GPL						SYNOFIN	l (Modifie	ed PPCP)							
Properties	STD. ASTM	Unit	LA4601/470 1 General		Speciality Grades										
			(Colou red)	LA1701 FR V0	LA3701 FR V2	LA4702 GF10	LA4703 GF15	LA4704 GF20	LA4706/ LA4606 GF30	LA4708 GF40	LA1704 GF20 MF5 FR VO	LA 1706 GF30 FR V0	LA4764 GF20 Cond. Black		
Flow															
Melt Flow Index@230C,2.16 Kg load	D1238	gms/10 min	7-14	10-14	8-14	7 - 11	4 - 9	4 - 8	6-10	4 - 8	5 - 10	8-16	1-2		
Mechanical															
Tensile Strength @ Yield 50 mm/min	D638	MPa	18 - 24	18 - 24	18 - 24	22 - 27	22 - 30	27 - 32	27 - 33	75 - 90	50-60	38 -48	43-49		
Tensile Elongation @ Yield	D638	%	8-14	7-12	7-12	7 - 9	7 - 10	6 - 9	6 - 9	4 - 6	6 - 8	5- 8	5-9		
Flexural Strength 5 mm/min	D790	MPa	28 - 34	25-30	25-30	38 - 45	38 - 44	42 - 46	44 - 50	90 - 110	50-60	50 -60	48-54		
Flexural Modulus	D790	MPa	900 -1400	1000 -2000	1200-2000	1200 - 1500	3000-3800	3500-4000	4800 -6000	5500-7000	1350-1450				
Izod Notched Impact Strength	D256	J/m	80 - 120	70 - 100	70 - 100	65 - 75	102 - 110	94 - 104	92 - 100	96 - 100	110-120	120-160	65-85		
Thermal															
Heat Deflection Temperature Under Load (B)1.82MPa	D 648	С	55 - 65	70 - 80	62 - 70	60 - 67	120 - 125	125- 130	130 - 138	140 - 148	130-138	90-110	135-150		
Vicat Softening Temperature (B)	D 1525	С	140 - 147	125 -148	142- 150	143- 150	143 - 150	146 - 152	150 - 155	-			146 - 152		
Others															
Density	D 792	gms/cc	0.89-0.94	0.95-1.00	0.94-1.00	0.95-0.98	0.94-1.00	0.98-1.02	1.00-1.08	1.19-1.23	1.2-1.3	1.28-1.32	1.10-1.15		
FlammabilityTest @3mm thickness	UL 94			V0	V2						V0	VO	NA		
Filler Content	D 5630	%	-	-	-	9-11	14 - 16	19 -21	29 - 31	39 - 41	23-27	29-31	19 -21		
Hardness	D 2240	Shore D	-	-	-	-	-	-	-	-	Min 75				

^{*} Typical values represent an average for the samples tested using standard procedures.

of material. In accordance with the poney of these companies of continuous product developmen	int, users are advised to eneck the most up to date information.								
GUJARAT PETROSYNTHESE LIMITED									
Polymer Alloys & Blends Division	Agents:								
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Mahadevapura Post, Behind Graphite India Ltd., Bangalore-560048									
Phone: 91-080-28524133 Fax: 91-080-28524171. E-mail: info@gpl.in									

