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APPINDICES

Appendix A

The Overall Composition of Rubber

Table A-1 properties of ethylene-propylene-diene copolymer (NORDEL[TM] IP 5565)

Typical polymer	Value
Mooney viscosity ML (1+4) @ 125°C	65
Polymer composition (wt%)	
Ethylene	50
Propylene	42.5
Ethylidene norbornene (ENB)	7.5
Molecular weight distribution	Medium
Product density (g/cc)	0.86
Ash content (max, wt%)	0.1
Total volatiles (max, wt%)	0.4

APPENDEX B

Data of Graft Copolymerzation of MMA and ST onto EPDM

Table B-1 Determination of grafting properties of GEPDM

Reaction properties	Reaction temp (°C)		Rubber concentration (wt%)			Reaction time (h)						
	80	90	6	8	10	4	6	8	10	12	16	20
EPDM rubber content (g)	24.00	24.00	18.00	24.00	30.00	24.00	24.00	24.03	24.03	24.00	24.00	24.00
Graft Product (g)	31.98	32.20	22.43	32.20	37.98	28.94	31.28	30.90	32.01	32.20	35.13	36.43
Total Conversion	33.27	34.10	24.60	34.10	26.60	20.60	25.80	28.56	33.20	34.10	46.40	51.80
Sample for soxhlet extraction (g)	3.00	3.06	3.0	3.06	3.0	3.07	3.01	3.00	3.06	3.06	3.05	3.04
Sample after extraction by LPE (g)	0.63	0.61	0.65	0.61	0.57	0.611	0.67	0.74	0.64	0.61	0.51	0.58
Sample after extraction by MEK+ acetone/ (g)	0.32	0.37	0.30	0.37	0.23	0.14	0.09	0.20	0.33	0.37	0.40	0.23
Free ethylene propylene diene rubber (g)	2.37	2.45	2.35	2.45	2.43	2.46	2.34	2.26	2.42	2.45	2.54	2.46
Free copolymer (g)	0.31	0.24	0.35	0.24	0.34	0.47	0.58	0.54	0.30	0.24	0.12	0.35
%Free ethylene propylene diene (%wt)	78.92	80.03	78.3	80.0	81.00	80.10	77.77	75.30	79.10	80.0	83.20	81.00
%Free copolymer (%wt)	10.35	7.98	11.50	7.98	11.40	15.30	19.13	18.10	9.97	7.98	3.78	11.50
%Graft ethylene propylene diene (%wt)	10.73	12.00	10.10	12.00	7.52	4.58	3.11	6.65	11.00	12.00	13.00	7.53
Total monomer (g)	7.98	8.19	4.43	8.19	7.97	4.94	7.28	7.86	7.98	8.19	11.13	12.43
Total free monomer (g)	3.31	2.57	2.59	2.57	4.34	4.43	5.98	5.58	3.19	2.57	1.33	4.18
Total grafted monomer (g)	4.67	5.63	1.84	5.63	3.63	0.51	1.30	1.28	4.79	5.63	9.80	8.25
Grafting efficiency (%wt)	58.54	68.66	41.60	68.66	45.49	10.42	17.82	18.67	60.04	68.66	88.07	66.40

Table B-2 Repeat of grafting properties of GEPDM at 16 h

Reaction properties	Reaction time for 16 h				
	1	2	3	Mean	S.D
EPDM rubber content (g)	24.00	24.00	24.00	24.00	0.00
Graft product (g)	35.13	34.13	35.05	34.77	0.56
Total conversion (%)	46.40	46.54	46.04	44.88	2.32
Sample for soxhlet extraction (g)	3.05	3.00	3.04	3.03	0.03
Sample after extraction by LPE (g)	0.51	0.52	0.52	0.52	0.01
Sample after extraction by MEK+ acetone (g)	0.40	0.39	0.39	0.39	0.01
Free EPDM rubber (g)	2.54	2.49	2.53	2.52	0.02
Free copolymer (g)	0.11	0.10	0.11	0.11	0.00
%Free EPDM rubber (%wt)	83.23	83.03	83.22	83.16	0.10
%Free copolymer (%wt)	3.78	3.65	3.66	3.40	0.06
%Grafted EPDM rubber (%wt)	12.99	13.32	13.11	13.24	0.15
Total monomer (g)	11.13	10.13	11.05	10.77	0.56
Total free monomer (g)	1.33	1.24	1.28	1.28	0.04
Total grafted monomer (g)	9.80	8.89	9.77	9.39	0.62
Grafting efficiency (%)	88.07	87.71	88.38	88.05	0.30

Appendix C

Data of Mechanical Properties of Modified Acrylic Sheet

Table C-1 Data of impact strength of modified acrylic sheet

Sample	Rubber Content (wt%)	GE (%)	No. of experiment of impact strength (KJ/m^2)					Mean	S.D
			1	2	3	4	5		
Acrylic sheet	-		41.23	43.69	42.50	43.44	41.88	42.55	1.04
Acrylic sheet /EPDM	1.0		42.62	41.28	41.22	41.09	40.16	41.27	0.88
	1.0		50.00	49.85	49.85	50.78	50.00	50.10	0.97
	2.0	88.1	50.09	51.09	53.31	52.46	52.46	52.08	0.39
	3.0		50.15	50.78	50.00	50.94	50.94	50.56	0.45
	4.0		51.54	49.23	49.03	50.19	49.0	49.80	1.09
Acrylic sheet GEPDM		10.4	48.13	48.13	48.44	47.38	47.69	47.95	0.42
		17.8	48.59	48.59	47.85	48.00	48.00	48.21	0.36
	2.0	18.7	49.38	49.53	48.77	48.77	48.92	49.07	0.36
		60.0	49.54	49.38	50.15	50.15	49.38	49.72	0.40
		68.7	50.78	50.94	50.94	50.78	50.78	50.84	0.09
		88.1	51.09	51.09	53.31	52.46	52.46	52.08	0.38

