

13. Replace and tighten the sealing fitting’s plug immediately to avoid the SpeedSeal compound from gelling and fouling the threads. See Figure 9.



REPLACE
PLUG

Figure 9

Table 1 - The Maximum Number of Conductors that can be Sealed in a Fitting

Example of how to use Table 1

The maximum number of #6 type THHN conductors (Column B) permitted by UL Std. 1203 in a 1-1/2” size sealing fitting is 9. The nine (9) #6 THHN conductors represent the maximum wire fill of 25% or less for sealing fittings. Increasing the sealing fitting to a 2” trade size will provide space for the 40% wire fill, or sixteen (16) #6 conductors, and comply with UL Std. 1203.

Trade Size	Conductor Size	Type	Max No. Permitted for 25% Fill	Permitted for 40% Fill/Trade Size Sealing
1-1/2”	#6	THHN	9	(16/2”)

In our example, use an EYS6 (for 2” size EYD, EZD, or EZS) sealing fitting.

The maximum number of wires that can be sealed in a fitting are as follows:

Source: UL Std. 1203/NFPA 70-National Electric Code ©

Size AWG or Kcmil	1/2” Seal (Qty/NPT Size)		3/4” Seal (Qty/NPT Size)		1” Seal (Qty/NPT Size)		1-1/4” Seal (Qty/NPT Size)		1-1/2” Seal (Qty/NPT Size)		2” Seal (Qty/NPT Size)	
	A	B	A	B	A	B	A	B	A	B	A	B
18	7(8-3/4)	11	12(15/1-1/4")	20	12(24/1-1/2")	20	20(42/2")	33	35(57/2-1/2")	58	49(94/3")	80
16	6(7-3/4)	9	10(12/1")	16	17(20/1-1/2")	27	17(35/2")	27	30(48/2-1/2")	47	41(79/3")	64
14	3(4-3/4")	8(13-3/4")	6(7/1")	15(22/1")	10(12/2-1/2")	24(36/1-1/2")	10(21/2")	24(63/2-1/2")	18(28/2-1/2")	43(85/2-1/2")	25(46/3")	58
12	3	6(9-3/4")	5(6/1")	11(16/1")	8(10/1-1/2")	18(26/1-1/2")	8(17/2")	18(46/2-1/2")	15(23/2-1/2")	32(62/2-1/2")	21(38/3")	43(102/3")
10	1(3-3/4")	4(6-3/4")	4(5/1")	7(10/1")	7(8/1-1/4")	11(17/1-1/4")	13(14/2")	20(29/2-1/2")	13(19/2")	20(39/2-1/2")	20(31/3")	27(64/3")
8	1	2(3-3/4")	2	4(6/1")	4	6(9/1-1/4")	7	11(16/1-1/2")	9(10/2-1/2")	16(22/2-1/2")	9(16/2-1/2")	16(37/3")
6	1	1(2-3/4")	1	2(4/1")	2(3/1-1/4")	4(7/1-1/4")	4(6/1-1/2")	7(12/2")	6(8/2")	9(16/2")	10(13/2-1/2")	16(27/3-1/2")
4	1	1	1	1(2/1")	1(2/1-1/4")	2(4/1-1/4")	3(4/1-1/2")	4(7/2")	5(6/2")	6(10/2-1/2")	8(10/2-1/2")	9(16/3")
3			1	1	1(2/1-1/4")	2(3/1-1/4")	3(4/1-1/2")	3(6/2")	4(5/2")	5(8/2")	7(9/2-1/2")	8(14/3")
2			1	1	1	1(3/1-1/4")	3	3(5/2")	3(4/2")	4(7/2")	6(7/2-1/2")	7(11/3")
1			1	1	1	1	1	2(4/2")	3	3(5/2")	4(5/2-1/2")	5(8/3")
1/0					1	1	1	2(3/2")	2	2(4/2")	4	4(7/3")
2/0					1	1	1	1(2/1-1/2")	1(2/2")	2(3/2")	3(4/2-1/2")	3(6/3")
3/0					1	1	1	1	1	1(3/2")	3	3(5/3")
4/0							1	1	1	1(2/2")	2(3/2-1/2")	2(4/3")
250							1	1	1	1	1	2(3/2-1/2")
300							1	1	1	1	1	1(3/2-1/2")
350							1	1	1	1	1	1(2/2-1/2")
400									1	1	1	1(2/2-1/2")
500									1	1	1	1
600											1	1
700											1	1
750											1	1
800											1	1

