

## MITSUBISHI ENGINEERING-PLASTICS CORP

ENVIRONMENT & QUALITY ASSURANCE DEPT SHIODOME SUMITOMO-BLDG 25TH FL 1-9-2 HIGASHI-SHINBASHI MINATO-KU, TOKYO 105-0021 Japan



NOVADURAN: 5010GN6-30 M8(ccc)(r11), 5010GN6-30M8(ccc)(r11), 5010GN6-30 M8AM(r11), 5010GN6-30M8AM(r11)

Polybutylene Terephthalate (PBT), pellets, glass reinforced

(ccc) - Any combination of any letters excluding a letter "X" and/or any numerals denoting a customer code may or may not follow. (r11) - Virgin and regrind up to 50% by weight incl. have the same basic material characteristics for thicknesses 0.38 mm and greater.

Flame Rating	Flammability	Value	Test Method
0.76 mm, ALL       V-0         0.9 mm, ALL       V-0         1.5 mm, ALL       V-0         3.0 mm, ALL       V-0         3.2 mm, ALL       V-0         0.38 mm, ALL       V-0         0.76 mm, ALL       V-0         0.76 mm, ALL       V-0         0.9 mm, ALL       V-0         3.0 mm       960 °C         3.0 mm       960 °C         3.0 mm       750 °C         3.0 mm       700 °C         3.0 mm       PLC 4         0.76 mm			UL 94
0.9 mm, ALL       V-0         1.5 mm, ALL       V-0         3.0 mm, ALL       V-0         3.2 mm, ALL       V-0         Flammability Classification       IEC 60695-11-10, -20         0.38 mm, ALL       V-0         0.76 mm, ALL       V-0         0.9 mm, ALL       V-0         1.5 mm, ALL       V-0         3.0 mm, ALL       V-0         3.2 mm, ALL       V-0         3.2 mm, ALL       V-0         6low Wire Flammability Index       IEC 60695-2-12         0.9 mm       960 °C         3.0 mm       960 °C         3.0 mm       960 °C         3.0 mm       960 °C         1.5 mm       750 °C         1.5 mm       700 °C         3.0 mm       700 °C         3.0 mm       700 °C         3.2 mm       825 °C         Electrical       Value       Test Method         Hot-wire Ignition (HWI)       UL 746A         0.38 mm       PLC 3         0.9 mm       PLC 3	0.38 mm, ALL	V-0	
1.5 mm, ALL       V-0         3.0 mm, ALL       V-0         3.2 mm, ALL       V-0         Flammability Classification       IEC 60695-11-10, -20         0.38 mm, ALL       V-0         0.76 mm, ALL       V-0         0.9 mm, ALL       V-0         1.5 mm, ALL       V-0         3.0 mm, ALL       V-0         3.2 mm, ALL       V-0         3.2 mm, ALL       V-0         3.2 mm, ALL       V-0         960 wWire Flammability Index       IEC 60695-2-12         0.9 mm       960 °C         1.5 mm       960 °C         3.0 mm       960 °C         3.0 mm       750 °C         1.5 mm       700 °C         3.0 mm       700 °C         3.2 mm       825 °C         Electrical       Value       Test Method         Hot-wire Ignition (HWI)       UL 746A         0.9 mm       PLC 3         0.9 mm       PLC 3         0.9 mm       PLC 3         0.9 mm       PLC 3         0.9 mm       PLC 2	0.76 mm, ALL	V-0	
3.0 mm, ALL 3.2 mm, ALL 7-0 Flammability Classification Fl	0.9 mm, ALL	V-0	
3.2 mm, ALL	1.5 mm, ALL	V-0	
Flammability Classification	3.0 mm, ALL	V-0	
0.38 mm, ALL       V-0         0.76 mm, ALL       V-0         0.9 mm, ALL       V-0         1.5 mm, ALL       V-0         3.0 mm, ALL       V-0         3.2 mm, ALL       V-0         Glow Wire Flammability Index       IEC 60695-2-12         0.9 mm       960 °C         1.5 mm       960 °C         3.0 mm       960 °C         3.2 mm       960 °C         1.5 mm       750 °C         1.5 mm       700 °C         3.0 mm       700 °C         3.0 mm       825 °C         Electrical       Value       Test Method         Hot-wire Ignition (HWI)       UL 746A         0.38 mm       PLC 4         0.76 mm       PLC 3         0.9 mm       PLC 3         1.5 mm       PLC 3         1.5 mm       PLC 3         1.5 mm       PLC 2         3.0 mm       PLC 2	3.2 mm, ALL	V-0	