Table C-2 Data of flexural strength of modified acrylic sheet

Sample	Rubber Content (wt%)	GE (%)	No. of experiment of flexural strength (MPa)			Mean	S.D
			1	2	3		
Acrylic sheet	-		79.10	77.80	77.57	78.14	0.81
Acrylic sheet /EPDM	1.0		69.50	64.70	74.94	69.74	5.1
Acrylic sheet GEPDM	1.0	88.1	96.70	92.50	92.37	93.82	2.45
	2.0		97.80	96.80	95.58	96.75	1.13
	3.0		71.50	72.90	71.47	71.94	0.81
	4.0		56.30	56.30	56.03	56.18	0.13
	2.0	10.4	80.00	80.50	80.74	80.43	1.49
		17.8	80.40	80.90	80.23	80.49	0.33
		18.7	82.00	83.30	83.83	83.05	0.94
		60.0	85.00	85.40	85.89	85.43	0.45
		68.7	87.10	86.80	89.32	87.75	1.37
		88.1	97.80	96.80	95.58	96.75	1.13

Table C-3 Data of tensile properties of modified acrylic sheet

Sample	Rubber content (wt%)	%GE	No. of experiment of tensile strength (MPa)			mean	S.D.	No. of experiment of elongation at break (%)			mean	S.D.
			1	2	3			1	2	3		
Acrylic sheet			74.39	76.02	74.43	74.93	0.93	9.89	9.73	9.57	9.73	0.16
Acrylic sheet/EPDM	1		52.41	51.98	51.66	52.02	0.38	8.39	7.65	8.25	8.10	0.39
	1		67.00	65.30	67.77	66.67	1.29	6.31	5.91	4.91	5.71	0.72
	2		74.10	72.10	73.70	73.32	1.05	5.78	5.26	5.46	5.50	0.26
	3	88.1	57.20	55.70	56.19	56.35	0.80	4.49	5.35	5.37	5.07	0.50
	4		43.40	43.20	43.33	43.31	0.09	5.13	4.63	5.04	4.93	0.27
Acrylic sheet/GEPDM		10.4	60.10	59.20	61.3	60.19	1.06	5.24	5.23	4.93	5.13	0.17
		17.8	56.20	57.50	57.79	57.16	0.84	5.25	4.85	4.59	4.89	0.33
		18.7	58.40	57.80	57.69	57.97	0.41	4.85	4.79	5.08	4.91	0.16
	2	60.0	59.30	59.20	59.99	59.51	0.42	5.24	5.24	5.69	5.39	0.26
		69.7	67.40	65.10	65.21	65.90	1.26	5.22	5.21	5.47	5.30	0.15
		88.1	74.10	72.10	73.74	73.32	1.05	5.78	5.26	5.46	5.49	0.26

Table C-4 Data of opacity of modified acrylic sheet

Sample	Rubber Content (wt%)	GE (%)	No. of experiment of opacity (%)			Mean	S.D
			1	2	3		
Acrylic sheet	-		12.56	12.71	12.62	12.63	0.08
Acrylic sheet /EPDM	1.0		28.00	28.08	28.82	28.30	0.45
	1.0		16.66	16.83	16.74	16.74	0.09
	2.0	88.1	18.32	18.44	18.40	18.39	0.06
	3.0		21.93	21.93	21.96	21.94	0.02
	4.0		21.72	22.00	21.50	21.74	0.25
Acrylic sheet GEPDM		10.4	28.73	28.78	28.64	28.72	0.07
		17.8	26.16	26.28	26.22	26.22	0.06
	2.0	18.7	23.70	23.47	23.09	23.42	0.31
		60.0	23.72	23.43	23.33	23.49	0.20
		68.7	18.77	18.46	18.79	18.67	0.19
		88.1	18.32	18.44	18.40	18.39	0.06

Appendix D

Data of Mechanical Properties of Modified Acrylic Sheet after Thermal Aging

Table D-1 Data of impact strength of modified acrylic sheet after thermal aging

Sample	Rubber content (wt%)	%GE	No. of experiment of impact strength (KJ/m^2)					Mean	S.D
			1	2	3	4	5		
Acrylic sheet	-		43.69	43.69	44.92	44.31	43.54	43.63	0.93
Acrylic sheet/ EPDM	1.00		43.08	43.23	45.23	43.75	45.23	44.10	1.06
	1		51.54	50.93	51.54	51.72	51.54	51.49	1.10
	2		52.41	52.41	53.62	52.92	52.92	52.26	0.31
	3	88.1	52.15	52.81	52.0	55.31	54.22	53.30	1.43
	4		51.69	52.0	50.44	51.19	51.92	52.05	0.82
Acrylic sheet/ GEPDM		10.4	48.88	48.28	47.81	47.08	47.54	48.50	0.66
		17.8	49.22	49.22	48.62	48.62	48.46	48.83	0.36
		18.7	50.47	50.63	49.85	49.69	50.54	52.24	1.48
	2	60.0	50.46	51.38	50.31	51.38	50.46	50.80	0.53
		68.7	50.94	51.56	50.94	52.19	51.56	51.44	0.52
		88.1	52.41	51.41	53.62	52.92	50.92	52.26	1.10
		66.4	50.77	50.77	50.94	50.46	50.46	50.68	0.21

Table D-2 Data of flexural strength of modified acrylic sheet after thermal aging

