



WIRE & CABLE VINYL COMPOUNDS

Product Selection Guide

PolyOne[™]

Building Wire

Products	1410-xxFRD	1410xxFRD3	1410-xx61FRD	1721-xx14E	1725-xx13FRD
Descriptors	THHN, THWN, TWN Insulations; Economical for 6 gauge and larger	THNN, THWN, TWN, TFFN, T90, TEW circuit size grade	THNN, THWN, TWN, TEW; Small sizes needing greater flame resistance	NMB jacket	Sunlight resistant jacket for underground feeder; general purpose jacket
Property Name					
Specific Gravity	1.34	1.35	1.33	1.39	1.38
Durometer (Shore A, D)	88A	85A	90A	78A	78A
LTBP (°C)	-15°	-21°	-31°	-30°	-26°
LOI	28%	31%	28%	n/a%	26%
Tensile	3,100 psi	3,100 psi	2,900 psi	2,160 psi	2,100 psi
Elongation	280%	280%	280	300%	300%
Temperature Rating (°C)	105° UL or CSA	105° UL or CSA	105° UL or CSA	60° UL or CSA	60° UL or CSA

Products	R8180K	R7426A	R7661A	Y283	W1200
Descriptors	NMD90 Insulation	NMD90 Jacket	TWH 75° wet insulation	NMWU Insulation; 60° wet	AWM 80° 75 THW
Property Name					
Specific Gravity	1.41	1.34	1.32	1.4	1.37
Durometer (Shore A, D)	86A	77A	83A	83A	41D
LTBP (°C)	-22°	-32°	-22°	-23°	-40°
LOI	29%	24%	24%	24%	n/a
Tensile	2,550 psi	2,250 psi	2,650 psi	2,400 psi	1,700 psi
Elongation	350%	380%	350%	310%	250%
Temperature Rating (°C)	90° CSA	90° CSA	75° wet/dry CSA	60° wet/dry CSA	75°/80° UL

CATV

Products	W2300	W2301	W2302	1104-xx60	W2407
Descriptors	CATV jacket, -35°; Non-FR feeder	CATV jacket, -40°; Non-FR feeder	Jacket UL approved for weathering in all colors	CMX jacket UL approved for colors except white; UL subject 1655	Flame retardant CATV jacket
Property Name					
Specific Gravity	1.36	1.35	1.36	1.41	1.31
Durometer (Shore A, D)	77A	72A	73A	82A	79A
LTBP (°C)	-35°	-40°	-30°	-25°	-40°
LOI	21%	n/a	n/a	29%	30%
Tensile	2,000 psi	2,000 psi	2,000 psi	2,200 psi	2,600 psi
Elongation	300%	300%	300%	280%	300%
Temperature Rating (°C)	75° UL, 60° CSA	75° UL, 60° CSA	75° UL, 60° CSA	75° UL, 60° CSA	60° UL or CSA

Plenum

Products	1360-xx21PID	JAP61A	JJP630A
Descriptors	Insulation category 3; UL 444 Security cables	Jacket category 3 Security cables	Jacket category 5 and 5e or 6; Used over FEP insulation; UL 444
Property Name			
Specific Gravity	1.48	1.59	1.61
Durometer (Shore A, D)	42D	52D	52D
LTBP (°C)	-5°	-3°	-9°
LOI	39%	40.5%	47%
Tensile	3,200 psi	2,500 psi	3,000 psi
Elongation	210%	240%	245%
Temperature Rating (°C)	60° UL or CSA	60° UL or CSA	60° UL or CSA

Power & Control

Products	1800-xx19D	JLK51A	JB758BA	R4602K	JC837DB
Descriptors	1000 volt MTW, UL 83, 75° or 90°; TW, THW	PLTC, UL 1277; Tray cable jacket	Concentric neutral jacket; -40° impact	Concentric neutral jacket; -40° impact; 60° version	Arctic grade UL tray jacket; CSA tray non-LAG
Property Name					
Specific Gravity	1.37	1.41	1.25	1.30	1.26
Durometer (Shore A, D)	85A	86A	71A	69A	72A
LTBP (°C)	n/a	-18°	-63°	-61°	-63°
LOI	n/a	29%	24%	24%	28%
Tensile	2,700 psi	2,600 psi	2,400 psi	2,400 psi	2,300 psi
Elongation	275%	250%	400%	400%	400%
Temperature Rating (°C)	90° UL	90° UL	75° UL or CSA	60° UL or CSA	90° UL, 105° CSA

