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APPENDICES

APPENDIX A

CRYSTALLINITY CALCULATION

The crystallinity of the blend was calculated according to the following Equation (A-1). The enthalpy of polylactide is 93.6 J g^{-1} . The enthalpy of polypropylene is 209 J g^{-1} of 100% crystalline polymer, respectively [27].

$$X_c = \frac{\Delta H_m / \phi_{PLA}}{\Delta H_m^0} \times 100 \quad \text{A-1}$$

Where;

- ΔH_m = Enthalpy of Mixing of the blend (J g^{-1})
- ΔH_m^0 = Enthalpy of Mixing of the neat polymer (J g^{-1})
- ϕ_{PLA} = Weight fraction or content of polylactide in blends
- X_c = Degree of crystallinity in blends

The total crystallinity of PP/PLA blend can be obtained according to Equation (A-2).

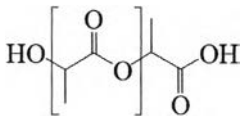
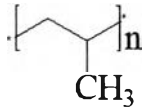
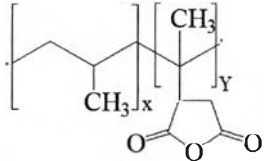
$$X_c^t = \phi_{PP} X_c^{PP} + \phi_{PLA} X_c^{PLA} \quad \text{A-2}$$

Where;

- X_c^t = Total degree of crystallinity in blends
- X_c^{PP} = Degree of crystallinity of polypropylene
- X_c^{PLA} = Degree of crystallinity of polylactide
- ϕ_{PP} = Weight fraction or content of polypropylene in blends
- ϕ_{PLA} = Weight fraction or content of polylactide in blends

APPENDIX B
SPECIFICATION

Table B1 : Materials specification of polymer and compatibilizer

Name : Structure	Abbreviation	\bar{M}_w (g mol ⁻¹)	MI (g 10min ⁻¹)	Melting point (°C)
Polylactide 	PLA	74,000	56 at 190 °C	150
Polypropylene 	PP	320,000	2.8 at 230 °C	163
Polypropylene-g-maleic anhydride 	PP-g-MA	9,100	-	156

APPENDIX C

TABLE C1 : DSC; T_m of unpigmented and pigmented blends

Compound ratios	T_{onset} (°C)	T_{peak} (°C)	T_{end} (°C)	ΔH_m (J g ⁻¹)
PP	149.6	170.0	187.2	71.3
PLA	143.7	156.5	168.1	34.7
90/10	151.9	164.6	171.9	87.0
90/10/PP-g-MA	149.5	162.8	171.1	90.3
90/10/PP-g-MA/DMDBS	149.6	163.6	171.0	94.4
0.2%Quinacridone 122 (90/10)	150.8	162.7	170.3	87.8
0.6%Quinacridone 122 (90/10)	151.2	162.8	172.3	85.2
0.8%Quinacridone 122 (90/10)	151.8	164.1	172.2	64.9
1.0%Quinacridone 122 (90/10)	151.6	162.2	171.0	86.0
0.2%Phthalocyanine 15:3 (90/10)	149.2	164.0	172.9	91.3
0.6%Phthalocyanine 15:3 (90/10)	150.8	164.8	174.5	90.3
0.8%Phthalocyanine 15:3 (90/10)	149.3	163.2	170.7	86.1
1.0%Phthalocyanine 15:3 (90/10)	149.9	162.9	171.5	89.4
80/20	148.4	164.4	172.8	84.7
80/20/PP-g-MA	145.1	162.9	173.3	83.6
80/20/PP-g-MA/DMDBS	143.7	163.7	173.1	81.0
0.2%Quinacridone 122 (80/20)	150.0	161.2	169.7	86.4
0.6%Quinacridone 122 (80/20)	148.8	162.5	170.8	83.1
0.8%Quinacridone 122 (80/20)	147.4	162.7	173.1	92.8
1.0%Quinacridone 122 (80/20)	148.2	162.2	171.3	96.0
0.2%Phthalocyanine 15:3 (80/20)	148.7	163.4	172.5	85.8
0.6%Phthalocyanine 15:3 (80/20)	148.9	162.7	172.1	87.3
0.8%Phthalocyanine 15:3 (80/20)	149.8	163.0	171.8	84.7
1.0%Phthalocyanine 15:3 (80/20)	149.3	163.5	172.9	85.1
70/30	151.6	163.3	169.7	85.2
70/30/PP-g-MA	148.4	161.9	170.4	84.7
70/30/PP-g-MA/DMDBS	148.2	161.4	169.6	85.9
0.2%Quinacridone 122 (70/30)	147.4	163.1	172.5	87.4
0.6%Quinacridone 122 (70/30)	149.8	163.0	172.1	93.8
0.8%Quinacridone 122 (70/30)	143.7	163.2	171.7	88.3
1.0%Quinacridone 122 (70/30)	142.5	162.9	172.1	87.7
0.2%Phthalocyanine 15:3 (70/30)	148.8	163.3	170.2	78.9
0.6%Phthalocyanine 15:3 (70/30)	150.6	163.3	170.2	79.7
0.8%Phthalocyanine 15:3 (70/30)	148.7	163.1	170.9	75.3
1.0%Phthalocyanine 15:3 (70/30)	146.7	162.4	170.6	83.3

