

Materials for Heat Shrinkable Moulded Shapes

Material Specifications			
Description	B7	G	J
Material	Semi-rigid flame retarded polyolefin	Fluid resistant elastomer	Flexible polyolefin
Continuous Operating Temperature °C	-55 to +135	-75 to +150	-55 to +135
Minimum Shrink Temperature °C	+135	+135	+135
Specifications	MIL-I-81765/1 TYPE I DEF 59-97 BSG198 Part 5	VG 95343 Pt6 & Pt18 DEF 59-97 BSG198 Part 5	MIL-1-81765/1 TYPE II DEF 59-97 BSG198 Part 5
Tensile Strength (MPa)	13	15	14
Ultimate Elongation (%)	500	580	610
Dielectric Strength kV/mm	14	14	12
Flammability (Self extinguishing)	Excellent	Excellent	Excellent
Characteristics	Good physical and chemical resistance	Excellent resistance to fuels	Flexible
Typical applications	Military and general high performance harnessing		

Material Specifications			
Description	H	B8	L
Material	Flexible limited fire hazard material	Semi-rigid flame retarded polyolefin	Flexible flame retarded fluoroelastomer
Continuous Operating Temperature °C	-55 to +105	-55 to +100	-55 to +200
Minimum Shrink Temperature °C	+135	+135	+175
Specifications	NAVSEA 5617649 DEF 59-97 VG 95343 Pt29 BSG198 Part 5	EA-TS 09-11	MIL-81765/4 DEF Stan 59-97 BSG198 Part 5
Tensile Strength (MPa)	10	15	12
Ultimate Elongation (%)	450	500	300
Dielectric Strength kV/mm	15	15	8
Flammability (Self extinguishing)	Excellent	Good	Excellent
Characteristics	Low smoke Halogen free	Good physical and reasonable chemical resistance	High temperature excellent chem. resistance
Typical applications	Ships, submarines & railways	Power/utility shapes	Military and high performance harnessing

Material Specifications			
Description	-9	-8	-6
Material	Modified elastomer blend	Modified fluoroelastomer	Flexible flame retarded polyolefin
Continuous Operating Temperature °C	-55 to +120	-55 to +150	-55 to +120
Minimum Shrink Temperature °C	+135	+135	+135
Specifications	SCX15112	SCX15111	MIL-1-81765/1 Type I + II
Tensile Strength (MPa)	12	15	12
Ultimate Elongation (%)	500	450	500
Dielectric Strength kV/mm	20	20	20
Flammability (Self extinguishing)	Excellent	<25mm	Excellent
Characteristics	Good physical and reasonable chemical resistance	Good physical and chemical resistance	Good physical and reasonable chemical resistance
Typical applications	Military and general high performance harnessing		

Adhesives for Heat Shrinkable Moulded Shapes

Adhesive Specifications			
Description	W / W2	WM250	W8
Adhesive	General purpose hot melt adhesive	General purpose hot melt adhesive	EVA, high performance, hot melt adhesive
Operating Temperature Range °C	-55 to +80	-55 to +80	-55 to +105
Softening Point °C	+95	+95	+110
Supplied Form	pre-applied	pre-applied	pre-applied
Shelf Life	5 years	5 years	5 years
Solvent Resistance	Fair under splash conditions		

Adhesive Specifications			
Description	W21	W24	TSA-200
Adhesive	Modified polyamide hot melt adhesive	High performance, pre-coat, 1 part epoxy	Thermoset +125° C
Operating Temperature Range °C	-55 to +120	-75 to +200	-55 to +125
Softening Point °C	+120	-	-
Supplied Form	pre-applied	pre-applied	Tape
Shelf Life	5 years	5 years	5 years
Solvent Resistance	Saline: Very good De-icing fluid: Good Diesel: Excellent Lubricating Oil: Good Hydraulic Oil: Good Aviation Fuel: Good Automotive Fuel: Good	De-icing fluid: Excellent Petrol: Excellent Lubricating Oil: Excellent Hydraulic Oil: Excellent	Fair under splash conditions

Adhesive Specifications		
Description	V9500	HMT200A
Adhesive	Two part, black, epoxy adhesive	Hot melt adhesive tape
Operating Temperature Range °C	-75 to +150	-55 to +105
Softening Point °C	-	+110
Supplied Form	Cartridge	Tape
Shelf Life	18 months	5 years
Solvent Resistance	De-icing fluid: Excellent Petrol: Excellent Lubricating Oil: Excellent Hydraulic Oil: Excellent	Fair under splash conditions

Use this table to find the adhesive compatibility for your preferred material.