Products	JC435XC	JG513G0	JGK511L	R7542Y	R7400B
Descriptors	Service entrance jacket; non-staining; SEU, USE	Tech jackets, inner and outer	Tech jackets, inner and outer; non-heavy metal	Tech jacket, outer; for large cables (>2 inch diameter)	Festoon jackets, -40
Property Name					
Specific Gravity	1.31	1.40	1.38	1.46	1.27
Durometer (Shore A, D)	72A	77A	73A	83A	69A
LTBP (°C)	-46°	-47°	-48°	-46°	-49°
LOI	25%	25%	25%	26%	25%
Tensile	2,100 psi	2,150 psi	2,000 psi	2,000 psi	2,200 psi
Elongation	400%	350%	360%	300%	410%
Temperature Rating (°C)	90° UL or CSA	90° UL or CSA	90° UL or CSA	90° UL or CSA	105° CSA

Products	W7400	R7543E	R7545H	R3790B	E1330I	R3792C
Descriptors	Festoon jacket, -40, 60° version	Radiation resistant jackets; to 50 meg. Rads.	Tech LAG insulation	Control cables; 90° wet, 105° dry insulation	Control cables; 60° wet or dry insulation	Fire alarm; FAS; 105° insulation or jacket
Property Name						
Specific Gravity	1.30	1.48	1.46	1.29	1.32	1.34
Durometer (Shore A, D)	68A	88A	84A	73A	83A	82A
LTBP (°C)	-45°	-33°	-36°	-46°	-48°	-24°
LOI	23%	28%	26%	25%	26%	29%
Tensile	1,500 psi	2,300 psi	2,000 psi	2,400 psi	2,400 psi	2,500 psi
Elongation	325%	300%	310%	400%	340%	350%
Temperature Rating (°C)	60° UL or CSA	90° CSA	90° CSA	105° CSA	60° UL or CSA	105° CSA

Transportation

Products	Y594K	MLA71A	R7600D	R7600E
Descriptors	OEM-approved, non-lead plug molding	OEM-approved, non-lead strain relief	Coastguard and Marine cables	Coastguard and marine cables; non-staining version
Property Name				
Specific Gravity	1.30	1.35	1.27	1.26
Durometer (Shore A, D)	82A	77A	88A	87A
LTBP (°C)	-28°	-36°	-43°	-40°
LOI	24%	25%	25%	25%
Tensile	2,000 psi	1,900 psi	2,800 psi	2,900 psi
Elongation	320%	310%	340%	320%
Temperature Rating (°C)	105° CSA	60° UL or CSA	90° CSA	90° CSA

Apparatus, Molding and Cord Sets

Products	1430-xx07D	1100-xx15	1100-xx22	E1330I	Y66A
Descriptors	Business machine wire; UL style 1061, CSA SR; semi-rigid insulation; mil spec W16878	SPT, SJT, SVT cord set; insulation or jacket; SJT-WA outdoor; UL 62	SPT, SJT, SVT; Harder version	SJTW insulation; Arctic grade 60°	SJTW insulation; 105°
Property Name					
Specific Gravity	1.34	1.38	1.41	1.32	1.3
Durometer (Shore A, D)	60D	73A	85A	83A	73A
LTBP (°C)	-10°	-27°	-20°	-47°	-30°
LOI	28%	n/a	n/a	26%	26%
Tensile	3,600	1,900 psi	2,200 psi	2,400 psi	2,100 psi
Elongation	220%	300%	290%	340%	380%
Temperature Rating (°C)	105° UL or CSA	75° UL	75° UL	60° UL or CSA	105° CSA

Products	Y152	JA306BA	1250-009D	R7400B	R3090S	Series 0650 to 0950
Descriptors	Cord sets; UL 75°, CSA BSS T11 insulation	SJTW jackets, -35° cold bend type	SJTW jackets, -40° cold impact	SJTW jackets; 105° version	Clear speaker wire; 105°	Clear speaker wire; range of hardness
Property Name						
Specific Gravity	1.38	1.39	1.3	1.27	1.19	1.19 - 1.27
Durometer (Shore A, D)	83A	69A	73A	68A	68A	65A - 53D
LTBP (°C)	-21°	-35°	-61°	-49°	-45°	n/a
LOI	25%	25%	25%	25%	23%	23 - 26%
Tensile	2,300 psi	2,000 psi	2,200 psi	2,200 psi	1,300 psi	1,100 - 2,700 psi
Elongation	300%	350%	450%	410%	300%	350 - 250%
Temperature Rating (°C)	75° UL, 60° CSA	60° UL or CSA	60° UL or CSA	105° CSA	105° CSA	60° UL or CSA