TABLE C2 : DSC; T_c of unpigmented and pigmented blends

Compound ratios	T _{onset} (°C)	T _{peak} (°C)	T _{end} (°C)	ΔH _c (J g ⁻¹)
PP	125.5	110.4	95.6	88.1
PLA	-	-	-	-
90/10	125.6	121.4	116.0	87.8
90/10/PP-g-MA	121.3	116.5	111.0	84.1
90/10/PP-g-MA/DMDBS	119.8	115.3	110.1	88.4
0.2%Quinacridone 122 (90/10)	124.1	121.7	116.7	90.5
0.6%Quinacridone 122 (90/10)	125.5	122.2	116.2	92.9
0.8%Quinacridone 122 (90/10)	126.6	124.0	118.6	90.0
1.0%Quinacridone 122 (90/10)	126.9	124.3	118.6	92.9
0.2%Phthalocyanine 15:3 (90/10)	128.5	124.9	119.5	92.2
0.6%Phthalocyanine 15:3 (90/10)	130.0	126.0	120.1	92.8
0.8%Phthalocyanine 15:3 (90/10)	130.8	127.5	122.4	88.6
1.0%Phthalocyanine 15:3 (90/10)	129.9	126.6	121.3	88.0
80/20	125.2	120.9	115.4	76.6
80/20/PP-g-MA	119.0	113.5	107.2	77.7
80/20/PP-g-MA/DMDBS	120.4	115.8	108.7	77.2
0.2%Quinacridone 122 (80/20)	122.9	120.1	115.2	78.9
0.6%Quinacridone 122 (80/20)	125.4	122.8	117.7	76.1
0.8%Quinacridone 122 (80/20)	125.9	122.9	117.1	83.2
1.0%Quinacridone 122 (80/20)	124.8	121.9	116.7	82.6
0.2%Phthalocyanine 15:3 (80/20)	128.8	125.3	119.7	76.6
0.6%Phthalocyanine 15:3 (80/20)	130.5	127.0	121.4	79.9
0.8%Phthalocyanine 15:3 (80/20)	130.7	127.5	122.4	76.0
1.0%Phthalocyanine 15:3 (80/20)	131.6	128.2	122.5	79.4
70/30	124.1	119.9	115.3	65.6
70/30/PP-g-MA	122.0	117.3	111.7	68.7
70/30/ PP-g-MA/DMDBS	121.1	116.9	112.1	70.7
0.2%Quinacridone 122 (70/30)	124.8	121.6	116.0	71.7
0.6%Quinacridone 122 (70/30)	125.5	122.9	117.3	91.5
0.8%Quinacridone 122 (70/30)	128.4	125.3	119.6	73.8
1.0%Quinacridone 122 (70/30)	127.8	124.6	119.4	68.2
0.2%Phthalocyanine 15:3 (70/30)	130.0	127.0	122.5	64.6
0.6%Phthalocyanine 15:3 (70/30)	130.1	127.3	122.8	68.2
0.8%Phthalocyanine 15:3 (70/30)	131.1	127.9	123.0	63.4
1.0%Phthalocyanine 15:3 (70/30)	131.4	128.3	123.4	69.9