Source: UL Std. 1203 / National Electric Code

Column A = Types RFH-2, FFH-2, RFHH-2 (AWG 18-16) RHH, RHW, RHW-2 (AWG 14-2000 KCMil)

Column B = THHN, THWN, THWN-2 (AWG 14-100 Kcmil)

All statements, technical information and recommendations contained herein are based on information and tests we believe to be reliable. The accuracy or completeness thereof are not guaranteed. In accordance with Eaton’s Crouse-Hinds Division’s “Terms and Conditions of Sale,” and since conditions of use are outside our control, the purchaser should determine the suitability of the product for his intended use and assumes all risk and liability whatsoever in connection therewith.

CHICO® SpeedSeal™ Compound

Fast Acting Sealing Compound for use with Crouse-Hinds series EYS, EYSX, EYD and EYDX Sealing Fittings

Installation & Maintenance Information

IF 1457

SAVE THESE INSTRUCTIONS FOR FUTURE REFERENCE

CAUTION

CHICO SpeedSeal compound is to be used only with Crouse-Hinds EYS and EYD type sealing fittings in ½” to 2” trade sizes. **SpeedSeal compound is suitable for Class I, Groups C, D, Class II, Groups E, F, G, and Class III when used with EYS and EYD sealing fittings.**

CAUTION

To avoid explosion hazard, the temperature of the CHICO SpeedSeal Compound must be between 50°F (10°C) and 85°F (29°C) before mixing. Sealing fittings must be at a temperature above 40°F (4°C).

To avoid explosion hazard, discard any unused CHICO SpeedSeal compound 1-1/2 years after date of manufacture marked on packaging.

CAUTION

Wear proper eye protection and protective plastic gloves when mixing and injecting SpeedSeal Compound to prevent personal injury.

WARNING

Contents will develop internal pressure after mixing; remove mixing rod immediately after mixing to prevent pressure build-up and possible sudden eruption that could result in personal injury.

Contains isocyanate - may be skin and respiratory sensitizer. May cause irritation of eyes, skin, nose and throat.

Do not breathe vapors. Use with adequate ventilation. Avoid contact with eyes, skin and clothing.

NOTE: Latest Safety Data Sheet for the CHICO SpeedSeal Compound is available in the Resources section of the Crouse-Hinds website at www.crouse-hinds.com.

PRÉCAUTION

La résine SpeedSeal de Chico doit être utilisée uniquement avec les raccords d’étanchéité Crouse-Hinds EYS et EYD de taille ½” à 2”. Lorsqu’elle est utilisée avec les raccords d’étanchéité EYS, EYD la résine **SpeedSeal est appropriée pour Class I Groups C&D, Class II Groups E, F and G et Class III.**

PRÉCAUTION

Portez une protection oculaire adéquate et des gants de protection de plastique quand vous mélangez et injectez le produit SpeedSeal afin d’empêcher des blessures corporelles.

AVERTISSEMENT

Le contenu générera une pression interne après mélange. Enlevez la tige d’agitation immédiatement après l’opération de mélange pour empêcher une accumulation de pression et une éruption soudaine possible du produit qui pourrait résulter en une blessure corporelle.

Contient de l’isocyanate - peut être un sensibilisateur cutané et respiratoire. Peut causer une irritation des yeux, de la peau, du nez et de la gorge.

Ne pas inhaler les vapeurs. Utiliser dans un endroit bien aéré. Éviter tout contact avec les yeux, la peau et les vêtements.

NOTE: Une feuille d’instruction complète en français peut être obtenue sur le site Internet de Crouse-Hinds à www.crouse-hinds.com dans la section Resources.

PRECAUCION

El compuesto CHICO SpeedSeal (sellado rápido) se utiliza solo con equipamiento de sellar, de tipo EYS y EYD, de Crouse-Hinds para tamaños comerciales de 1/2” a 2”. **El compuesto SpeedSeal (sellado rápido) es apropiado para Clase I Grupos C & D, Clase II Grupos E, F y G y Clase III cuando se utiliza con equipamiento de sellar del tipo EYS, EYD.**

PRÉCAUTION

Utilice la protección adecuada para sus ojos y guantes protectores de plástico cuando mezcle e inyecte el compuesto SpeedSeal para prevenir daños personales.