0.76 mm, ALL       V-0         0.9 mm, ALL       V-0         1.5 mm, ALL       V-0         3.0 mm, ALL       V-0         3.2 mm, ALL       V-0         Glow Wire Flammability Index       IEC 60695-2-12         0.9 mm       960 °C         1.5 mm       960 °C         3.0 mm       960 °C         3.2 mm       960 °C         Glow Wire Ignition Temperature       IEC 60695-2-13         0.9 mm       700 °C         1.5 mm       700 °C         3.0 mm       700 °C         3.2 mm       825 °C         Electrical       Value       Test Method         Hot-wire Ignition (HWI)       UL 746A         0.38 mm       PLC 4         0.76 mm       PLC 3         0.9 mm       PLC 3         1.5 mm       PLC 3         1.5 mm       PLC 3         1.5 mm       PLC 2         3.0 mm       PLC 2	Flammability Classification		IEC 60695-11-10, -20
0.9 mm, ALL       V-0         1.5 mm, ALL       V-0         3.0 mm, ALL       V-0         3.2 mm, ALL       V-0         Glow Wire Flammability Index       IEC 60695-2-12         0.9 mm       960 °C         1.5 mm       960 °C         3.0 mm       960 °C         3.2 mm       960 °C         Glow Wire Ignition Temperature       IEC 60695-2-13         0.9 mm       750 °C         1.5 mm       700 °C         3.0 mm       700 °C         3.2 mm       825 °C         Electrical       Value       Test Method         Hot-wire Ignition (HWI)       UL 746A         0.38 mm       PLC 3         0.9 mm       PLC 2         3.0 mm       PLC 2	0.38 mm, ALL	V-0	
1.5 mm, ALL       V-0         3.0 mm, ALL       V-0         3.2 mm, ALL       V-0         Glow Wire Flammability Index       IEC 60695-2-12         0.9 mm       960 °C         1.5 mm       960 °C         3.0 mm       960 °C         3.2 mm       960 °C         Glow Wire Ignition Temperature       IEC 60695-2-13         0.9 mm       750 °C         1.5 mm       700 °C         3.0 mm       700 °C         3.2 mm       825 °C         Electrical       Value       Test Method         Hot-wire Ignition (HWI)       UL 746A         0.38 mm       PLC 4         0.76 mm       PLC 3         0.9 mm       PLC 3         1.5 mm       PLC 3         3.0 mm       PLC 2	0.76 mm, ALL		
3.0 mm, ALL 3.2 mm, ALL V-0 3.2 mm, ALL V-0 Glow Wire Flammability Index UEC 60695-2-12 0.9 mm 960 °C 1.5 mm 960 °C 3.0 mm 960 °C 3.0 mm 960 °C 3.2 mm 960 °C  Glow Wire Ignition Temperature 0.9 mm 750 °C 1.5 mm 700 °C 3.0 mm 700 °C 3.2 mm 700 °C 3.2 mm 825 °C  Electrical Hot-wire Ignition (HWI) UL 746A  0.38 mm PLC 4 0.76 mm PLC 3 0.9 mm PLC 3	0.9 mm, ALL	V-0	
3.2 mm, ALL       V-0         Glow Wire Flammability Index       IEC 60695-2-12         0.9 mm       960 °C         1.5 mm       960 °C         3.0 mm       960 °C         3.2 mm       960 °C         Glow Wire Ignition Temperature       IEC 60695-2-13         0.9 mm       750 °C         1.5 mm       700 °C         3.0 mm       700 °C         3.2 mm       825 °C         Electrical       Value       Test Method         Hot-wire Ignition (HWI)       UL 746A         0.38 mm       PLC 4         0.76 mm       PLC 3         0.9 mm       PLC 3         1.5 mm       PLC 3         3.0 mm       PLC 3         9 mm       PLC 2         3.0 mm       PLC 2	1.5 mm, ALL	V-0	
Glow Wire Flammability Index         IEC 60695-2-12           0.9 mm         960 °C           1.5 mm         960 °C           3.0 mm         960 °C           3.2 mm         960 °C           Glow Wire Ignition Temperature         IEC 60695-2-13           0.9 mm         750 °C           1.5 mm         700 °C           3.0 mm         700 °C           3.2 mm         825 °C           Electrical         Value         Test Method           Hot-wire Ignition (HWI)         UL 746A           0.38 mm         PLC 4           0.76 mm         PLC 3           0.9 mm         PLC 3           1.5 mm         PLC 2           3.0 mm         PLC 2	3.0 mm, ALL	V-0	
0.9 mm       960 °C         1.5 mm       960 °C         3.0 mm       960 °C         3.2 mm       960 °C         IEC 60695-2-13         0.9 mm       750 °C         1.5 mm       700 °C         3.0 mm       700 °C         3.2 mm       825 °C         Electrical       Value       Test Method         Hot-wire Ignition (HWI)       UL 746A         0.38 mm       PLC 4         0.76 mm       PLC 3         0.9 mm       PLC 3         1.5 mm       PLC 2         3.0 mm       PLC 2	3.2 mm, ALL	V-0	