Sample	Rubber Content (wt%)	GE (%)	No. of experiment of flexural strength (MPa)			Mean	S.D
			1	2	3		
Acrylic sheet	-		66.20	64.80	69.26	66.76	2.28
Acrylic sheet/ EPDM	1.0		80.20	81.00	80.97	80.71	0.13
	1.0		92.50	89.90	92.37	91.57	1.45
	2.0	88.1	89.10	91.90	89.73	90.25	1.45
	3.0		72.50	73.80	76.19	74.17	1.87
	4.0		69.30	64.00	69.54	67.60	3.12
Acrylic sheet/ GEPDM		10.4	71.80	73.40	70.02	71.73	1.70
		17.8	72.50	76.40	72.96	73.95	2.11
	2.0	18.7	74.40	75.10	74.73	74.73	0.36
		60.0	77.20	70.80	73.8	73.95	3.18
		68.7	75.70	81.50	76.73	77.95	3.08
		88.1	89.10	91.90	89.73	90.25	1.45

Table D-3 Data of tensile properties of modified acrylic sheet after thermal aging

Sample	Rubber Content (wt%)	%GE	No. of experiment of tensile strength (MPa)			mean	S.D.	No. of experiment of elongation at break (%)			mean	S.D.
			1	2	3			1	2	3		
Acrylic sheet			68.35	62.80	68.36	66.50	3.20	16.62	15.04	16.63	16.10	0.91
Acrylic sheet/ EPDM	1.0		54.53	54.65	57.13	55.43	1.47	7.49	8.99	9.12	8.53	0.91
	1.0		70.10	68.01	69.33	68.15	0.44	5.33	6.41	4.66	5.47	0.88
	2.0		75.42	74.14	74.0	74.52	0.78	5.03	5.88	5.64	5.52	0.44
	3.0	88.1	55.43	56.15	58.73	56.77	1.74	5.48	5.22	5.30	5.33	0.14
	4.0		55.08	56.17	54.24	55.16	0.97	5.28	5.30	5.30	5.29	0.01
		10.4	55.03	55.07	55.24	55.11	0.11	4.45	4.54	4.31	4.43	0.12
		17.8	57.38	57.40	57.30	57.36	0.05	4.26	4.47	4.38	4.37	0.11
Acrylic sheet/ GEPDM	2.0	18.7	58.29	56.33	58.48	57.70	1.19	4.40	4.19	4.91	4.50	0.37
		60.0	59.14	58.93	59.61	59.23	0.35	5.66	5.36	5.24	5.42	0.22
		68.7	65.13	65.31	65.23	65.23	0.09	5.11	5.73	5.55	5.46	0.32
		88.1	75.42	74.14	74.00	74.52	0.78	5.03	5.88	5.64	5.52	0.44

Table D-4 Data of opacity and ΔE of modified acrylic sheet after thermal aging

Sample	Rubber Content (wt%)	%GE	No. of experiment of opacity (%)			mean	S.D.	No. of experiment of ΔE			mean	S.D.
			1	2	3			1	2	3		
Acrylic sheet			7.24	7.65	7.48	7.46	0.21	0.53	0.35	0.47	0.45	0.09
Acrylic sheet/ EPDM	1.0		23.68	23.45	21.78	22.97	1.04	2.74	2.46	2.47	2.56	0.16
	1		11.70	11.56	11.66	11.64	0.07	1.42	1.45	1.35	1.41	0.05
	2		14.50	14.46	14.25	14.40	0.13	2.34	2.37	2.15	2.29	0.12
	3	88.1	16.00	16.19	16.12	16.10	0.10	2.72	2.60	2.80	2.71	0.10
	4		20.42	20.80	20.78	20.67	0.21	3.23	2.83	2.83	2.96	0.23
Acrylic sheet/ GEPDM	2	10.4	20.04	20.08	20.02	20.05	0.03	3.00	2.86	2.93	2.93	0.07
		17.8	16.53	16.36	16.78	16.56	0.21	2.92	2.65	2.83	2.80	0.14
		18.7	15.84	15.76	15.90	15.83	0.07	2.88	2.70	2.76	2.78	0.09
		60.0	16.84	16.73	16.76	16.78	0.06	2.51	2.68	2.85	2.68	0.17
		68.7	14.78	14.86	14.85	14.83	0.04	2.66	2.53	2.37	2.52	0.15
		88.1	14.50	14.46	14.25	14.40	0.13	2.24	2.37	2.14	2.25	0.12

Appendix E

Data of Mechanical Properties of Modified Acrylic Sheet after UVAgeing

Table E-1 Data of impact strength of modified acrylic sheet after UV aging

Sample	Rubber Content (wt%)	%GE	No. of experiment of impact strength (KJ/m^2)					Mean	S.D
			1	2	3	4	5		
Acrylic sheet	-		48.31	48.31	42.15	45.85	44.06	45.74	2.69
Acrylic sheet/ GEPDM	1.0		52.81	49.31	50.31	50.31	51.06	49.80	1.23
	1.0		48.31	49.77	50.85	49.54	50.54	49.80	0.72
	2.0		51.31	50.77	52.38	51.94	50.74	51.43	1.87
	3.0	88.1	45.85	48.31	46.56	45.85	50.77	47.47	2.10
	4.0		48.31	48.31	49.54	50.00	50.00	49.25	0.88
Acrylic sheet/ GEPDM		10.4	47.31	43.94	49.54	50.16	47.54	47.70	2.44
		17.8	47.38	50.49	47.54	43.94	48.31	47.53	2.36
	2.0	18.7	47.08	48.31	47.08	48.31	47.08	47.57	0.67
		60.0	47.81	48.31	48.31	48.31	49.54	48.46	0.64
		68.7	48.31	50.77	59.54	50.77	48.31	51.54	4.64
		88.1	51.31	50.77	52.38	51.94	50.74	51.43	0.72

