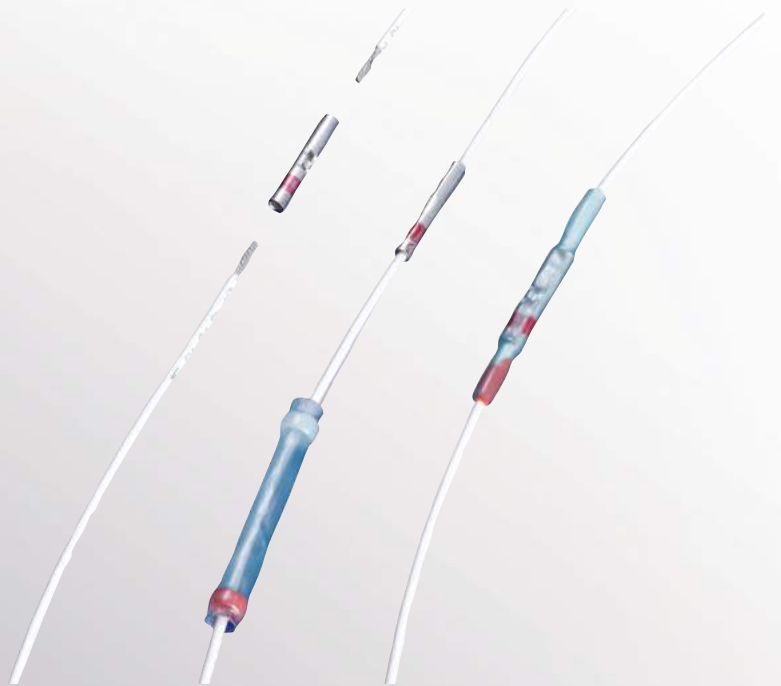
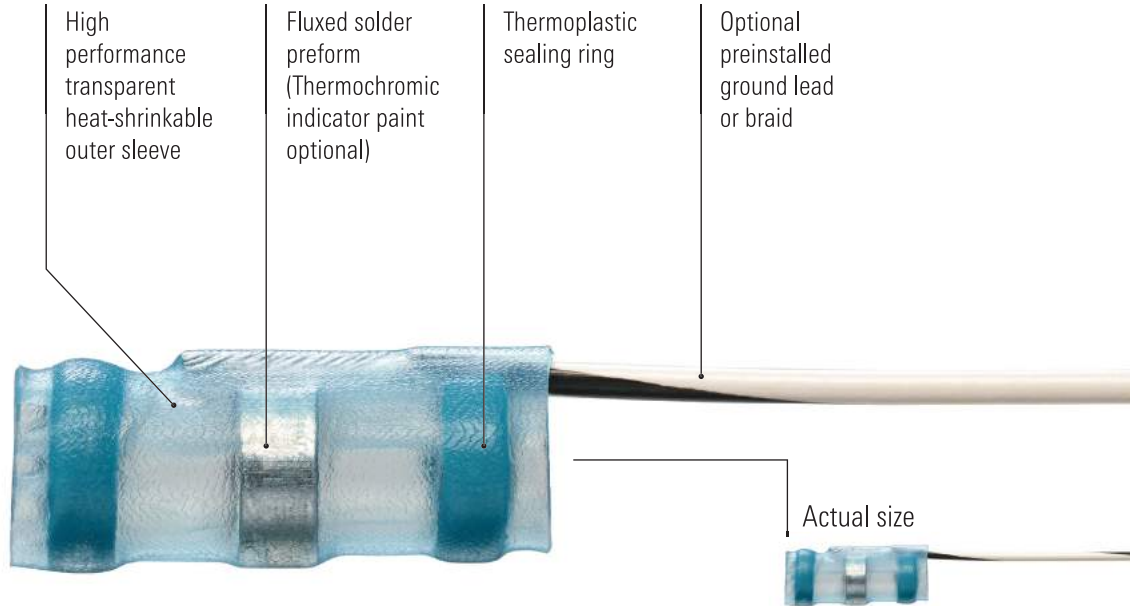




