

## Environmental Shrink Boots: Overview and materials selection



**Protect Your Guardian Assembly** with heat-shrinkable boots. These easy-to-use boots provide excellent electrical, mechanical and environmental protection. Heating the boot causes the boot to shrink onto the conduit fitting or transition. These lipped boots attach directly to all Guardian fittings. After shrinking, the boot lip locks into groove. Standard Guardian system boots are Type 1 High Performance Elastomer for extreme temperature range performance, and excellent resistance to fuels and oils. The standard Guardian boot also includes an eylet for attachment of dust caps or protective covers. Part numbers are shown in the table at right. Other boot materials, adhesives and options are shown in the following pages.

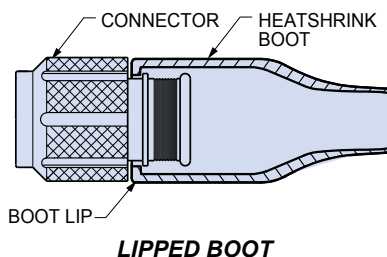
Standard Guardian Boots		
Boot Size	Part Number	Ref Conduit I.D. / Size
03	<a href="#">770-001S103</a>	06,09
04	<a href="#">770-001S104</a>	12,16
05	<a href="#">770-001S105</a>	20
06	<a href="#">770-001S106</a>	24
07	<a href="#">770-001S107</a>	28,32,40

### Material Selection Guide

Attribute	Type 1 High Performance Semi-Rigid Elastomer	Type 2 Zero Halogen Semi-Rigid Polyolefin	Type 3 Flexible Polyolefin
Continuous Operating Temp.	-75° to +150°C	-30° to +125°C	-55° to +135°
Resistance to Fuels, Oils	Excellent	Very Good	Good
Low Toxicity, Zero Halogen	No	Yes	No

### Type 1 High Performance Elastomer

Semi-rigid high performance boots combine excellent resistance to fuels, oils and solvents with superior performance at extreme temperatures. Rated for 3000 hours continuous operation at +150° C, these boots fit directly to Guardian fittings and adapters for superior environmental protection and strain-relief. Material meets the requirements of VG95343 Part 6, BSG 198-5-DE, EN62329-102 and SAE AS5258 Type H. These boots are recommended for demanding applications such as military vehicles and petrochemical exploration. Black color.



### Type 2 Zero Halogen

Halogen-free polyolefin boots meet low smoke and toxicity requirements of shipboard, transit and aircraft systems. These Low Smoke/Zero Halogen (LSZH) boots fit directly on all Guardian system adapters and fittings. Oxygen index greater than 30%, smoke index less than 20, and toxicity index under 3 per 100 grams. Material meets requirements of NAVSEA 5617649, VG95343 Part 29, BSG 198-5-DF, EN62329-101 and SAE AS5258 Type G. Good resistance to oils, fuels and solvents. These boots provide strain relief and environmental protection to connector/conduit transitions. Temperature rating -30° to +125° C. Black color.

### Type 3 Flexible Polyolefin

Economical flexible polyolefin boots fit directly on all Guardian system adapters and fittings. These self-extinguishing boots meet the requirements of SAE AS81765/1 Type II. Good resistance to oils and fuels. Available with optional hot melt adhesive lining, these boots provide strain relief and environmental protection to connector/cable transitions. Temperature rating -55° to +135° C. Black color.