RADXL FLK

Fusible Link Wire
-40 - 105°C

RADXL FLK is a high performance wire designed specifically for fusible-link applications. Fuse-link wires are designed to "open" a circuit when extreme overload occurs. A Fusible link is not intended to replace a fuse, instead, it is to be used in conjunction with a fuse. It is primary used in high amperage applications especially battery cables. RADXL FLK is designed to protect the wiring harnesses and circuit from a direct electrical short. When there is a direct electrical short, the fuse-link wire will heat to a high temperature and melt the conductor without creating a fire or dripping hot melt insulation.

The high temperature performance and fluid resistance of FLK means it will survive the harsh engine compartment environment. Superior abrasion and pinch resistance ensures durability. Irradiation cross-linked insulation will not melt or catch on fire and will prevent the melted copper conductor from escaping. Normal current flow will not generate enough heat to warn the wire up. Normal current flow does not result in significant voltage drop.

FXL processes very well on automated high speed cut and strip equipment. The end result is a fuse-link wire that performs safely time after time.

Benefits and Features

Fluid Resistant
–40°C to 105°C Temperature Range
Superior Processing
Will not Melt
Will Not Start a Fire
Retains melted copper conductor

Applications

Including but not limited to:
Battery Cables
Power Distribution
Starter wires

Part Number	Standard Conductors Bare Copper	Nom. Dia of Conductor		Insulation Thickness		Nom. OD		Finished Weight (lbs/mft)	AWG size Circuit Protection
		in.	mm.	in.	mm.	in.	mm.		
RADXL-FLK20-XX	20 (7/28)	.038	0.97	.030	.76	.099	2.51	6.83	16
RADXL-FLK18-XX	18 (19/.0092)	.045	1.19	.030	.76	.106	2.69	9.54	14
RADXL-FLK16-XX	16 (19/29)	.057	1.83	.030	.76	.121	3.07	12.63	12
RADXL-FLK14-XX	14 (19/27)	.071	1.85	.030	.76	.133	3.38	17.72	10
RADXL-FLK12-XX	12 (19/25)	.090	2.27	.030	.76	.154	3.91	26.45	8
RADXL-FLK10-XX	10 (19/23)	.112	2.84	.030	.76	.188	4.78	39.45	6
RADXL-FLK8-XX	8 (19/21)	.143	3.62	.043	1.09	.229	5.82	60.56	4
RADXL-FLK6-XX	6 (37/21)	.200	5.08	.043	1.09	.286	7.26	106.58	2

CHAMPLAIN CABLE
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RADXL FLK

Property / Attribute			SAE J-1128 TXL Req.	RADXL FLK 16 AWG Typical Performance
Flex Life				
Flex Test	Per Modified ISO 14572		NA	NA
Dielectric Strength				
Dielectric Test	Wet Dielectric after 5 hour soak		1 kV 1 min.	5 kV 30 min.
Flame Resistance				
Flame Test	Flame test 45o angle, 15 seconds		<15	<1
Thermal Performance				
Cold Bend	4 hours at temperature no cracks / breakdown		-40^{0}C	-40^{0}C
Temperature Rating	240 Hours @180^{0}C heat aging		125^{0}C	125^{0}C
Temperature Rating	3000 Hours @150^{0}C		100^{0}C	105^{0}C
Mechanical Properties				
Tensile	Minimum psi		No Requirement	1676
Elongation	Minimum %		200	243
Abrasion	Sand Paper Resistance Length cm.		850	2818
Abrasion	Scrape Cycles		None	NA
Pinch	Pounds		22	28
Fusiblelink Testing				
Short Circuit	SAE J156		No Flame	No Flame
Fluids				
Engine Oil	ASTM D471, IRM-902	50 +/-3 ^{0}C	15% Max.	1.30%
Gasoline	ASTM D471 Ref. Fuel C	23 +/-5 ^{0}C	15% Max.	5.90%
Ethanol	85% Ethanol + 15% ASTM D471, Ref. Fuel C	23 +/-5 ^{0}C	15% Max.	2.20%
Diesel Fuel	ASTM D471, 90% IRM-903 + 10% p-xylene	23 +/-5 ^{0}C	15% Max.	5.00%
Power Steering	ASTM D471, IRM-903	50 +/-3 ^{0}C	30% Max.	2.80%
Auto Transmission	Citgo #33123 SAE-J311	50 +/-3 ^{0}C	25% Max.	3.50%
Engine Coolant	50% Ethylene Glyco + 50% distilled Water	50 +/-3 ^{0}C	15% Max.	3.00%
Battery Acid	H_2SO_4 Specific Gravity = 1.260 +/- .005	23 +/-5 ^{0}C	5% Max.	<.2%

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