Table E-2 Data of flexural strength of modified acrylic sheet after UV aging

Sample	Rubber Content (wt%)	%GE	No. of experiment of flexural strength (MPa)			Mean	S.D
			1	2	3		
Acrylic sheet	-		65.95	58.06	68	64.00	5.25
Acrylic sheet /EPDM	1		85.87	79.19	69.42	78.16	8.27
Acrylic sheet/ GEPDM	1	88.1	73.28	76.17	69.97	73.14	3.10
	2		115.9	125.1	128	123.0	6.32
	3		113.9	107.4	120.3	113.87	6.45
	4		84.98	95.91	89.53	90.14	5.49
	2	10.4	66.76	82.87	72.47	74.03	8.17
		17.8	80.11	63.78	76.09	73.33	8.51
		18.7	75.7	72.46	67.68	71.95	4.03
		60.0	73.97	75.25	80.25	76.49	3.32
		68.7	112.3	93.75	98.86	101.64	9.58
		88.1	115.9	125.1	128	123	6.32

Table E-3 Data of tensile properties of modified acrylic sheet after UV aging

Rubber type	Rubber Content (wt%)	%GE	No. of experiment of Tensile strength (MPa)					No. of experiment of elongation at break (%)				
			1	2	3	mean	S.D.	1	2	3	mean	S.D.
Acrylic sheet			62.48	67.13	62.93	64.18	2.57	4.26	3.68	4.45	4.13	0.40
Acrylic sheet/ EPDM	1.0	1.0	44.60	40.24	39.02	41.29	2.93	3.30	2.94	2.57	2.94	0.37
	1		47.24	49.58	49.13	48.65	1.24	3.61	3.60	3.41	3.54	0.11
	2	88.1	55.94	54.72	54.84	55.17	0.67	4.81	4.21	4.19	4.40	0.35
	3		44.69	44.16	44.42	44.42	0.27	3.43	3.29	3.70	3.47	0.21
	4		42.96	44.11	41.87	42.98	1.12	3.17	3.46	3.12	3.25	0.18
Acrylic sheet/ GEPDM	2	10.4	44.62	43.04	43.11	43.59	0.90	2.62	2.87	2.47	2.78	0.28
		17.8	45.72	43.72	44.48	44.64	1.01	2.84	2.91	2.93	2.89	0.05
		18.7	46.88	44.80	45.17	45.62	1.11	3.02	2.95	2.85	2.94	0.08
		60.0	44.72	45.26	45.96	45.64	1.17	3.22	3.44	2.69	3.12	0.38
		68.7	50.18	46.97	45.80	47.65	2.27	3.28	3.21	3.34	3.28	0.07
		88.1	55.94	54.72	54.84	55.17	0.67	4.81	4.21	4.19	4.40	0.35

Table E-4 Data of opacity and ΔE of modified acrylic sheet after UV aging

Sample	Rubber Content (wt%)	%GE	No. of experiment of opacity (%)			mean	S.D.	No. of experiment of ΔE			mean	S.D.
			1	2	3			1	2	3		
Acrylic sheet			8.25	8.26	8.24	8.25	0.01	10.05	10.47	10.52	10.35	0.26
Acrylic sheet	1.0		21.94	24.87	24.49	23.77	1.59	17.12	14.36	15.36	15.61	1.40
	1		11.12	11.06	11.04	11.07	0.04	13.69	11.74	10.49	11.97	1.61
	2	88.1	14.54	15.06	14.07	14.56	0.50	12.06	12.26	12.40	12.24	0.17
	3		20.36	19.94	20.32	20.21	0.23	15.52	15.60	16.90	16.01	0.77
	4		21.31	19.31	18.36	19.68	1.53	16.26	15.85	15.34	15.82	0.46
Acrylic sheet/ GEPDM	2	10.4	13.37	13.23	13.26	13.29	0.07	14.64	14.74	14.28	14.55	0.24
		17.8	16.54	15.88	16.53	16.32	0.38	14.83	14.92	13.97	14.57	0.52
		18.7	16.34	16.74	16.21	16.43	0.28	14.87	14.83	14.39	14.70	0.27
		60.0	17.26	16.88	17.04	17.06	0.19	12.75	12.78	12.66	12.73	0.06
		68.7	13.51	13.74	13.83	13.69	0.17	13.08	13.43	13.20	12.44	0.18
		88.1	14.54	15.06	14.97	14.86	0.28	12.06	12.26	12.40	12.24	0.17

