

# A Representative Sampling of RoHS Compliant PVC Compounds for Wire and Cable Applications



## GENERAL INSULATION COMPOUNDS

PVC Compound No.		60003	80457	80851-F	80862	84455	84459	01-A-0402C-112	02-A0310A-107
<b>Application</b>		Category 3 Riser Insulation	TEW, AWM Insulation	Mil-W-16878; AWM Insulation	Semi-Rigid PVC Insulation	FR, AWM Insulation	Non-Migrating FR, AWM Insulation; 60°C Oil Rating	Automotive SAE J1128 TWP Insulation	Automotive SAE J1128 GPT Insulation
<b>Property</b>	<b>ASTM Method</b>								
Temperature Rating, °C		75	105	105	105	105	105	105	90
Specific Gravity	D-792	1.34	1.34	1.30	1.30	1.37	1.41	1.32	1.31
Shore Hardness, delayed	D-2240	84 C	88 A	71 C	90 C	65 C	67 C	88 C	82 C
Tensile Strength, psi	D-638	3525	2500	3200	3500	2900	2700	3420	3450
Elongation, %	D-638	260	300	320	235	340	290	290	330
Brittle Point, °C	D-746	-18	-30	-24	-30	-22	-9	-27	-26
Oxygen Index, %	D-2863	31	24	27.5	29.5	27.5	28	26	31.5

## UL COMPONENT RECOGNIZED INSULATION COMPOUNDS

PVC Compound No.		80102	80851	80851-B	80853-A	80853-B	80853-C	80873	84853-L	84854
<b>Application</b>		TW, AWM Insulation	TW, THW, THHN, THWN, TFFN; AWM Insulation 75°C Oil Rating	TW, THW, THHN, THWN, TFFN; AWM Insulation 75°C Oil Rating	TW, THW, THHN, THWN, TFFN; AWM Insulation 60°C Oil Rating	TW, THW, THW-2, THHW, THHN, THWN, THWN-2, TFFN; AWM Insulation 75°C Oil Rating	TW, THW, THW-2, THHW, THHN, THWN, THWN-2, TFFN; AWM Insulation; 60°C Oil Rating	TW, THW, THHN, THWN, TFFN; Automotive SAE J1128 GPT Insulation; AWM Insulation	TW, THW, THHN, THWN	TW, THW, THHN, THWN
<b>Property</b>	<b>ASTM Method</b>									
Temperature Rating, °C		75	105	105	105	105	105	105	105	105
Specific Gravity	D-792	1.37	1.30	1.30	1.37	1.31	1.31	1.30	1.38	1.37
Shore Hardness, delayed	D-2240	77 C	71 C	71 C	76 C	75 C	71 C	83 C	75 C	75 C
Tensile Strength, psi	D-638	3450	3200	3300	2900	3100	3100	3550	2800	3080
Elongation, %	D-638	270	320	325	290	350	350	320	285	290
Brittle Point, °C	D-746	-14	-24	-33	-11	-20	-19	-13	-17	-18
Oxygen Index, %	D-2863	28	27.5	27.5	27	27	27	26.5	28	31

Compounds highlighted in yellow are UL Recognized Components.

## UL COMPONENT RECOGNIZED INSULATION COMPOUNDS

PVC Elastomer Compound No.		Flexalloy 89501-83	Flexalloy 89501-83FR
<b>Application</b>		TW, THW, THHW; SEOW, SJEOW	TW, THW, THHW; SEOW, SJEOW
<b>Property</b>	<b>ASTM Method</b>		
Temperature Rating, °C		105	105
Specific Gravity	D-792	1.28	1.31
Shore Hardness, delayed	D-2240	83 A	83 A
Tensile Strength, psi	D-638	2600	2600
Elongation, %	D-638	250	250
Brittle Point, °C	D-746	-45	-45
Oxygen Index, %	D-2863	26	29