TABLE C3 : DSC; T_g of unpigmented and pigmented blends

Compound ratios	T _{onset} (°C)	T _{peak} (°C)	T _{end} (°C)
PP	-	-	-
PLA	-	64.0	-
90/10	63.4	64.8	70.8
90/10/PP-g-MA	63.4	64.5	66.7
90/10/PP-g-MA/DMDBS	61.9	62.5	63.8
0.2%Quinacridone 122 (90/10)	56.9	62.2	66.8
0.6%Quinacridone 122 (90/10)	63.0	63.8	67.2
0.8%Quinacridone 122 (90/10)	63.2	65.0	71.1
1.0%Quinacridone 122 (90/10)	60.6	63.5	67.0
0.2%Phthalocyanine 15:3 (90/10)	60.0	63.5	65.9
0.6%Phthalocyanine 15:3 (90/10)	62.1	65.5	66.7
0.8%Phthalocyanine 15:3 (90/10)	58.8	64.5	70.1
1.0%Phthalocyanine 15:3 (90/10)	61.7	64.9	69.9
80/20	63.4	65.8	68.0
80/20/PP-g-MA	63.6	64.8	68.5
80/20/PP-g-MA/DMDBS	63.8	64.2	66.5
0.2%Quinacridone 122 (80/20)	67.0	69.1	70.2
0.6%Quinacridone 122 (80/20)	65.9	66.8	67.9
0.8%Quinacridone 122 (80/20)	64.2	67.1	68.4
1.0%Quinacridone 122 (80/20)	65.0	67.5	68.4
0.2%Phthalocyanine 15:3 (80/20)	63.0	65.8	67.5
0.6%Phthalocyanine 15:3 (80/20)	62.4	65.2	66.1
0.8%Phthalocyanine 15:3 (80/20)	62.8	65.8	67.4
1.0%Phthalocyanine 15:3 (80/20)	63.9	64.4	66.6
70/30	63.5	66.5	69.2
70/30/PP-g-MA	62.6	65.1	69.0
70/30/ PP-g-MA/DMDBS	62.9	65.8	69.0
0.2%Quinacridone 122 (70/30)	62.6	63.8	65.9
0.6%Quinacridone 122 (70/30)	64.4	65.3	67.4
0.8%Quinacridone 122 (70/30)	62.3	64.5	67.2
1.0%Quinacridone 122 (70/30)	63.4	64.8	67.5
0.2%Phthalocyanine 15:3 (70/30)	60.2	65.0	66.2
0.6%Phthalocyanine 15:3 (70/30)	60.3	65.2	66.7
0.8%Phthalocyanine 15:3 (70/30)	64.2	65.2	66.8
1.0%Phthalocyanine 15:3 (70/30)	60.3	64.8	67.7

TABLE C4 : DSC; T_g, T_m, T_c, and %Crystallinity

Compound ratios	T _g (°C)	T _c (°C)	T _m (°C)	%Crystallinity
PP	-	110.4	170.0	34.1
PLA	64	150.8	-	34.3
90/10	64.8	121.4	164.6	55.6
90/10/PP-g-MA	64.5	116.5	162.8	57.7
90/10/PP-g-MA/DMDBS	62.5	115.3	163.6	60.3
0.2%Quinacridone 122 (90/10)	62.2	121.7	162.7	56.1
0.6%Quinacridone 122 (90/10)	63.8	122.2	162.8	54.4
0.8%Quinacridone 122 (90/10)	65.0	124.0	164.1	54.3
1.0%Quinacridone 122 (90/10)	63.5	124.3	162.2	55.0
0.2%Phthalocyanine 15:3 (90/10)	63.5	124.9	164.0	58.4
0.6%Phthalocyanine 15:3 (90/10)	65.5	126.0	164.8	57.7
0.8%Phthalocyanine 15:3 (90/10)	64.5	127.5	163.2	55.0
1.0%Phthalocyanine 15:3 (90/10)	64.9	126.6	162.9	57.1
80/20	65.8	120.9	164.4	50.6
80/20/PP-g-MA	64.8	113.5	162.9	50.0
80/20/PP-g-MA/DMDBS	64.2	115.8	163.7	48.4
0.2%Quinacridone 122 (80/20)	69.1	120.1	161.2	51.6
0.6%Quinacridone 122 (80/20)	66.8	122.8	162.5	49.7
0.8%Quinacridone 122 (80/20)	67.1	122.9	162.7	55.5
1.0%Quinacridone 122 (80/20)	67.5	121.9	162.2	57.4
0.2%Phthalocyanine 15:3 (80/20)	65.8	125.3	163.4	51.3
0.6%Phthalocyanine 15:3 (80/20)	65.2	127.0	162.7	52.2
0.8%Phthalocyanine 15:3 (80/20)	65.8	127.5	163.0	50.6
1.0%Phthalocyanine 15:3 (80/20)	64.4	128.2	163.5	50.9
70/30	66.5	119.9	163.3	56.0
70/30/PP-g-MA	65.1	117.3	161.9	55.7
70/30/PP-g-MA/DMDBS	65.8	116.9	161.4	56.5
0.2%Quinacridone 122 (70/30)	63.8	121.6	163.1	57.5
0.6%Quinacridone 122 (70/30)	65.3	122.9	163.0	61.6
0.8%Quinacridone 122 (70/30)	64.5	125.3	163.2	58.1
1.0%Quinacridone 122 (70/30)	64.8	124.6	162.9	57.7
0.2%Phthalocyanine 15:3 (70/30)	65.0	127.0	163.3	51.0
0.6%Phthalocyanine 15:3 (70/30)	65.2	127.3	163.3	52.4
0.8%Phthalocyanine 15:3 (70/30)	65.2	127.9	163.1	49.5
1.0%Phthalocyanine 15:3 (70/30)	64.8	128.3	162.4	54.8

