repair or cut-ins on hot and cold water distribution systems. Please contact Oatey Technical Service for recommendations on Cure Times for such applications.

DO NOT test PVC and CPVC piping systems with compressed air or gas.

NOTES: Cure schedule is the time required before pressure testing the system
 - This chart can be used as a guideline to determine joint cure
 - Cure times stated are for conditions with relative humidity of 60% or less
 + In damp or humid weather, allow 50% additional cure time