## STS SOLDER TERMINATION SLEEVES PRODUCT SOLUTIONS GUIDE

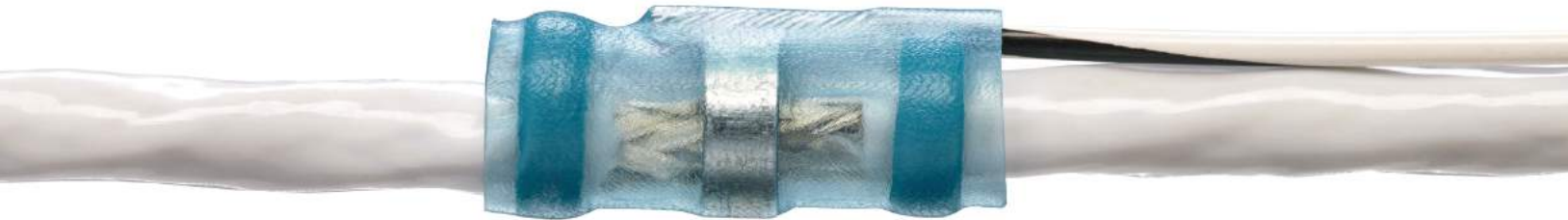


## Typical STS Construction Details

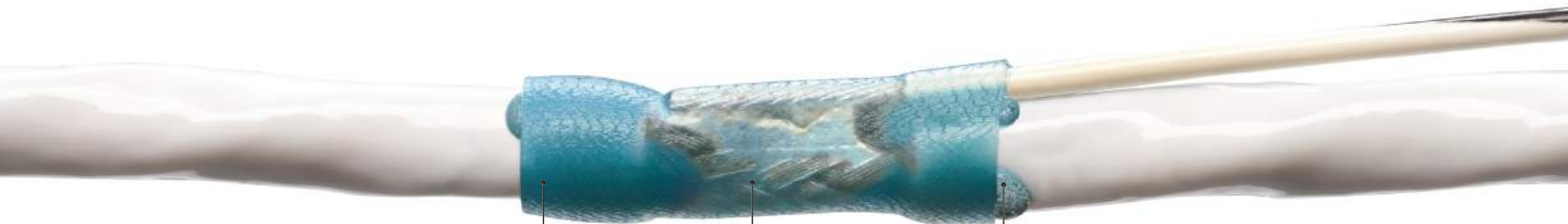


## Installation Instructions

1. Insert prepared cable.



2. Apply heat (hot air or infrared heating tool).



Sleeve shrinks, conforms to cable profile and provides strain relief.

Solder preform melts and flows. Installation quality is visible through outer transparent sleeve.

Thermoplastic rings melt to provide environmental sealing.

**RELIABLE • REPEATABLE • INSPECTABLE**

STS Solder Termination Sleeves provide the most reliable means of terminating a wide variety of coaxial cables types. In addition, they can be used for wire-to-wire or wire-to-pin style connections, and even on triaxial cable assemblies. They solder, seal, insulate, and strain relieve critical connections in one simple step. STS devices are available for low and high temperature cables and come in a range of sizes, with or without preinstalled lead wires or braid conductors. Lead wires come in many choices of color, AWG sizes and types.

Built to stringent standards, including SAE-AS83519 and NAS 1744, 1745 & 1746, each STS device has an internal precision engineered pre-fluxed solder preform, meaning that every connection receives identical amounts of solder and flux resulting in highly repeatable processes. STS products have a long history of use in a variety of areas ranging from commercial aircraft and military aerospace & defense to high volume commercial applications.

Certain STS parts also have a temperature indicating (TI) paint on the solder rings that changes color when sufficient heat has been applied as visual evidence that the termination has been properly completed. High performance sealing inserts at each end ensure that connections are environmentally resistant. A transparent tough outer shrinkable sleeve made from semi-rigid crosslinked fluoroplastic provides strain relief, insulation and mechanical protection of the finished solder joint and allows for convenient visual inspection.