TABLE C5 : Tensile strength in the machine direction of the blends

Compound ratios	1	2	3	4	5	Average	Std (σ)
PP	42	40	44	42	44	42	2
PLA	66	66	65	66	67	66	1
90/10	34	36	33	37	36	35	2
90/10/PP-g-MA	27	27	27	23	26	26	2
90/10/PP-g-MA/DMDBS	31	29	28	28	30	29	1
0.2%Quinacridone 122 (90/10)	32	28	31	34	32	32	2
0.6%Quinacridone 122 (90/10)	34	36	35	32	33	34	1
0.8%Quinacridone 122 (90/10)	34	33	36	34	33	34	1
1.0%Quinacridone 122 (90/10)	39	33	33	33	33	34	3
0.2%Phthalocyanine 15:3 (90/10)	34	27	32	28	31	30	3
0.6%Phthalocyanine 15:3 (90/10)	32	34	31	34	33	33	1
0.8%Phthalocyanine 15:3 (90/10)	35	38	37	36	35	36	1
1.0%Phthalocyanine 15:3 (90/10)	41	37	38	39	38	38	2
80/20	23	23	21	20	20	21	2
80/20/PP-g-MA	18	16	17	19	18	18	1
80/20/PP-g-MA/DMDBS	19	17	19	18	20	19	1
0.2%Quinacridone 122 (80/20)	17	18	19	16	19	18	1
0.6%Quinacridone 122 (80/20)	21	17	18	18	20	19	2
0.8%Quinacridone 122 (80/20)	19	23	20	22	23	22	2
1.0%Quinacridone 122 (80/20)	21	20	21	26	22	22	2
0.2%Phthalocyanine 15:3 (80/20)	21	20	23	19	21	21	1
0.6%Phthalocyanine 15:3 (80/20)	23	26	25	22	24	24	2
0.8%Phthalocyanine 15:3 (80/20)	28	23	26	23	27	25	2
1.0%Phthalocyanine 15:3 (80/20)	26	31	25	28	29	28	2
70/30	19	18	18	19	19	19	0
70/30/PP-g-MA	16	17	16	17	17	17	1
70/30/ PP-g-MA/DMDBS	19	16	16	17	17	17	1
0.2%Quinacridone 122 (70/30)	14	16	14	15	16	15	1
0.6%Quinacridone 122 (70/30)	15	16	14	16	14	15	1
0.8%Quinacridone 122 (70/30)	19	18	20	18	17	18	1
1.0%Quinacridone 122 (70/30)	20	19	22	23	20	21	1
0.2%Phthalocyanine 15:3 (70/30)	15	15	14	16	14	15	1
0.6%Phthalocyanine 15:3 (70/30)	17	17	15	16	15	16	1
0.8%Phthalocyanine 15:3 (70/30)	18	21	20	18	18	19	1
1.0%Phthalocyanine 15:3 (70/30)	21	20	21	23	21	21	1