GPL						SYNOFI	N (Modifi	ed PPCP)							
Properties	STD.	Unit	Speciality Grades												
	ASTM		LA4710 Talc Filled 5	LA4711 Talc Filled 10	LA4712 Talc Filled 15	LA4713 /LA4613 IM Talc Filled 20	LA4714 Talc Filled 25	LA4715 Talc Filled 30	LA4716 Talc Filled 40	LA1713 FR Talc Filled 20	LA4615 Talc Filled 30	LD4601 (Gen Col with UV)	LD4613 20Talc		
Flow															
Melt Flow Index @ 230C & 2.16 Kg load	D 1238	gms/ 10 min	11-14	9-12	12-18	6-10	7-14	7-10	9-12	8-14	9-12	10 - 13	10 - 13		
Mechanical															
Tensile Strength @ Yield 50 mm/min	D 638	MPa	23-27	20-25	24 - 35	18 - 22	18-24	21 - 23	24-32	18 - 22	19-25	18 - 23	18 - 22		
Tensile Elongation @ Yield	D638	%	9-11	7-10	5-10	12-16	8-14	4-7	8-12	6-10	6-11	10 - 13	7 - 9		
Flexural Strength 5 mm/min	D790	MPa		38 - 44	20-30	22 - 26	38-50	30 - 38	34-40	30 - 34		24 - 28	24 - 28		
Flexural Modulus	D790	MPa		1300-1700	1350-1500	1300- 1400	1600-2700	1500 - 1800	1450-1900	1350-1450		750 - 1000	800 -1200		
Izod Notched Impact Strength	D256	J/m	95-105	80-110	76 - 96	90-120	70-90	60 - 80	48-64	62 - 68	60-70	400 - 530	300 - 500		
Thermal															
Heat Deflection Temperature Under Load (B)1.82MPa	D 648	С	60-65	60-65	65 - 80	65 - 72	80-95	66 - 75	65-80	75 - 80	62-72	56 - 62	65 - 72		
Vicat Softening Temperature (B)	D 1525	С		-	145 -155	140 - 145	140-150	-	135-160	145 - 150		100 - 110	-		
Others															
Density	D 792	gms/cc	0.89-0.94	0.94-0.97	0.96-1.05	1.00 - 1.08	1.10-1.15	1.10 - 1.15	1.12-1.20	1.02- 1.08	1.08-1.10	0.89-0.94	1.00-1.08		
Flammability Test @ 3mm thickness	UL 94		НВ	НВ				НВ		V0		НВ	НВ		
Filler Content	D 5630	%	4 - 6	9.5 - 10.5	14 - 16	19 - 21	24 - 26	28 - 32	39 - 41	19 - 21	29 - 31	NA	19-21		
Hardness	D 2240	Shore D	-	-	-	-	-	-	-	-	-	NA			
Moisture Content	D6980	%		Max-0.4											

^{*} Typical values represent an average for the samples tested using standard procedures.

of material. In accordance with the policy of these companies of continuous product development, users are advised to check the most up to date in	iornation.								
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Polymer Alloys & Blends Division	Agents:								
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GPL						SYNOFIN	l (Modifie	ed PPCP)				
Properties	STD.	Unit	Speciality Grades										
ASTM	ASTM		LA4742 Mineral Filled 15	LA4743 Mineral Filled 20	LA4744 Mineral Filled 25	LA4633 40% CaCo3	LA 4731 20% Caco3						
Flow			<u> </u>										
Melt Flow Index @ 230C & 2.16 Kg load	D 1238	gms/ 10 min	7 - 14	7 - 14	7 - 14	8 - 12	7 - 12						
Mechanical													
Tensile Strength @ Yield 50 mm/min	D 638	MPa	20 - 30	20 - 30	18 - 24	22 - 25	12 - 17						
Tensile Elongation @ Yield	D638	%	8 - 14	8 - 14	8 - 14	5 - 8	4 - 7						
Flexural Strength 5 mm/min	D790	MPa	35 - 45	35 - 47	26 - 32	27 -30	22-26						
Flexural Modulus	D790	MPa	1500- 2500	1500-2500	1200-2000	2650 - 3200							
Izod Notched Impact Strength	D256	J/m	70 - 100	70 - 95	65 - 90	30 - 60	80-100						
Thermal													
Heat Deflection Temperature Under Load (B)1.82MPa	D 648	С	74 - 85	78 - 90	80 - 95	65 - 80	55 - 70						
Vicat Softening Temperature (B)	D 1525	С	125-158	135-150	140- 150	-	-						
Others													
Density	D 792	gms/cc	0.98-1.06	1.00-1.08	1.10-1.15	1.21 - 1.24	1.01-1.05						
Flammability Test @ 3mm thickness	UL 94					НВ							
Filler Content	D 5630	%	14 - 16	19 - 21	24 - 26	39 - 41	19 - 21						
Hardness	D 2240	Shore D	-	-	-	-	-						

^{*} Typical values represent an average for the samples tested using standard procedures.