1.5 mm       960 °C         3.0 mm       960 °C         3.2 mm       960 °C         Glow Wire Ignition Temperature       IEC 60695-2-13         0.9 mm       750 °C         1.5 mm       700 °C         3.0 mm       700 °C         3.2 mm       825 °C         Electrical       Value       Test Method         Hot-wire Ignition (HWI)       UL 746A         0.38 mm       PLC 4         0.76 mm       PLC 3         0.9 mm       PLC 3         1.5 mm       PLC 2         3.0 mm       PLC 2	Glow Wire Flammability Index		IEC 60695-2-12
3.0 mm       960 °C         3.2 mm       960 °C         Glow Wire Ignition Temperature       IEC 60695-2-13         0.9 mm       750 °C         1.5 mm       700 °C         3.0 mm       700 °C         3.2 mm       825 °C         Electrical       Value       Test Method         UL 746A         0.38 mm       PLC 4         0.76 mm       PLC 3         0.9 mm       PLC 3         1.5 mm       PLC 2         3.0 mm       PLC 2			
3.2 mm       960 °C         Glow Wire Ignition Temperature       IEC 60695-2-13         0.9 mm       750 °C         1.5 mm       700 °C         3.0 mm       700 °C         3.2 mm       825 °C         Electrical Value Test Method         Hot-wire Ignition (HWI)       UL 746A         0.38 mm       PLC 4         0.76 mm       PLC 3         0.9 mm       PLC 3         1.5 mm       PLC 2         3.0 mm       PLC 2	1.5 mm	960 °C	
Glow Wire Ignition Temperature       IEC 60695-2-13         0.9 mm       750 °C         1.5 mm       700 °C         3.0 mm       700 °C         3.2 mm       825 °C         Electrical       Value       Test Method         Hot-wire Ignition (HWI)       UL 746A         0.38 mm       PLC 4         0.76 mm       PLC 3         0.9 mm       PLC 3         1.5 mm       PLC 2         3.0 mm       PLC 2	3.0 mm		
0.9 mm       750 °C         1.5 mm       700 °C         3.0 mm       700 °C         3.2 mm       825 °C         Electrical       Value       Test Method         Hot-wire Ignition (HWI)       UL 746A         0.38 mm       PLC 4         0.76 mm       PLC 3         0.9 mm       PLC 3         1.5 mm       PLC 2         3.0 mm       PLC 2		960 °C	
1.5 mm       700 °C         3.0 mm       700 °C         3.2 mm       825 °C         Electrical       Value       Test Method         Hot-wire Ignition (HWI)       UL 746A         0.38 mm       PLC 4         0.76 mm       PLC 3         0.9 mm       PLC 3         1.5 mm       PLC 2         3.0 mm       PLC 2	Glow Wire Ignition Temperature		IEC 60695-2-13
3.0 mm       700 °C         3.2 mm       825 °C         Electrical       Value       Test Method         Hot-wire Ignition (HWI)       UL 746A         0.38 mm       PLC 4         0.76 mm       PLC 3         0.9 mm       PLC 3         1.5 mm       PLC 2         3.0 mm       PLC 2	0.9 mm	750 °C	
3.2 mm       825 °C         Electrical       Value       Test Method         Hot-wire Ignition (HWI)       UL 746A         0.38 mm       PLC 4         0.76 mm       PLC 3         0.9 mm       PLC 3         1.5 mm       PLC 2         3.0 mm       PLC 2	1.5 mm		
Electrical         Value         Test Method           Hot-wire Ignition (HWI)         UL 746A           0.38 mm         PLC 4           0.76 mm         PLC 3           0.9 mm         PLC 3           1.5 mm         PLC 2           3.0 mm         PLC 2	3.0 mm		
Hot-wire Ignition (HWI)  0.38 mm  PLC 4  0.76 mm  PLC 3  0.9 mm  PLC 3  1.5 mm  PLC 2  3.0 mm  PLC 2			
0.38 mm PLC 4 0.76 mm PLC 3 0.9 mm PLC 3 1.5 mm PLC 2 3.0 mm PLC 2	Electrical	Value	
0.76 mm PLC 3 0.9 mm PLC 3 1.5 mm PLC 2 3.0 mm PLC 2			UL 746A
0.9 mm PLC 3 1.5 mm PLC 2 3.0 mm PLC 2			
1.5 mm PLC 2 3.0 mm PLC 2			
3.0 mm PLC 2			
3.2 mm PLC 2			
	3.2 mm	PLC 2	