TABLE C6 : Elongation in the machine direction of the blends

Compound ratios	1	2	3	4	5	Average	Std (σ)
PP	559	557	565	615	613	582	29
PLA	3	3	3	3	3	3	0
90/10	568	498	496	542	542	529	31
90/10/PP-g-MA	450	428	443	444	428	438	10
90/10/PP-g-MA/DMDBS	522	541	517	540	506	525	15
0.2%Quinacridone 122 (90/10)	594	522	512	622	512	553	52
0.6%Quinacridone 122 (90/10)	657	662	674	597	593	637	39
0.8%Quinacridone 122 (90/10)	666	659	683	694	670	674	14
1.0%Quinacridone 122 (90/10)	709	696	698	632	641	675	36
0.2%Phthalocyanine 15:3 (90/10)	662	613	632	545	543	599	53
0.6%Phthalocyanine 15:3 (90/10)	618	715	661	703	702	680	40
0.8%Phthalocyanine 15:3 (90/10)	671	692	728	663	786	708	50
1.0%Phthalocyanine 15:3 (90/10)	815	737	746	717	711	745	42
80/20	445	472	444	472	431	453	18
80/20/PP-g-MA	241	245	345	193	177	240	66
80/20/PP-g-MA/DMDBS	311	377	374	303	459	365	63
0.2%Quinacridone 122 (80/20)	372	294	375	266	279	317	52
0.6%Quinacridone 122 (80/20)	422	341	397	439	427	405	39
0.8%Quinacridone 122 (80/20)	478	450	462	475	359	445	50
1.0%Quinacridone 122 (80/20)	539	399	506	502	443	478	56
0.2%Phthalocyanine 15:3 (80/20)	417	359	360	437	379	391	35
0.6%Phthalocyanine 15:3 (80/20)	437	477	472	489	486	472	21
0.8%Phthalocyanine 15:3 (80/20)	534	487	548	518	473	512	31
1.0%Phthalocyanine 15:3 (80/20)	549	505	567	501	477	520	37
70/30	328	287	247	290	203	271	48
70/30/PP-g-MA	178	133	181	103	123	135	33
70/30/ PP-g-MA/DMDBS	370	147	147	407	115	237	140
0.2%Quinacridone 122 (70/30)	279	386	394	318	312	338	50
0.6%Quinacridone 122 (70/30)	283	276	297	336	280	294	24
0.8%Quinacridone 122 (70/30)	331	350	283	310	293	313	27
1.0%Quinacridone 122 (70/30)	350	323	321	281	284	311	29
0.2%Phthalocyanine 15:3 (70/30)	219	197	283	205	204	222	35
0.6%Phthalocyanine 15:3 (70/30)	161	174	149	168	205	171	21
0.8%Phthalocyanine 15:3 (70/30)	289	385	330	227	183	283	80
1.0%Phthalocyanine 15:3 (70/30)	216	111	361	193	257	228	92

TABLE C7 : Modulus in the machine direction of the blends

Compound ratios	1	2	3	4	5	Average	Std (σ)
PP	954	1031	1001	951	929	973	42
PLA	3016	3496	2873	3286	2972	3129	256
90/10	970	973	1029	929	988	978	36
90/10/PP-g-MA	983	1003	1030	1051	1035	1020	27
90/10/PP-g-MA/DMDBS	1079	922	958	958	1036	991	65
0.2%Quinacridone 122 (90/10)	1014	1156	1262	1184	1013	1126	110
0.6%Quinacridone 122 (90/10)	913	863	910	941	991	924	47
0.8%Quinacridone 122 (90/10)	1015	843	989	940	989	955	68
1.0%Quinacridone 122 (90/10)	993	1049	1179	1145	1134	1100	77
0.2%Phthalocyanine 15:3 (90/10)	942	875	910	911	942	916	28
0.6%Phthalocyanine 15:3 (90/10)	960	867	992	928	967	943	48
0.8%Phthalocyanine 15:3 (90/10)	1133	1112	1141	1065	1103	1111	30
1.0%Phthalocyanine 15:3 (90/10)	1123	1164	1124	1124	1123	1131	18
80/20	1013	973	1014	973	986	992	21
80/20/PP-g-MA	1017	877	945	902	926	933	53
80/20/PP-g-MA/DMDBS	900	885	962	931	935	923	31
0.2%Quinacridone 122 (80/20)	830	819	817	843	828	827	11
0.6%Quinacridone 122 (80/20)	903	871	873	909	902	892	18
0.8%Quinacridone 122 (80/20)	937	953	974	956	940	952	15
1.0%Quinacridone 122 (80/20)	1039	1038	1027	1038	1041	1036	5
0.2%Phthalocyanine 15:3 (80/20)	802	767	768	788	771	779	16
0.6%Phthalocyanine 15:3 (80/20)	995	1037	1085	1054	1054	1045	33
0.8%Phthalocyanine 15:3 (80/20)	984	1013	1009	1001	1014	1004	12
1.0%Phthalocyanine 15:3 (80/20)	1193	1223	1170	1182	1218	1197	23
70/30	1003	979	946	927	979	967	30
70/30/PP-g-MA	790	824	830	798	791	807	19
70/30/PP-g-MA/DMDBS	907	834	776	749	879	829	67
0.2%Quinacridone 122 (70/30)	859	919	877	874	869	880	23
0.6%Quinacridone 122 (70/30)	847	861	857	876	832	855	16
0.8%Quinacridone 122 (70/30)	1016	1026	1068	1056	1052	1044	22
1.0%Quinacridone 122 (70/30)	1123	1115	1117	1051	1092	1100	30
0.2%Phthalocyanine 15:3 (70/30)	861	835	826	874	827	844	22
0.6%Phthalocyanine 15:3 (70/30)	955	946	948	953	969	954	9
0.8%Phthalocyanine 15:3 (70/30)	1082	1074	1072	1090	1024	1068	26
1.0%Phthalocyanine 15:3 (70/30)	1093	1210	1211	1212	1156	1176	52