material. In decordance with the policy of these companies of continuous product development, users are darked to check the most up to date information.									
GUJARAT PETROSYNTHES	SE LIMITED								
Polymer Alloys & Blends Division	Agents:								
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GPL						SYNOFIN	l (Modifi	ed PPCP)	l				
Properties	STD. ASTM	Unit		Speciality Grades									
			LB4601/ LB4701 LowFlow	LB4702 GF 7.5	LB4704 GF20	LB 4606 GF30	LB4613/ LB4713 UV Talc 20	LB4715/ Talc 30	LB3701 FR V2	LB1713 FR V0 Talc 20	LG4710 (M.Flow H. Impact)		
Flow													
Melt Flow Index @ 230C & 2.16 Kg load	D 1238	gms/ 10 min	2 - 6	4 - 7	3.5 - 7	3 - 7	2 - 6	2 - 6	3 - 6	3 - 5	15-18		
Mechanical													
Tensile Strength @ Yield 50 mm/min	D 638	MPa	18-32	32 - 40	35 - 48	35 - 47	27-31	25 - 30	27 - 31	28 - 32	20-24		
Tensile Elongation @ Yield	D638	%	8 - 12	7 - 10	5 - 9	4 - 8	5 - 9	4 - 7	9 - 13	6 - 10	6 - 10		
Flexural Strength 5 mm/min	D790	MPa	28-34	35 - 42	42 - 60	42 - 65	32-38	30 - 38	28 - 32	30 - 35	18-25		
Flexural Modulus	D790	MPa	900 -1400	1700 -2700	2500 -3500	3000 -6000	2300-3000	2700 - 3600	1100-1500	2200-3000			
Izod Notched Impact Strength	D256	J/m	90-150	70 - 100	60 - 90	65 - 90	60-70	50 - 70	70 - 100	60 - 75	85-105		
Thermal													
Heat Deflection Temperature Under Load (B)1.82MPa	D 648	С	50-60	64 - 75	64 - 90	-	68-75	70 - 84	60 - 70	65 - 80			
Vicat Softening Temperature (B)	D 1525	С	140-147	110 - 125	-	150 - 155	-	-	-	140 - 150			
Others													
Density	D 792	gms/cc	0.89-0.94	0.96- 0.98	1.19-1.23	1.00- 1.08	1.23-1.25	1.26 - 1.28	0.94-0.98	1.20- 1.25	0.89-0.93		
Flammability Test @ 3mm thickness	UL 94			НВ	-				V2	V0			
Filler Content	D 5630	%	-	7 - 13	19 - 21	29 - 31	19 - 21	28 - 32	-	19 -21			
Hardness	D 2240	Shore D	-	NA		-	-	-	-	NA			

^{*} Typical values represent an average for the samples tested using standard procedures.

n material. In accordance with the policy of these complaines of continuous product development, users are advised to cheek the most up to date information.										
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GPL					9	SYNOFIN	(Modifie	ed PPRCP)			
Properties	STD. ASTM Unit Speciality Grades										
			LE4701/LE46 01	LE4713 Talc Filled 20	LF4701 (Gen Col with RP)	LF 4704 GF 20	LF 4706 GF 30	LF 4703 GF 15			
Flow											
Melt Flow Index @ 230C & 2.16 Kg load	D 1238	gms/ 10 min	9 - 13	10-14	8 - 12	Min 3	Min 3	Min 5			
Mechanical											
Tensile Strength @ Yield 50 mm/min	D 638	MPa	28 - 32	22-27	21 - 25	Min 35	Min 44	Min 28			
Tensile Elongation @ Yield	D638	%	10 - 12	10-12	10 - 12	Min 8	Min5	Min 6			
Flexural Strength 5 mm/min	D790	MPa	28 - 34		26 - 30	Min 46	Min 56	Min 40			
Flexural Modulus	D790	MPa	1000-1200		1100-1400						
Izod Notched Impact Strength	D256	J/m	60 - 85	45-52	85 - 120	Min 65	Min 70	Min 75			
Thermal											
Heat Deflection Temperature Under Load (B)1.82MPa	D 648	С	58 - 61	53-59	57 - 60	Min 102	Min 120	Min 123			
Vicat Softening Temperature (B)	D 1525	С	100 - 110		100 - 110			Min 75			
Others											
Density	D 792	gms/cc	0.89-0.92	1.02-1.04	0.89-0.92	Min 1.04	Min 1.12	Min 0.97			
Flammability Test @ 3mm thickness	UL 94		НВ		НВ						
Filler Content	D 5630	%	NA	19-21	1.3	19-21	29-31	15-17			
Hardness	D 2240	Shore D	NA	-	NA						