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## Component - Plastics

File Number: E53664



Electrical	Value	Test Method
High Amp Arc Ignition (HAI)		UL 746A
0.38 mm	PLC 1	
0.76 mm	PLC 0	
0.9 mm	PLC 0	
1.5 mm	PLC 0	
3.0 mm	PLC 0	
3.2 mm	PLC 0	
Comparative Tracking Index (CTI)	PLC 2	UL 746A
Dielectric Strength	33 kV/mm	ASTM D149
High Voltage Arc Tracking Rate (HVTR)	PLC 1	UL 746A
Volume Resistivity	1.0E+14 ohms·cm	ASTM D257
Volume Resistivity	1.0E+14 ohms·cm	IEC 60093
Arc Resistance	PLC 6	ASTM D495
Thermal	Value	Test Method
RTI Elec		UL 746B
0.38 mm	130 °C	
0.76 mm	130 °C	
0.9 mm	130 °C	
1.5 mm	130 °C	
3.0 mm	130 °C	
3.2 mm	130 °C	
RTI Imp		UL 746B
0.38 mm	130 °C	
0.76 mm	130 °C	
0.9 mm	130 °C	
1.5 mm	130 °C	
3.0 mm	130 °C	
3.2 mm	130 °C	
RTI Str		UL 746B
0.38 mm	130 °C	
0.76 mm	140 °C	
0.9 mm	140 °C	
1.5 mm	140 °C	
3.0 mm	140 °C	
3.2 mm	140 °C	

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