Products	3701-xx01D	JC404HX	R4181K	MA301FA
Descriptors	Plug molding; UL 94 V0, 105°	Plug molding; UL 94 V0, 105°; softer version	Plug molding; very soft strain reliefs	Plug molding; plugs with new blades; easy processing
Property Name				
Specific Gravity	1.32	1.29	1.40	1.40
Durometer (Shore A, D)	78A	65A	64A	80A
LTBP (°C)	-30°	-37°	-40°	-20°
LOI	28%	27%	24%	25%
Tensile	2,400 psi	1,900 psi	700 psi	2,000 psi
Elongation	350%	380%	250%	300%
Temperature Rating (°C)	105° CSA	105° CSA	60° UL or CSA	105° CSA

Products	MD301FA	MAF110A	MJF114A	W9400
Descriptors	Plug molding; plugs with new blades; 105°	Plug molding; for UL 817; new blade style	Plug molding; UL 817; softer version; strain reliefs	Plug molding; to pass blade pull test with most blade styles
Property Name				
Specific Gravity	1.45	1.40	1.41	1.30
Durometer (Shore A, D)	80A	89A	75A	50D
LTBP (°C)	-19°	-20°	-27°	-19°
LOI	25%	n/a	n/a	n/a
Tensile	2,000 psi	3,100 psi	2,000 psi	2,600 psi
Elongation	300%	290%	300%	340%
Temperature Rating (°C)	105° CSA	60° UL or CSA	60° UL or CSA	60° UL or CSA

Telecom

Products	1349-xx05FRD	1430-1007D	JAC31A	JAC32A	JJC31A
Descriptors	Riser insulation	Riser insulation, 105° business machine wire	Riser jackets over PE insulation; patch cords, 20 mil jacket, 4 pair cables, FT4	Riser jackets over PE insulation; increased flexibility; patch cords, 20 mil jacket, 4 pair cables, FT4	Riser jacket, CL2R, CMR, category 5; used over foam at 25 pair
Property Name					
Specific Gravity	1.33	1.34	1.44	1.43	1.63
Durometer (Shore A, D)	54D	60D	43D	42D	42D
LTBP (°C)	-7°	-10°	-28°	-28°	-8°
LOI	30%	28%	34%	33%	43%
Tensile	3,700 psi	3,600 psi	2,800 psi	2,700 psi	2,400 psi
Elongation	200%	220%	250%	285%	220%
Temperature Rating (°C)	60° UL or CSA	105° UL or CSA	60° UL or CSA	75° UL	75° UL

Products	JJC32A	R1480L	R8206A	2540-xx04FRD	W2402
Descriptors	Riser jacket, CL2R, CMR, category 5; 2-25 pair non-FR insulations	Telephone wire insulation; D-type, premise wiring	Telephone wire jacket; premise wiring	Mil C17-13930 non-contaminating jacket; type JP coaxial cables	Aerial drop wire; F multi
Property Name					
Specific Gravity	1.51	1.33	1.3	1.29	1.24
Durometer (Shore A, D)	84A	42D	87A	82A	80A
LTBP (°C)	-24°	-11°	-43°	n/a	-46°
LOI	37%	27%	30%	28%	26%
Tensile	2,300 psi	3,200 psi	2,900 psi	2,400 psi	2,700 psi
Elongation	290%	300%	350%	360%	360%
Temperature Rating (°C)	75° UL	60° UL or CSA	60° UL or CSA	80° UL	90° UL

Products	1604-xx07FRD	1604-xx27FRD	W2403	W9200
Descriptors	Jacket for CMR and CL2	Low gloss jacket for CMR and CL2	C-Sevice underground	Frame wire; jumper cable to replace cross-linked vinyl
Property Name				
Specific Gravity	1.38	1.4	1.45	1.32
Durometer (Shore A, D)	87A	82A	50D	77D
LTBP (°C)	-27°	-32°	-20°	n/a
LOI	32%	31%	24%	28%
Tensile	2,900 psi	2,000 psi	2,200 psi	4,100 psi
Elongation	260%	220%	270%	220%
Temperature Rating (°C)	60° UL or CSA	75° UL	60° UL or CSA	60° UL or CSA

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