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GPL					!	SYNOFIN	l (Modifi	ed PPHP)				
Properties	STD.	STD. Unit Speciality Grades										
	ASTM		LC4701 (PPHP)	LC1701 (PPHP) FR V0	LC1611 FR UV Talc 5	LC3701 PPHP FR V2	LC 4712 Talc 15	LC4713/ LC4613 Talc 20	LC4715 Talc 30	LC4732 30% CaCo3		
Flow												
MeIt Flow Index @ 230C & 2.16 Kg load	D1238	gms/ 10 min	7 - 14	7 - 14	7 - 13	9 - 15	8-11	7 - 14	8 - 11	8 - 12		
Mechanical												
Tensile Strength @ Yield 50 mm/min	D638	MPa	30 - 37	18 - 24	20-25	30 - 37	17-23	25 - 32	29 - 34	26 - 34		
Tensile Elongation @ Yield	D638	%	8 -14	8 -14	10 -14	8 - 14	5-8	6 .5 - 10	5 - 10	5 - 8		
Flexural Strength 5 mm/min	D790	MPa	40 - 45	28 - 34	26-32	38 - 45	23-30	40 - 52	34 - 45	28 - 34		
Flexural Modulus	D790	MPa	1200-1700	900-400	900- 1100	1100-1700		1200- 1700	2500-3600	2200-2800		
Izod Notched Impact Strength	D256	J/m	15 - 35	25 - 35	90-120	15 - 30	60-80	60 - 100	20 - 35	35 - 44		
Thermal												
Heat Deflection Temperature Under Load (B)1.82MPa	D 648	С	57 - 62	60 - 70	60-64	57 - 62	60-70	65 - 75	70 - 90	80 - 90		
Vicat Softening Temperature (B)	D 525	С	140-147	140-147	130-140	140 -147		146 - 152	-	142 - 160		
Others												
Density	D 792	gms/cc	0.89-0.94	0.89-0.94	0.91- 0.95	0.89-0.94	1.02-1.06	1.04 - 1.07	1.11 -1.14	1.11 -1.14		
Flammability Test @ 3mm thickness	UL 94			V0	V0	V2			НВ			
Filler Content	D 5630	%	-	-	4 - 6	-	14-16	19 -21	29 - 32	28 - 32		
Hardness	D 2240	Shore D	-	-	-	-		-	-	-		

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<u>'</u>	

GPL	SYNOFIN (Modified PPHP)												
Properties	STD.	Unit	Speciality Grades										
	ASTM		LC4704 PPHP- GF20	LC4705 GF25 5MF	LC4606/ LC4706 GF30	LC4708 GF 35	LC4703 GF18						
Flow					•	•							
Melt Flow Index @ 230C & 2.16 Kg load	D1238	gms/ 10 min	12 - 16	5 - 10	5 - 10	6-10	12-18						
Mechanical													
Tensile Strength @ Yield 50 mm/min	D638	MPa	38-45	37-44	37-44	65-71	43-53						
Tensile Elongation @ Yield	D638	%	5 - 8	5 - 8	5 - 8	5-9	5-8						
Flexural Strength 5 mm/min	D790	MPa	60-70	40 - 50	75 - 86	82-87	45-55						
Flexural Modulus	D790	MPa	4000-5000	4000-6000									
Izod Notched Impact Strength	D256	J/m	15-25	37 - 46	35-48	65-75	40-50						
Thermal													
Heat Deflection Temperature Under Load (B)1.82MPa	D 648	С	130-140	110 - 120	120-130	143-149	-						
Vicat Softening Temperature (B)	D 525	С	-	142 - 160	-								
Others													
Density	D 792	gms/cc	1.1-1.13	1.10 - 1.13	1.11 - 1.13	1.12-1.16	1.01-1.03						
Flammability Test @ 3mm thickness	UL 94			НВ									
Filler Content	D 5630	%	19-21	28 - 32	28-32	33-37	17-19						
Hardness	D 2240	Shore D											

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