Appendix F

Data of Thermal Properties of Unmodified and Modified Acrylic Sheet

Tg   -52.9°C
Onset   -54.1°C
End   -51.9°C
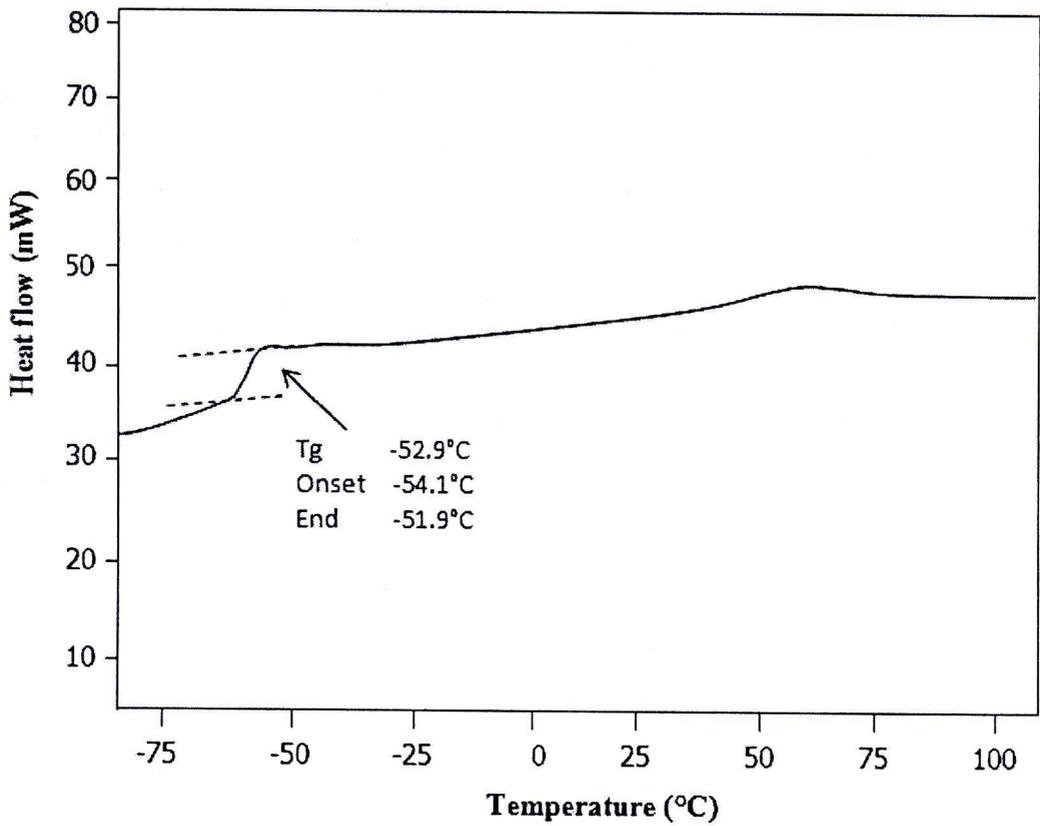
Figure F-1 DSC thermogram of EPDM.
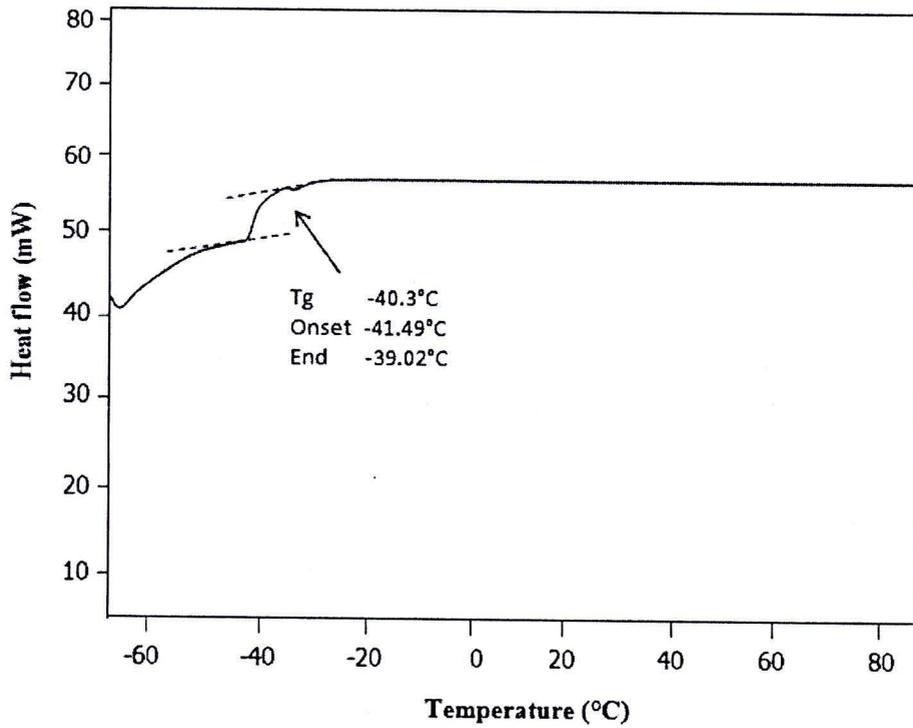
Figure F-2 DSC thermogram of GEPDM (%GE = 88.1%).
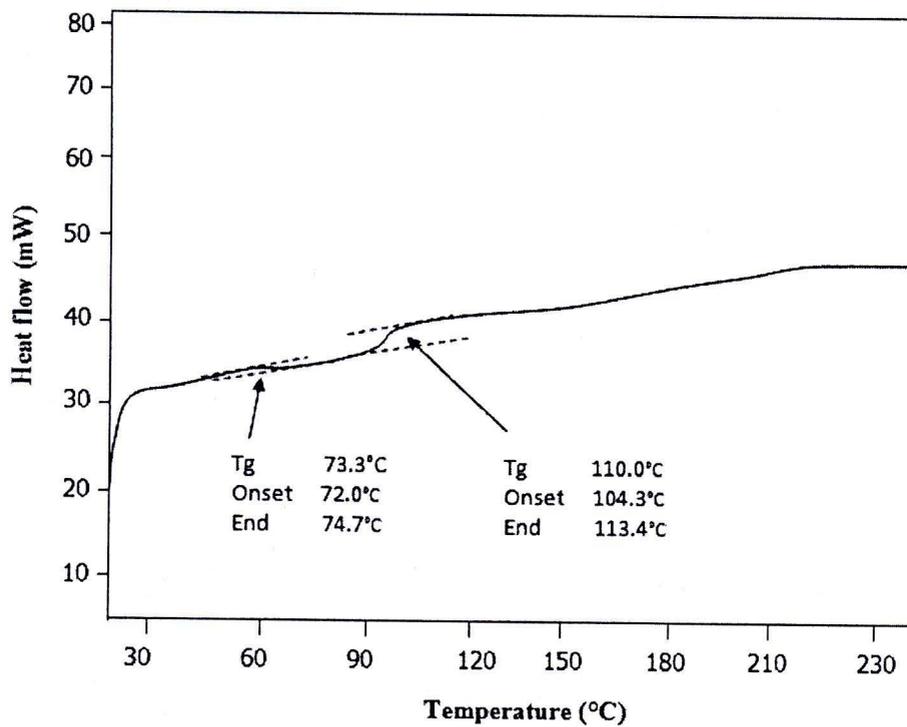
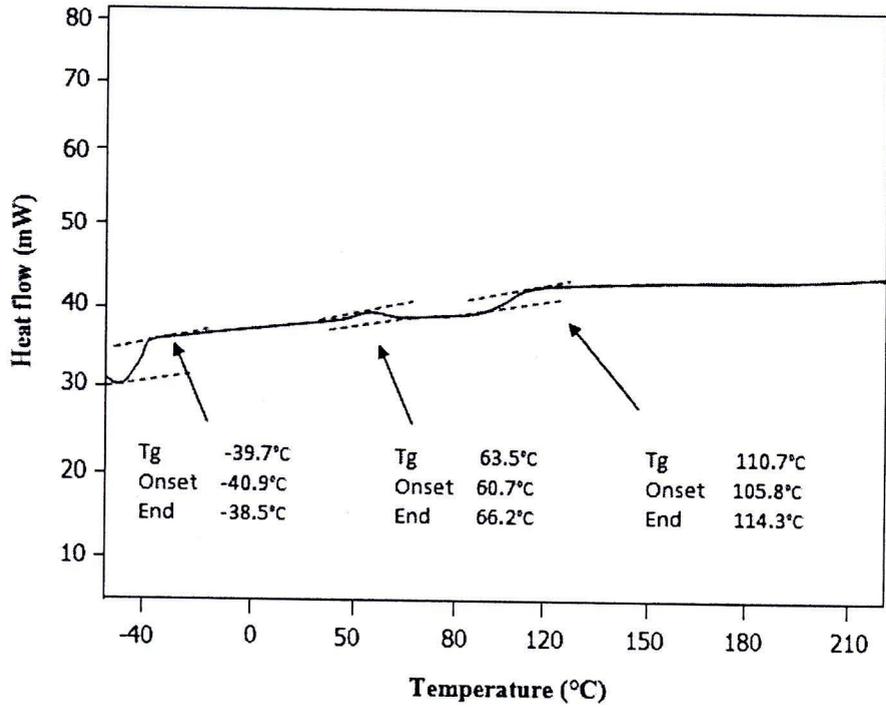**Figure F-3** DSC thermogram of acrylic sheet (MMA/ST = 80/20 % w/w).