TABLE C8 : Stiffness in the machine direction of the blends

Compound ratios	1	2	3	4	5	Average	Std (σ)
PP	8755	8593	8593	8318	8346	8521	185
PLA	37700	40205	35911	36965	35670	37290	1823
90/10	9363	9702	9461	9881	9289	9539	246
90/10/PP-g-MA	11015	10511	10610	10627	10695	10692	193
90/10/PP-g-MA/DMDBS	10786	9336	10873	10300	9218	10103	786
0.2%Quinacridone 122 (90/10)	12676	10982	12937	12430	12660	12337	779
0.6%Quinacridone 122 (90/10)	10726	9710	10243	10587	10904	10434	472
0.8%Quinacridone 122 (90/10)	13952	13596	13593	11594	12929	13133	936
1.0%Quinacridone 122 (90/10)	14417	16209	15459	13544	15877	15101	1101
0.2%Phthalocyanine 15:3 (90/10)	10282	11127	12110	10935	10506	10992	709
0.6%Phthalocyanine 15:3 (90/10)	12928	11887	12723	11707	11596	12168	613
0.8%Phthalocyanine 15:3 (90/10)	14486	14112	15489	15446	15117	14930	608
1.0%Phthalocyanine 15:3 (90/10)	15562	14967	16013	15997	16582	15824	601
80/20	13934	14599	15039	14341	15718	14726	684
80/20/PP-g-MA	13287	14253	15353	15784	14872	14710	978
80/20/PP-g-MA/DMDBS	16120	15483	16299	15632	15745	15856	342
0.2%Quinacridone 122 (80/20)	10204	10269	10346	10238	10212	10254	57
0.6%Quinacridone 122 (80/20)	10882	10404	11273	11290	10911	10952	362
0.8%Quinacridone 122 (80/20)	11709	11917	11951	12174	11749	11900	185
1.0%Quinacridone 122 (80/20)	12987	12973	12839	12625	12969	12879	154
0.2%Phthalocyanine 15:3 (80/20)	9469	9633	10025	9164	9137	9486	366
0.6%Phthalocyanine 15:3 (80/20)	12444	12966	13878	13923	13180	13278	628
0.8%Phthalocyanine 15:3 (80/20)	11801	11970	12281	12667	12256	12195	331
1.0%Phthalocyanine 15:3 (80/20)	15220	14917	14623	14778	14399	14787	309
70/30	15804	14680	15130	14374	14586	14915	568
70/30/PP-g-MA	19739	18878	19955	20752	20626	19990	756
70/30/ PP-g-MA/DMDBS	18130	19817	17259	17778	17339	18065	1040
0.2%Quinacridone 122 (70/30)	10732	10931	10860	11485	10968	10995	288
0.6%Quinacridone 122 (70/30)	10584	10051	10714	10276	10402	10405	259
0.8%Quinacridone 122 (70/30)	12695	12830	12692	13205	13151	12915	248
1.0%Quinacridone 122 (70/30)	13965	13140	14036	13935	13648	13745	369
0.2%Phthalocyanine 15:3 (70/30)	10765	10435	10321	10335	9734	10318	373
0.6%Phthalocyanine 15:3 (70/30)	11358	11822	11849	11913	11699	11728	221
0.8%Phthalocyanine 15:3 (70/30)	13524	13421	13395	13631	12800	13354	324
1.0%Phthalocyanine 15:3 (70/30)	8755	8593	8593	8318	8346	8521	185

VITAE

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