AVERTISSEMENT

El contenido desarrollará una presión interna después de mezclarse. Retire la barra mezcladora inmediatamente después de mezclar para prevenir que la presión aumente y produzca una repentina explosión que podría lesionarlo.

Contiene isocianato - puede ser sensible a la piel y el olfato. Puede causar irritación de ojos, piel, nariz y garganta.

No respire los vapores. Utilizese en lugares con una adecuada ventilación. Evite el contacto con los ojos, piel y ropa.

NOTA: La Hoja de Instrucciones completa está disponible en la sección “Resources” del web site de Crouse-Hinds www.crouse-hinds.com.

APPLICATION

The National Electrical Code® (NEC) requires that seals be installed in specific places in Class I, Divisions 1 & 2 classified areas. This is to minimize the passage of gases and vapors and to prevent the passage of flames through the conduit from one portion of the electrical installation to another portion.

While not a code requirement, it is considered good practice to sectionalize long conduit runs by inserting seals not more than 50 to 100 feet apart, depending on the conduit size, to minimize the effects of “pressure piling.”

The NEC requires seals in Class II locations under certain conditions. Crouse-Hinds sealing fittings can be used to meet these requirements.

Conduit seals are not intended to prevent the passage of liquids, gases or vapors at a continuous pressure differential across the seal. Even at differences in pressure across the seal equivalent to a few inches of water, there may be a slow passage of gas or vapor through a seal and through the conductors passing through the seal.

Crouse-Hinds sealing fittings are listed by Underwriter’s Laboratories, Inc. (UL), for use in Class I and Class II hazardous locations with CHICO A Sealing Compound and CHICO X Fiber. Alternatively, Crouse-Hinds series type EYS and EYD sealing fittings ½” to 2” and EYSX and EYDX type sealing fittings ½” to 1-1/2” are also UL Listed for use with CHICO SpeedSeal Compound in Class I, Divisions 1 & 2, Groups C, D; Class I, Division 2, Group B (see Figure 2); and Class II, Divisions 1 & 2, Groups E, F, G hazardous areas.

INSTALLATION

Figure 1 – SpeedSeal Compound Chart

Use chart to determine which size SpeedSeal cartridge to use for selected sealing fitting.

Fitting Catalog Number	Amount of SpeedSeal material needed (in ounces) per fitting	Suggested SpeedSeal Catalog Number	Required Cartridge Quantity
EYS1, EYS16, EYS11, EYS116 EYD1, EYD16, EYD11, EYD116 EYS2, EYS26, EYS21, EYS216 EYD2, EYD26, EYD21, EYD216 EYSX11, EYDX11	1	CHICO SS2 (2 oz. Cartridge)	1
EYS3, EYS36, EYS31, EYS316 EYD3, EYD36, EYD31, EYD316 EYSX21, EYDX21	2	CHICO SS2 (2 oz. Cartridge)	1
EYS41, EYS416, EYS4, EYS46 EYD4, EYD46, EYD41, EYD416 EYSX31, EYDX31	3	CHICO SS6 (6 oz. Cartridge)	1
EYSX41, EYDX41 EYD5, EYD56, EYD51, EYD516 EYS51, EYS516, EYS5, EYS56 EYSX51, EYDX51 EYD6, EYD66, EYD61, EYD616 EYS61, EYS616, EYS6, EYS66	6	CHICO SS6 (6 oz. Cartridge)	1