STS Part Number Family	Industry Specification
H-M Series (Immersion resistant w/o lead wire, 150°C)	AS83519/1 (QPL listed product)
H-ML Series (Immersion resistant with lead wire 150° C)	AS83519/2 (QPL listed product)
H-MB Series (w/braided lead, 150°C)	----
H-H Series (High Temperature, 175°C)	RoHS
H-C Series (High Temperature Convection Heated, 150°C)	NAS 1744, NAS 1745
L-C Series (Low Temperature Convection Heated, 125° C)	NAS 1745
H-I Series (High Temperature Infrared Heated, 150°C)	NAS 1746
E-C Series (Commercial Wire Termination, 125°C)	RoHS

**STS Part Numbering Identification**

**H – ML – X**

**EXAMPLE**

**Sleeve Size**

1 is smallest, 5 is largest (for lead wire products, dash #s = 1-5, 6-10, 11-15, 16-20 , respectively)

**Preinstalled Lead Wire or Braid**

L = Lead Wire

*Dash # "X" = Size; Gauge*

- 1-5 = 20 awg
- 6-10 = 22 awg
- 11-15 = 24 awg
- 16-20 = 26 awg

B = Braid

*Dash # "XXXX" = Size; Length; Plating (T= Tin, N= Nickel, S= Silver)*

Sizes 1-5 available in various lengths & plating types (call SEIP Customer Support for detailed part #)

**Heating Method**

- C = Convection / Hot Air
- I = Infrared
- M = Mil-Spec (thermochromic indicator) Hot Air or Infrared

**Solder Alloys**

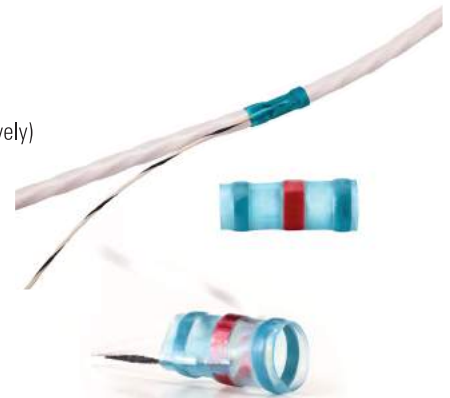
*Content*

*RoHS*

*Solder Melt Temp*

*Operating Temp*

H-H = Sn96	96% tin;4% silver	YES	(221°C)	(175°C)
H = Sn63	63% tin;37% lead	NO	(183°C)	(150°C)
L = Cd18	18% cadmium;32% lead;50% tin	NO	(145°C)	(125°C)
E = Bi58/Sn42	58% bismuth;42% tin	YES	(138°C)	(125°C)



# 150°C Operating Temperature STS

AS83519/1 & 2 (150°C) Convection or Infrared Applications Sn63 (RMA flux)											
Size	CABLE OD RANGE	NO PREINSTALLED WIRE		PREINSTALLED 20 AWG WIRE (M22759/32-20-90)		PREINSTALLED 22 AWG WIRE (M22759/32-22-90)		PREINSTALLED 24 AWG WIRE (M22759/32-24-90)		PREINSTALLED 26 AWG WIRE (M22759/32-26-90)	
		SEIP	AS (MIL)	SEIP	AS (MIL)	SEIP	AS (MIL)	SEIP	AS (MIL)	SEIP	AS (MIL)
1	.020-.105	H-M-1	M83519/1-1	H-ML-1	M83519/2-1	H-ML-6	M83519/2-6	H-ML-11	M83519/2-11	H-ML-16	M83519/2-16
2	.030-.145	H-M-2	M83519/1-2	H-ML-2	M83519/2-2	H-ML-7	M83519/2-7	H-ML-12	M83519/2-12	H-ML-17	M83519/2-17
3	.050-.200	H-M-3	M83519/1-3	H-ML-3	M83519/2-3	H-ML-8	M83519/2-8	H-ML-13	M83519/2-13	H-ML-18	M83519/2-18
4	.070-.255	H-M-4	M83519/1-4	H-ML-4	M83519/2-4	H-ML-9	M83519/2-9	H-ML-14	M83519/2-14	H-ML-19	M83519/2-19
5	.100-.300	H-M-5	M83519/1-5	H-ML-5	M83519/2-5	H-ML-10	M83519/2-10	H-ML-15	M83519/2-15	H-ML-20	M83519/2-20