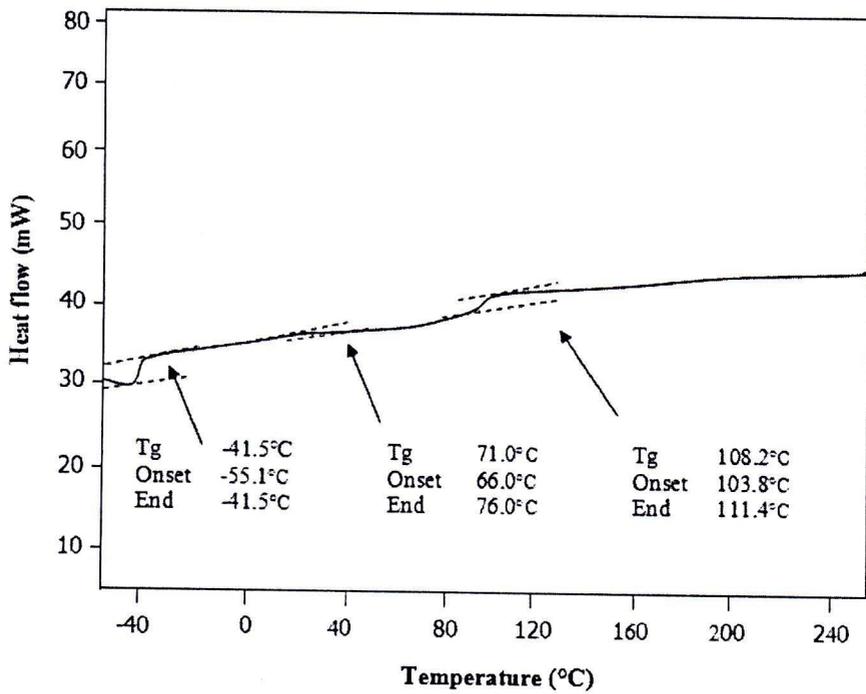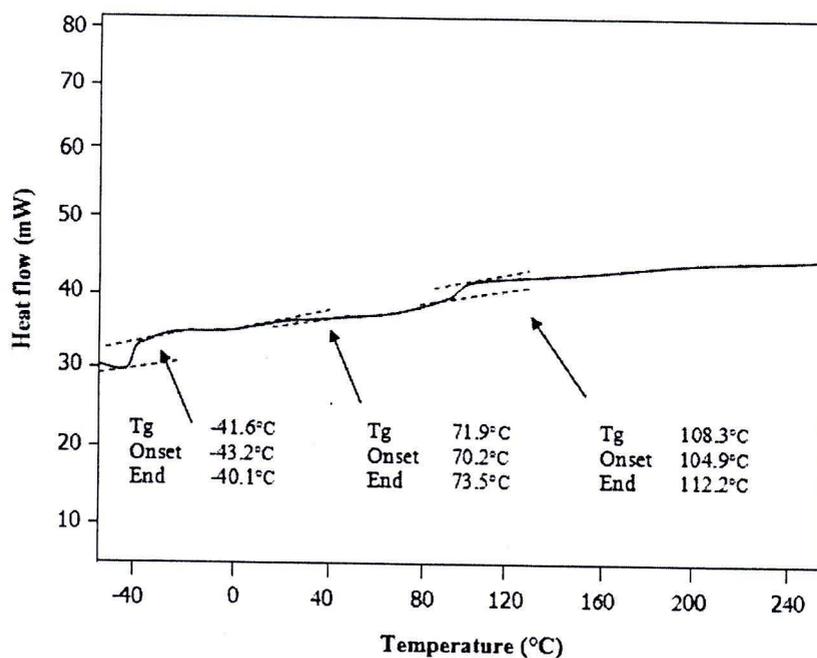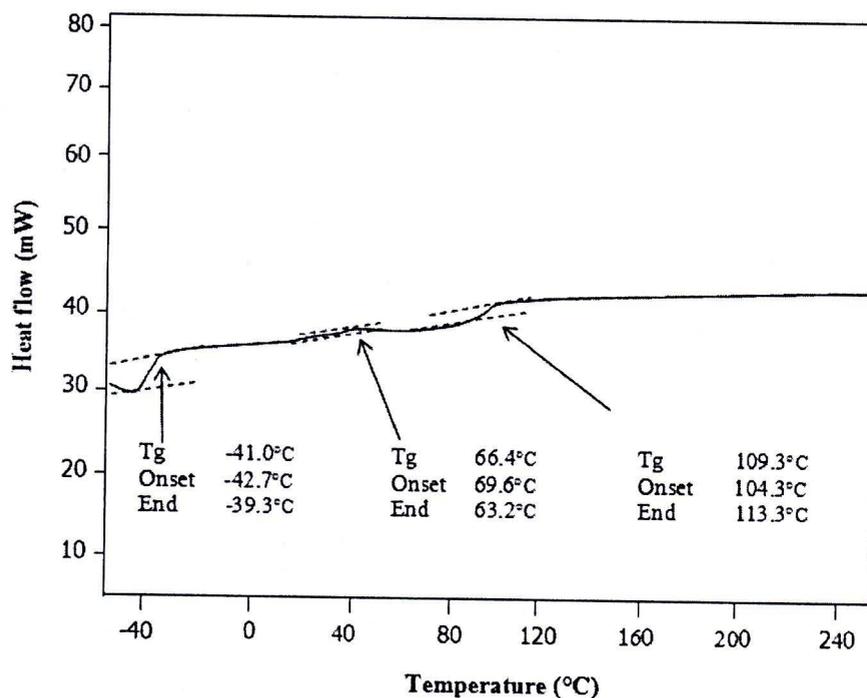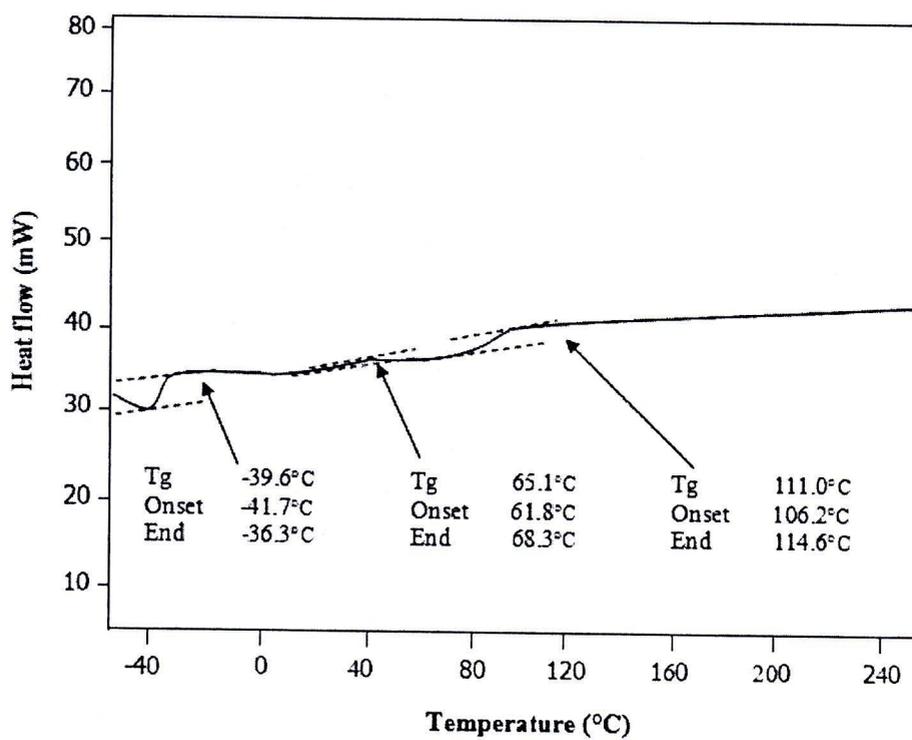**Figure F-4** DSC thermogram of acrylic sheet containing 1.0 wt% of EPDM.