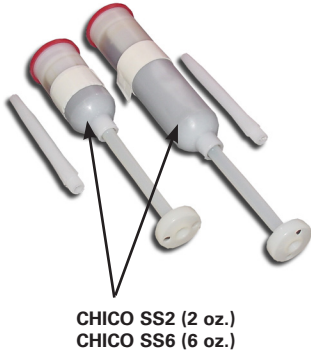
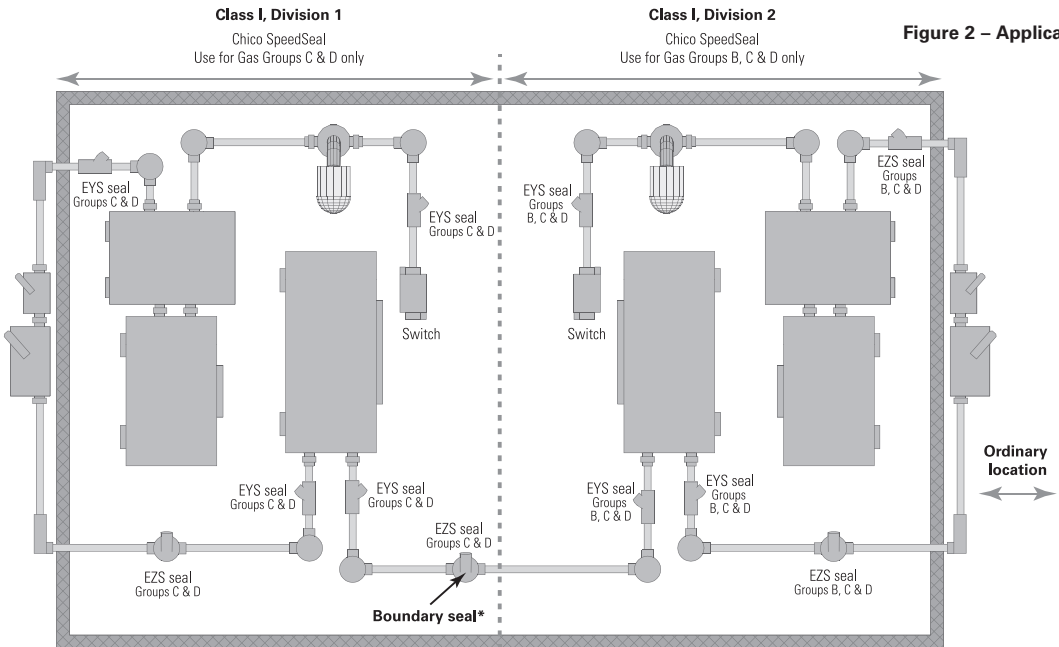


Figure 2 – Application Guide CHICO SpeedSeal



*Boundary seal - Division 1 to Division 2: Sealing fitting must be installed within 10 ft. of either side of the boundary line and the complete assembly (Seal and Sealing Compound) must carry ratings for Class I, Division 1.

Crouse-Hinds CHICO SpeedSeal Compound may be used to seal in both horizontal and vertical installations. CHICO SpeedSeal Compound must be used with CHICO X Fiber in vertical installations. The CHICO X Fiber is used to create a dam to prevent the SpeedSeal material from running down the conduit system before it sets. Damming is not required in horizontal conduit runs. However, to prevent the sealing compound from expanding into conduit or adjacent enclosure, CHICO X Fiber dams should be used in the sealing fittings integral bushings.

SpeedSeal Compound, when properly mixed, starts to gel in about 4 minutes at 70°F (21°C) or 6 minutes at 40°F (4°C) into a dense, strong mass which is unaffected by water, is not attacked by petroleum products and is not softened by heat. It will harden within 20 minutes and will withstand, with an ample safety factor, pressure from an exploding gas or vapor.

Conductors sealed in SpeedSeal Compound should be an approved thermoplastic or rubber insulated type.

Installers should be trained before making the dam, mixing and pouring the compound. Call Crouse-Hinds for a copy of the installation video.

Preparing EYS Sealing Fittings

- Remove the pipe plug(s) from the EYS sealing fitting.
- For vertical installations, it is necessary to use CHICO X Fiber to make a dam in the bottom conduit hub. The dam will prevent the un-gelled SpeedSeal Compound from leaking out of the sealing chamber. No dam is required for horizontal installations unless it is desired to have compound expand in one direction or to keep compound out of conduit or adjacent enclosures.
- To properly make dam in conduit hub, use EYS TOOL KIT or hardwood stick, to force the conductors forward. Do not use metal tools.
- Pack the fiber into the bottom conduit hub behind the conductors.
- Push the conductors toward the back of the fitting and pack fiber in bottom conduit hub in front of conductors. It is not critical that the conductors are separated because the SpeedSeal Compound will expand and fill around the individual conductors. However, a good dam is required to prevent the fluid material from leaking out of the sealing chamber.
- Do not leave any shreds of fiber clinging to the side wall of sealing chamber or to the conductors. Such shreds, when embedded in the sealing compound, may form leakage channels. The completed dam should be even with the integral bushing (conduit stop).
- In vertical installations, if the EYS sealing fitting is the type with two (2) threaded openings, replace the threaded plug in the bottom (larger) opening. The sealing compound will be poured into the top opening. In horizontal installations, replace the plug in the smaller opening; the sealing compound will be poured into the larger opening.