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## GENERAL JACKET COMPOUNDS

PVC Compound No.	65005	65006	82-E498-E	88-N398-J	89-P129A-NT	89-P180-B	96-A0914M-90	97-G0029C-82	03-A0673C-85
<b>Application</b>	Category 5,6 Riser Jacket	Category 3 Riser Jacket	Thin Wall Jacket	Category 3 Riser Jacket	Non-Migrating Clear Jacket	Extra Flexible Low Gloss, FR Jacket.	Category 5 Riser Jacket	Non-Antimony, Low Gloss Riser Jacket	NMB Jacket
<b>Property</b>	<b>ASTM Method</b>								
Temperature Rating, °C	75	75	105	75	105	80	75	75	75
Specific Gravity	D-792	1.54	1.40	1.37	1.39	1.25	1.33	1.51	1.37
Shore Hardness, delayed	D-2240	74 C	75 C	87 A	90 A	80 A	73 A	70 C	82 A
Tensile Strength, psi	D-638	2615	2800	2700	2900	2780	2130	2300	2595
Elongation, %	D-638	275	325	360	300	385	305	250	300
Brittle Point, °C	D-746	-19	-24	-27	-31	-25	-33	-20	-27
Oxygen Index, %	D-2863	38	31.5	29	31.5	22	27.5	37	29.5

## UL COMPONENT RECOGNIZED JACKET COMPOUNDS

PVC Compound No.	121	124	126	130	153	155	157V	157V-4
<b>Application</b>	Sunlight Resistant Jacket	Sunlight Resistant Jacket	Sunlight Resistant Jacket	Sunlight Resistant Jacket	Non-Migrating, Sunlight Resistant Jacket	Sunlight Resistant Jacket	Non-Migrating, Sunlight Resistant Jacket	Non-Migrating, Sunlight Resistant, FR Jacket, Automotive Harness Jacket
<b>Property</b>	<b>ASTM Method</b>							
Temperature Rating, °C	90	80	75	80	105	80	105	105
Specific Gravity	D-792	1.26	1.39	1.36	1.37	1.40	1.40	1.33
Shore Hardness, delayed	D-2240	83 A	80 A	74 A	80 A	79 A	80 A	72 A
Tensile Strength, psi	D-638	2500	2300	2060	2300	2400	2050	2200
Elongation, %	D-638	355	330	400	350	350	385	400
Brittle Point, °C	D-746	-51	-38	-42	-30	-17	-31	-35
Oxygen Index, %	D-2863	26.5	22.5	23.5	22	23	22	21.5

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## UL COMPONENT RECOGNIZED JACKET COMPOUNDS

PVC Compound No.	4124	4130	4167	4855-LF	4168	65004	65007	65290
<b>Application</b>	Sunlight Resistant Jacket	Sunlight Resistant Jacket	Sunlight Resistant Jacket	Sunlight Resistant, Tray Cable Jacket	Sunlight Resistant Jacket	Sunlight Resistant Riser Jacket	Low Temperature Sunlight Resistant Category 5,6 Riser Jacket	Sunlight Resistant Riser Jacket
<b>Property</b>	<b>ASTM Method</b>							
Temperature Rating, °C	80	75	60	90	75	75	90	80
Specific Gravity	D-792	1.38	1.39	1.23	1.37	1.21	1.42	1.54
Shore Hardness, delayed	D-2240	80 A	83 A	75 A	67 C	70 A	73 C	86 A
Tensile Strength, psi	D-638	2400	2600	2150	2560	2100	2800	2050
Elongation, %	D-638	350	360	265	250	410	275	275
Brittle Point, °C	D-746	-38	-27	-56	-24	-52	-27	-27
Oxygen Index, %	D-2863	25	28.5	26	29	23.5	32	39