Material Combinations	Material			
	G	B7	B8	H
Material Description	Fluid resistant elastomer	Semi -rigid flame retarded polyolefin	Semi -rigid flame retarded polyolefin	Flexible limited fire hazard polyolefin
Shape				
Minimum Shrink Temperature °C	+135	+135	+135	+135
Operating Temperature Range °C	-75 to +150	-55 to +135	-55 to +100	-55 to +105
Shelf Life	5 years	5 years	5 years	5 years
Helashrink 100 Series	yes	yes	no	yes
Helashrink 1100 Series	yes	yes	no	yes
Helashrink 200 Series	yes	yes	no	yes
Helashrink 300 Series	yes	yes	no	yes
Helashrink 400 Series	yes	yes	no	yes
Helashrink 1200 Series	yes	yes	no	yes
Helashrink 1300 Series	yes	yes	no	yes
Low Profile Shapes (Series 313, 412, 492, 573)	no	no	no	no
Helashrink 1600 Series	no	no	yes	no
Helashrink In Line Series, low voltage	no	no	yes	no
Adhesive Compatibility	WM250	WM250	WM250	WM250
	W8	W8	W8	W8
	W24	W24		W24
	V9500	V9500		W21
	HMT200A	HMT200A		

Material & Adhesive Combinations Search

Material Combinations	Material			
	L	-9	-6	-8
Material Description	Flexible flame retarded fluoroelastomer	Modified elastomer blend	Flexible flame retarded polyolefin	Fluoro-elastomer polymer blend
Shape		low profile	low profile	low profile
Minimum Shrink Temperature °C	+175	+135	+135	+135
Operating Temperature Range °C	-55 to +200	-55 to +120	-55 to +120	-55 to +150
Shelf Life	5 years			
Helashrink 100 Series	yes	no	no	no
Helashrink 1100 Series	yes	no	no	no
Helashrink 200 Series	yes	no	no	no
Helashrink 300 Series	yes	no	no	no
Helashrink 400 Series	yes	no	no	no
Helashrink 1200 Series	yes	no	no	no
Helashrink 1300 Series	yes	no	no	no
Low Profile Shapes (Series 313, 412, 492, 573)	no	yes	yes	yes
Helashrink 1600 Series	no	no	no	no
Helashrink In Line Series, low voltage	no	no	no	no
Adhesive Compatibility	W24	WM250	WM250	WM250
		W8	W8	W8
		W24	W24	W24
		V9500	V9500	V9500
		HMT200A	HMT200A	HMT200A
		TSA200	TSA200	TSA200

Use this table to find the material compatibility for your preferred adhesive.

Adhesive Combinations	Adhesive			
	W / W2	WM250	W8	W21
Adhesive Description	General purpose hot melt adhesive	General purpose hot melt adhesive	EVA, high performance, hot melt adhesive	Modified polyamide hot melt adhesive
Operating Temperature Range °C	-55 to +80	-55 to +80	-55 to +105	-55 to +120
Softening Point °C	+95	+95	+110	-
Supplied Form	pre-applied	pre-applied	pre-applied	pre-applied
Shelf Life	5 years	5 years	5 years	5 years
Solvent Resistance	Fair under splash conditions	Fair under splash conditions	Fair under splash conditions	Saline: Very good De-icing fluid: Good Diesel: Excellent Lubricating Oil: Good Hydraulic Oil: Good Aviation Fuel: Good Automotive Fuel: Good

Helashrink 100 Series	no	yes	yes	yes
Helashrink 1100 Series	no	yes	yes	yes
Helashrink 200 Series	no	yes	yes	yes
Helashrink 300 Series	no	yes	yes	yes
Helashrink 400 Series	no	yes	yes	yes
Helashrink 1200 Series	no	yes	yes	yes
Helashrink 1300 Series	no	yes	yes	yes
Low Profile Shapes (Series 313, 412, 492, 573)	no	yes	yes	yes
Helashrink 1600 Series	yes	yes	no	no
Helashrink In Line Series, low voltage	yes	yes	no	no

Material Compatibility	B8	G	G	G
		B7	B7	B7
		B8	H	B8
		H	-6	H
		-6	-9	
		-9	-8	
		-8		

Adhesive Combinations	Adhesive			
	W24	TSA-200	V9500	HMT200A
Adhesive Description	High performance, pre-coat, 1 part epoxy	Thermoset +125°C	Two part, black, epoxy adhesive	Hot melt adhesive tape
Operating Temperature Range °C	-75 to +200	-55 to +125	-75 to +150	-55 to +105
Softening Point °C	-	-	-	+ 110
Supplied Form	pre-applied	Tape	Cartridge	Tape
Shelf Life	5 years	5 years	18 months	5 years
Solvent Resistance	De-icing fluid: Excellent Petrol: Excellent Lubricating Oil: Excellent Hydraulic Oil: Excellent	Fair under splash conditions	De-icing fluid: Excellent Petrol: Excellent Lubricating Oil: Excellent Hydraulic Oil: Excellent	Fair under splash conditions

Helashrink 100 Series	yes	no	yes	yes
Helashrink 1100 Series	yes	no	yes	yes
Helashrink 200 Series	yes	no	yes	yes
Helashrink 300 Series	yes	no	yes	yes
Helashrink 400 Series	yes	no	yes	yes
Helashrink 1200 Series	yes	no	yes	yes
Helashrink 1300 Series	yes	no	yes	yes
Low Profile Shapes (Series 313, 412, 492, 573)	yes	yes	yes	yes
Helashrink 1600 Series	no	no	no	yes
Helashrink In Line Series, low voltage	no	no	no	yes

Material Compatibility	G	-6	G	G
	B7	-9	B7	B7
	H	-8	H	B8
	L			H
	-6			-6
	-9			-9
	-8			-8