Mixing and Dispensing SpeedSeal Compound

- READ ALL INSTRUCTIONS PRIOR TO MIXING.** SPEEDSEAL COMPOUND BEGINS TO EXPAND VERY QUICKLY. BE SURE TO FAMILIARIZE YOURSELF WITH THE INSTRUCTIONS ON THE FOLLOWING PAGES BEFORE MIXING. THIS WILL ENSURE PROPER INSTALLATION.
- Make sure that SpeedSeal material is at a temperature between 50°F (10°C) and 85°F (29°C).
- WEAR SAFETY GLASSES AND PROTECTIVE GLOVES.
- Check the mixing rod to ensure that it isn’t overly tight or loose. To do this, hold the cartridge with the red end cap facing up and squeeze the cartridge in the area around the plunger. This will hold plunger in place. See Figure 3. Turn counterclockwise slightly to loosen, then clockwise to re-tighten snugly.
- Remove the tape band from the cartridge.
- Pull the mixing rod up to the top of the cartridge. See Figure 4.

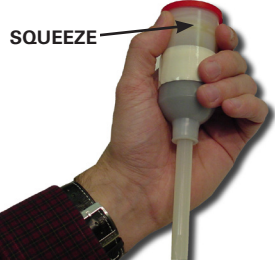


Figure 3



Figure 4

- Squeeze the cartridge in the area of the removed tape band to deform the foil barrier between the two materials. See Figure 5.

- Hold the tube with the red cap **on a flat surface**. Push the mixing rod all the way in to the bottom of the cartridge (red side).

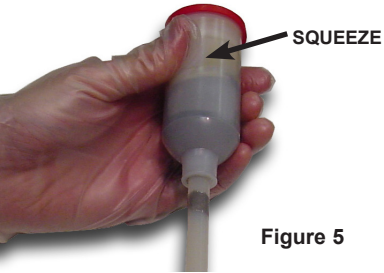


Figure 5

- Mix rapidly for 40 to 50 strokes (a stroke is one complete in and out cycle). While mixing, hold cartridge firmly and turn in a clockwise rotation to make sure that the plunger is swiping all material in the cartridge. **DO NOT MIX FOR MORE THAN 30 SECONDS. PRESSURE WILL BUILD UP ON THE INSIDE AFTER 30 SECONDS AS THE MATERIAL STARTS TO EXPAND.**
- At the last stroke, push the mixing rod all the way in to the bottom (red side), grasp the cartridge firmly at the bottom to hold plunger in place, and immediately unscrew the mixing rod and remove carefully. See Figure 6.

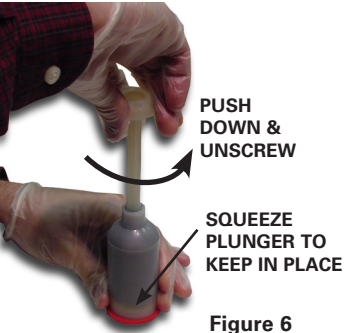


Figure 6

- Screw nozzle onto cartridge where mixing rod was removed. See Figure 7.

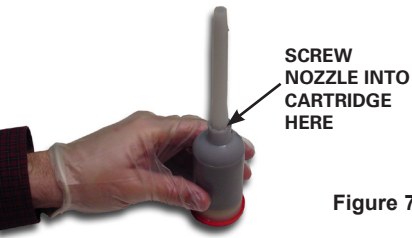


Figure 7

- Use the mixing rod to push the plunger. Inject the proper amount of sealing compound material into the fitting through the EYS threaded opening. See Figure 8. See Table 1 at the beginning of installation instructions for proper amount of material. Cartridge is marked at 1/2 used point.

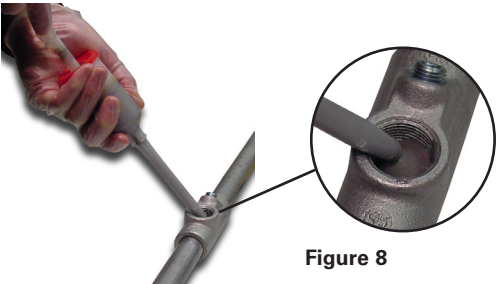


Figure 8