Figure F-5 DSC thermogram of acrylic sheet containing 1.0 wt% of GEPDM (%GE = 88.1%).

Figure F-6 DSC thermogram of acrylic sheet containing 2.0 wt% of GEPDM
(%GE = 88.1%).

Figure F-7 DSC thermogram of acrylic sheet containing 3.0 wt% of GEPDM
(%GE = 88.1%).

Figure F-8 DSC thermogram of acrylic sheet containing 4.0 wt% of GEPDM
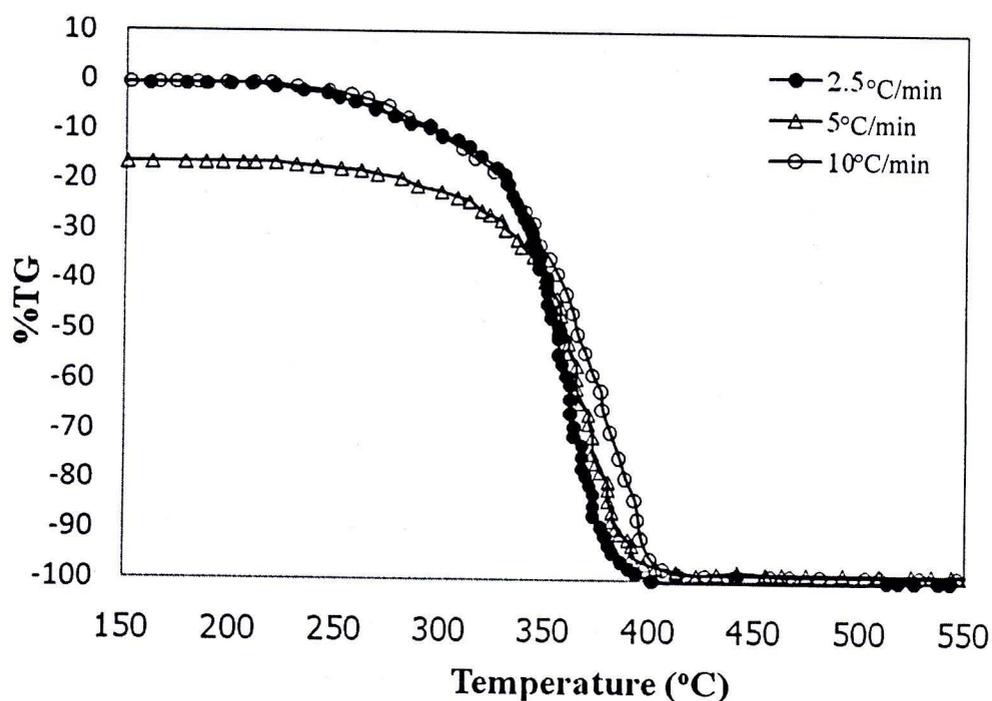(%GE = 88.1%).