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## UL COMPONENT RECOGNIZED JACKET COMPOUNDS

PVC Compound No.	80131	80842	84131	84137	84468	84842-B	84855	84859
<b>Application</b>	Sunlight Resistant Jacket	Sunlight Resistant Jacket	Sunlight Resistant Jacket	Sunlight Resistant Jacket	Sunlight Resistant Jacket	Sunlight Resistant Jacket; 60°C Oil Rating	Sunlight Resistant Tray Cable Jacket	Sunlight Resistant Jacket; 60°C Oil Rating
<b>Property</b>	<b>ASTM Method</b>							
Temperature Rating, °C	105	105	105	80	105	105	90	75
Specific Gravity	D-792	1.31	1.30	1.33	1.39	1.35	1.32	1.42
Shore Hardness, delayed	D-2240	80 A	82 A	80 A	85 A	85 A	86 A	65 C
Tensile Strength, psi	D-638	2345	2400	2250	2260	2850	2750	2650
Elongation, %	D-638	400	400	345	300	360	360	325
Brittle Point, °C	D-746	-39	-31	-29	-28	-28	-32	-25
Oxygen Index, %	D-2863	22	26	25	24	31	29	32.5

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## UL COMPONENT RECOGNIZED JACKET COMPOUNDS

PVC Elastomer Compound No.		Flexalloy 9602-72	Flexalloy 9602-72FR	Flexalloy 9604-75	Flexalloy 9605-70FR	Flexalloy 9606-65	Flexalloy 9607-96
<b>Application</b>		Sunlight Resistant Jacket	Sunlight Resistant FR Jacket	Sunlight Resistant Jacket	Non-Migrating Sunlight Resistant, Tray Cable Jacket	Sunlight Resistant Jacket	Sunlight Resistant Industrial Cable FR Jacket
<b>Property</b>	<b>ASTM Method</b>						
Temperature Rating, °C		105	105	105	90	105	105
Specific Gravity	D-792	1.25	1.28	1.30	1.32	1.23	1.42
Shore Hardness, delayed	D-2240	72 A	72 A	80 A	70 A	65 A	71C
Tensile Strength, psi	D-638	2100	1930	2440	1630	2100	3100
Elongation, %	D-638	330	390	380	380	390	335
Brittle Point, °C	D-746	-50	-48	-47	-43	-52	-18
Oxygen Index, %	D-2863	25.5	28.5	25	30	26	36

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## GENERAL INSULATION / JACKET COMPOUNDS

PVC Compound No.		583	584	585	586	590	716	4303
<b>Application</b>		GP Clear, Non-Tarnishing, SPT Ins./Jkt.	GP Clear, SPT Ins./Jkt.	GP Clear, SPT Ins./Jkt.	GP Clear, SPT Ins./Jkt.	GP Clear, SPT Ins./Jkt.	GP Clear, SPT Ins./Jkt.	Clear, FR Non-Tarnishing, SPT Ins./Jkt.
<b>Property</b>	<b>ASTM Method</b>							
Temperature Rating, °C		60	60	60	60	60	105	75
Specific Gravity	D-792	1.17	1.20	1.22	1.22	1.25	1.21	1.24
Shore Hardness, delayed	D-2240	70 A	75 A	80 A	85 A	90 A	85 A	86 A
Tensile Strength, psi	D-638	2200	2175	2500	2750	3200	2700	3280
Elongation, %	D-638	430	400	375	350	325	340	375
Brittle Point, °C	D-746	-40	-35	-37	-29	-17	-38	-38
Oxygen Index, %	D-2863	N/A	N/A	N/A	24	N/A	22.5	25

