



Harness Systems Overview

Summary of Component Characteristics by Category



System 10	System 25	System 100	System 200
General purpose system. Industrial electrical environments	Rugged application system. Tough and resistant to fluids, high temperatures.	Low fire hazard system. Low toxicity & gas emission for confined areas.	High temperature system. Excellent resistance to long term fuel immersion.
SAE-AS81765/1 Def Stan 59-97 type DA BSG-198-5-DA UL224, File E85381	VG95345 Part 6,7,8,9 Def Stan 59-97 type DE BSG-198-5-DE-P	VG95343 part 29,30 Def Stan 59-97 type DF BSG 198-5-DF BR1326 Class C 5617649 (US)	Def Stan 59-97 type DD BSG 198-5-DD-P (Europe) SAE-AS81765/4

Operating Temperature	-55°C to +135°C	-75°C to +150°C	-30°C to +105°C*	-55°C to +200°C*
Flammability	Flame retardant	Flame retarded	Flame retarded Low Fire Hazard	Flame retarded
Flexibility	Semi-rigid	Rugged and flexible	Semi-flexible	Flexible and abrasion resistant
Fluid Resistance	Suitable for occasional exposure to fluids.	Resistant to most common military fuels, oils and greases up to 70°C.	Good resistance to fuels, oils and greases.	Excellent chemical resistance.
Heat-shrink Tubing	CGPT, Versafit, DR-25	DR-25, RT-375, RW-175-E, SCT	ZHTM	RW-200-E, SRFR, TFE, TFER, RT-555,
Moulded Part Material	-3 Polyolefin	-25, -25S Elastomer	-100, -100S Polyolefin	-12 Fluoroelastomer
Adhesives	/180, /86, /42, S1005, S1030, S1017	/86, /225, S1048, S1125	/180, S1030, S1125, S1006	S1255-04, S1125
Feedthrough	CES	TCFS, TCFR, TCFT	TCFS, TCFR, TCFT	TCFS, TCFR, TCFT
Backshell (shielded)	Tinel-Lock, Band, Roll Spring, Braided Tail	Tinel-Lock, Band, Roll Spring, Braided Tail	Tinel-Lock, Band, Roll Spring, Braided Tail	Tinel-Lock, Band, Roll Spring, Braided Tail
Backshell (non-shielded)	Solid, Spin, Spin-Lock	Solid, Spin, Spin-Lock	Solid, Spin, Spin-Lock	Solid, Spin, Spin-Lock
Screening Braid	Ray-90	Ray-101, LWB-101	Ray-101, LWB-101	Ray-101, LWB-101
Wire to Wire Splice - Crimp	DuraSeal D-406, MiniSeal D436	MiniSeal D436	DuraSeal D-406, MiniSeal D436	MiniSeal D200
Wire to Wire Splice - Solder	B-155, CWT	D-1744	B-155	S-200
Shield Termination	B-155, CWT	ST63, SO63, SO96, SO175	B-155	S-200, B-023
Coaxial Termination	B-155, CWT	B-02X, B-04X, D-181	B-155	-
Wire Terminal - Crimp	DuraSeal B-106	-	DuraSeal B-106	-
Wire Terminal - Solder	CWT, B-155	D-129, D-141	B-155	-
Shielded Contact	SolderTact D-602	SolderTact D-602	SolderTact D-602	-

* Subject to material and application variations

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Adhesives Guide

Harnessing and Electro-Mechanical Solutions for Demanding Environment Applications



We can offer a wide range of thermoplastic and curable adhesives, that are used in electrical harnessing systems to provide environmental sealing and load transfer between heat shrinkable components.

This guide outlines the properties of these adhesives and includes recommendations for the selection of an adhesive to bond to various substrates.

Substrate	S1006	S1125	S1006	S1125	S1125	S1125	S1125	S1125	S1125	S1006	S1125	S1125	S1006	S1125	S1125	S1006	S1125	S1125	S1006	S1125	S1006	S1125	
-3, -4, -8, -51, -51 Polyolefin																							
-25 Modified Elastomer																							
-100 ZeroHal																							
RNF, RT, HTAT, ATUM, RP4800 Thermorad, AFR																							
DR-25 FDR																							
ZHTM, ZHCP Zerohal																							
-12 RW-200-E Fluoroelastomer																							
-12 RW-200-E Fluoroelastomer																							
-10, -13 Kynar, Convolex																							
Rayaten																							
Metals Backshells																							
Hypalon, Neoprene, #Polyurethane																							
PVC																							
+Polyethylene																							

Key

- Moulded Parts
- Metals / Backshells
- Tubing
- Cables

Notes

- + Polyethylene surfaces may need a special preparation technique e.g. flame brushing.
- # Chemlock® 234B Primer recommended with S1030 (/180) when bonding to DR25, DR25-TW and polyurethane .
1. PTFE and other fluoropolymers can be bonded using Tetra-Etch® etchant and S1125 epoxy adhesive, or S1260 hot melt tape.
2. Silicone, SRFR, SFR and -6 materials are best bonded using commercially available RTV silicone adhesives.

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Tetra-Etch is a trademark of W. L. Gore & Associates UK.

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