NAS 1744 (150°C) Convection or Infrared Applications Sn63 (RMA flux)			
Size	CABLE OD RANGE	NO PREINSTALLED WIRE	
		SEIP	NAS
1	.020-.095	H-C4-1	1744-1
2	.030-.125	H-C4-2	1744-2
3 or 4	.050-.200	H-C4-3	1744-3
4 or 5	.100-.300	H-C4-4	1744-4

NAS 1744 (150°C) Convection or Infrared Applications Sn63 (RA flux)			
Size	CABLE OD RANGE	NO PREINSTALLED WIRE	
		SEIP	NAS
1	.020-.095	H-C4-5	1744-5
2	.030-.125	H-C4-6	1744-6
3 or 4	.050-.200	H-C4-7	1744-7
4 or 5	.100-.300	H-C4-8	1744-8

*NAS 1745 (125°C) Convection Applications Cd18 (RMA flux)			
Size	CABLE OD RANGE	NO PREINSTALLED WIRE	
		SEIP	NAS
1	.020-.095	L-C-1	1745-13
2	.030-.125	L-C-2	1745-14
3	.050-.200	L-C-3	1745-15
4	.070-.255	L-C-4	1745-23
5	.100-.300	L-C-5	1745-16
6	.220-.460	L-C-6	1745-24
7	.260-.545	L-C-7	1745-25

NAS 1745 (150°C) Convection Applications Sn63 (RMA flux)			
Size	CABLE OD RANGE	NO PREINSTALLED WIRE	
		SEIP	NAS
1	.020-.095	H-C-1	1745-1
2	.030-.125	H-C-2	1745-2
3	.050-.200	H-C-3	1745-3
4	.070-.255	H-C-4	1745-17
5	.100-.300	H-C-5	1745-4
6	.220-.460	H-C-6	1745-18
7	.260-.545	H-C-7	1745-19

NAS 1745 (150°C) Convection Applications Sn63 (RA flux)			
Size	CABLE OD RANGE	NO PREINSTALLED WIRE	
		SEIP	NAS
1	.020-.095	H-C5-5	1745-5
2	.030-.125	H-C5-6	1745-6
3	.050-.200	H-C5-7	1745-7
4	.070-.255	H-C5-20	1745-20
5	.100-.300	H-C5-8	1745-8
6	.220-.460	H-C5-21	1745-21
7	.260-.545	H-C5-22	1745-22

NAS 1746 (150°C) Infrared Applications Sn63 (RMA flux)			
Size	CABLE OD RANGE	NO PREINSTALLED WIRE	
		SEIP	NAS
1	.020-.095	H-I-1	1746-1
2	.030-.125	H-I-2	1746-2
3	.050-.200	H-I-3	1746-3
4	.070-.250	H-I-4	1746-9
5	.100-.300	H-I-5	1746-4

NAS 1746 (150°C) Infrared Applications Sn63 (RA flux)			
Size	CABLE OD RANGE	NO PREINSTALLED WIRE	
		SEIP	NAS
1	.020-.095	H-I-1-3	1746-5
2	.030-.125	H-I-2-3	1746-6
3	.050-.200	H-I-3-3	1746-7
4	.070-.250	H-I-4-3	1746-10
5	.100-.300	H-I-5-3	1746-8

\*Low temperature @125°C - See STS part number identification for operating temperature detail

## 175°C High Operating Temperature STS – RoHS

HIGH TEMP STS (175°C) Convection Applications Sn96 (RA flux)		
Size	CABLE OD RANGE	NO PREINSTALLED WIRE
	INCHES	SEIP
1	.020-.105	H-HC-1
2	.030-.125	H-HC-2
3	.050-.200	H-HC-3
4	.070-.280	H-HC-4
5	.100-.300	H-HC-5