## UL COMPONENT RECOGNIZED INSULATION / JACKET COMPOUNDS

PVC Compound No.		80118-Y	80128-Y	80328	80328-Y	80328-YFR	80855	84458	84842	84856
<b>Application</b>		TW; Sunlight Resistant Jacket	TW; Sunlight Resistant Jacket	TW; Sunlight Resistant Jacket	TW; Sunlight Resistant Jacket	TW; FR Sunlight Resistant Jacket	TW, THW; Sunlight Resistant Insulation, Jacket	TW, THW; Sunlight Resistant Jacket	TW, THW, CXTW; SJT, SJTW; Sunlight Resistant Insulation, Jacket	TW, THW; Sunlight Resistant Jacket
<b>Property</b>	<b>ASTM Method</b>									
Temperature Rating, °C		60	75	75	75	75	90	105	105	90
Specific Gravity	D-792	1.39	1.38	1.43	1.43	1.44	1.36	1.39	1.33	1.38
Shore Hardness, delayed	D-2240	86 A	86 A	85A	85 A	85 A	67 C	90 A	86 A	67 C
Tensile Strength, psi	D-638	2550	2590	2350	2400	2400	2650	2800	2750	2800
Elongation, %	D-638	280	305	350	320	300	310	330	360	310
Brittle Point, °C	D-746	-28	-22	-29	-29	-29	-23	-21	-30	-24
Oxygen Index, %	D-2863	23	24	23	23	27	24	26.5	29	28.5

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## UL COMPONENT RECOGNIZED MOLDING COMPOUNDS

PVC Compound No.		1001	1003	1007	1009	1011	1013	1015	1017
<b>Application</b>		Connectors, Strain Reliefs	Connectors, Strain Reliefs, Grommets	Plugs, Strain Reliefs, Grommets	Plugs, Strain Reliefs, Grommets	Plugs, Grommets	Plugs, Grommets	Plugs, Grommets	Plugs, Grommets, DIN Pre-mold
<b>Property</b>	<b>ASTM Method</b>								
Temperature Rating, °C		60	60	60	60	60	60	60	60
Specific Gravity	D-792	1.33	1.35	1.38	1.37	1.35	1.39	1.39	1.39
Shore Hardness, delayed	D-2240	75 A	79 A	86 A	86 A	69 C	77 C	82 C	66 D
Tensile Strength, psi	D-638	1500	1700	2350	1700	2075	2800	3000	2900
Elongation, %	D-638	300	300	280	260	225	280	250	150
Brittle Point, °C	D-746	-38	-35	-24	-25	-20	-12	-6	+15
Oxygen Index, %	D-2863	23	23.5	24	24	24	25	N/A	28
UL 94 Flame Class		HB	HB	HB	HB	HB	HB	HB	HB

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## UL COMPONENT RECOGNIZED MOLDING COMPOUNDS

PVC Compound No.		4011	4101	4103	4109	4111	76-5179B	77-W115-B
<b>Application</b>		Plugs, Strain Reliefs, Grommets	Connectors, Strain Reliefs	Connectors, Strain Reliefs, Grommets	Plugs, Strain Reliefs, Grommets	Plugs, Grommets	Connectors, Strain Reliefs	Non-Migrating Plugs, Connectors, Strain Reliefs, Grommets
<b>Property</b>	<b>ASTM Method</b>							
Temperature Rating, °C		60	60	60	60	105	80	105
Specific Gravity	D-792	1.39	1.36	1.38	1.42	1.39	1.23	1.38
Shore Hardness, delayed	D-2240	71 C	76 A	80 A	85 A	82 C	55 A	85 A
Tensile Strength, psi	D-638	2650	1590	1500	1900	2730	1550	2500
Elongation, %	D-638	275	320	215	290	280	480	355
Brittle Point, °C	D-746	-10	-34	-26	-24	-10	-43	-15
Oxygen Index, %	D-2863	28	25.5	25	25	31	22.5	28.5
UL 94 Flame Class		V-0	V-2	V-2, V-0	V-0	V-0	V-2	V-2, V-0

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*Properties indicated are typical of the material as manufactured and should not be used to establish specification limits.*

*The information contained herein is believed to be reliable. However, all recommendations or suggestions are made without guarantee, as conditions and methods of commercial use are beyond our control.*



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