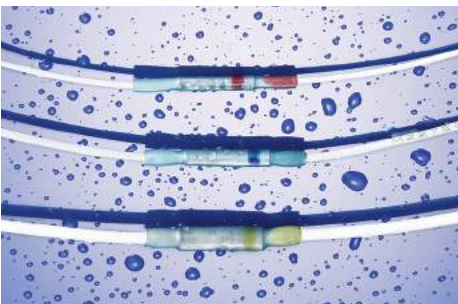
HIGH TEMP STS with leads(175°C) Convection Applications Sn96 (RA flux)			
Size	CABLE OD RANGE	PREINSTALLED 20 AWG WIRE (M22759/41-20-90)	PREINSTALLED 22 AWG WIRE (M22759/41-22-YY)
	INCHES	SEIP	SEIP
1	.020-.105	H-HML-1	H-HML-6-YY
2	.030-.145	H-HML-2	H-HML-7-YY
3	.050-.200	H-HML-3	H-HML-8-YY
4	.070-.255	H-HML-4	H-HML-9-YY
5	.100-.300	H-HML-5	H-HML-10-YY

## 125°C Low Operating Temperature STS – RoHS

LOW TEMP STS (125°C) Convection Applications Bi58 (RMA flux)		
Size	CABLE OD RANGE	NO PREINSTALLED WIRE
	INCHES	SEIP
1	.020-.095	E-C4-1
2	.030-.125	E-C4-2
3	.050-.200	E-C4-3
4	.070-.235	E-C4-4
5	.100-.300	E-C4-5



## 150°C Operating Temperature Crimp STS – RoHS



STS sealed crimp kits provide reliable, stable, environmentally sealed crimp splices in the most extreme operating environments.

### Features:

Temperature range: -55°C to +150°C

Moisture resistant

RoHS compliant

Crimp Kit Color Code Selection					
Product name	SAE Spec Equivalent	1 to 1 Splice Wire Range (AWG)	Crimp Barrel Size Range CMA - (mm <sup>2</sup> )	Shrink Sleeve Sealing Inserts - Inside Diameter Inches (mm)	Color Code
H-CR-436-36	AS81824/1-1	26 - 20	304 - 1510 (0.15 - 0.75)	.085 (2.16)	RED
H-CR-436-37	AS81824/1-2	20 - 16	779 - 2680 (0.39 - 1.34)	.110 (2.79)	BLUE
H-CR-436-38	AS81824/1-3	16 - 12	1900 - 6755 (0.95 - 3.37)	.170 (4.32)	YELLOW

Required Crimping Tool: Per SAE-AS22520

# SUMITOMO ELECTRIC INTERCONNECT PRODUCTS, INC.

[www.seipusa.com](http://www.seipusa.com)  
[www.sumitube.com](http://www.sumitube.com)



QPL-AS83519  
QPL-AS81824

NAS-1744  
NAS-1745  
NAS-1746

The information contained in this brochure is believed to be correct and in accordance with accepted engineering practices. Because of the varied nature of the uses for these products, each user should make their own evaluation regarding the suitability of these products for their specific application.

Sumitomo Electric Fine Polymer, Inc. and/or Sumitomo Electric Interconnect Products, Inc. make no warranties expressed or implied regarding the accuracy and completeness of the information and data contained herein, and disclaims any liability from the use or misuse of its products.

Sumitomo Electric Fine Polymer, Inc. and/or Sumitomo Electric Interconnect Products, Inc. shall not be liable for any injury, loss or damage directly, indirectly or as a consequence arising from the use or misuse of its products mentioned in this catalog, other than the replacement of materials considered defective.

ISO 9001:2008  
ISO 14001:2004

Sumitomo Electric Interconnect Products, Inc.  
915 Armorlite Drive  
San Marcos  
CA 92069-1440  
[www.seipusa.com](http://www.seipusa.com)

Customer Service  
1-800-758-3515 (USA & Canada)  
1-760-761-0600 (Outside USA & Canada)  
[customerservice@seipusa.com](mailto:customerservice@seipusa.com)  
Fax: 1-800-758-3517 (USA & Canada)  
or 1-760-761-0620 (Outside USA & Canada)  
[www.seipusa.com](http://www.seipusa.com)

©2014 Sumitomo Electric Interconnect Products, Inc. All rights reserved. The Sumitomo Electric logo is a registered trademark of Sumitomo Electric Industries. Other products and brand names may be trademarks of their respective owners. The information on this datasheet is believed to be correct at the time of publication. Specifications given in this publication are subject to change without notice.