Appendix G

Calculation of Activation Energy of Thermal Decomposition of Modified Acrylic Sheets

This calculation follows the Kissinger method to determine the kinetic parameters such as activation energy and preexponential factor by thermogravimetry, based o the assumption that the decomposition obyes first-order kinetics.

The modified acrylic sheet with containing 2 wt% of GEPDM (88.1%GE) is used for an example.

(1) Record the degradation temperatures at different heating rate as showed in figure G-1 and Table G-1


Figure G-1 Mass loss curves of modified acrylic sheet with containing 2 wt% of GEPDM (%GE = 88.1%) at various heating rates.

Table G-1 Degradation temperature of modified acrylic sheet with containing 2 wt% of GEPDM (%GE = 88.1%) at various heating rate

Heating rate (°C/min)	2.5	5	10
Degradation temperature (°C)	367.89	371.67	381.49

(2) Plot the logarithm of the heating rate expressed as kelvin per min versus the reciprocal of the absolute degradation temperature (1) at which the conversation level was reached. A straight line as shown in Figure G-2 show result.
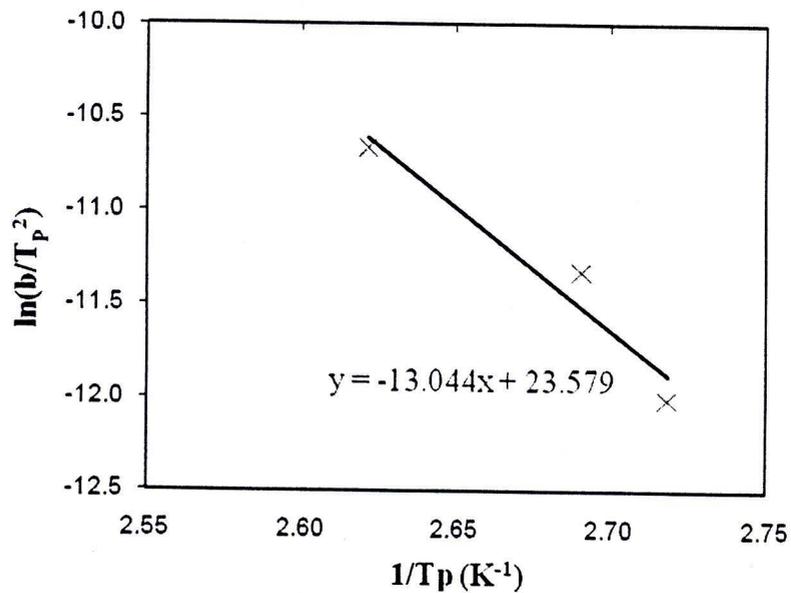
Figure G-2 Kissinger plot of heating rate versus degradation temperature at the constant %mass loss.

(3) Calculate an estimation of the activation energy (E_a) as shown in eq (D-1), use of the value of slope obtained from

$$\ln\left(\frac{\beta}{T_P^2}\right) = \ln\frac{AR}{E_a} + \ln\left[n(1-\alpha_P)^{n-1}\right] - \frac{E_a}{RT_P} \qquad (D-1)$$

Where β =   heating rate,

T_p and α_p =   absolute decomposition temperature

$(d\alpha/dt)_p$ =   weight loss at the maximum weight-loss rate, R

     =   gas constant, 8.314 J/(mol*K)

A   =   pre-exponential factor

n   =   reaction order

Ea   =   activation energy

Remark:

The activation energy was calculated from the slope of the straight line obtained from a plot of $\ln(\beta/T^2{}_p)$ versus $1/T_p$

Table G-2 Activation energy of modified acrylic sheet at various of GEPDM content

Sample	Heating rate (°C/min)	t_p (°C)	T_p (K)	$1/T_p$ (K^{-1})	$\ln(b/T_p^2)$	Slope	Intercept	Ea (KJ/mol)
EPDM	2.5	436.58	709.58	1.41	-12.21			
	5	448.69	721.69	1.39	-11.55	-26.76	25.90	222.44
	10	457.18	730.18	1.37	-10.88			
GEPDM	2.5	428.57	701.57	1.43	-12.19			
	5	443.73	716.73	1.39	-11.54	-33.02	34.28	274.49
	10	453.11	726.11	1.38	-10.87			
without GEPDM first stage	2.5	259.20	532.20	1.88	-11.64			
	5.0	264.31	537.31	1.86	-10.96	-22.06	29.83	183.41
	10.0	275.95	548.95	1.82	-10.31			
without GEPDM second stage	2.5	290.85	563.85	1.77	-11.75			
	5.0	349.20	622.20	1.61	-11.26	-4.91	3.08	40.83
	10.0	360.30	633.30	1.58	-10.60			
1 wt% GEPDM	2.5	362.50	635.50	2.76	-11.99			
	5.0	372.70	645.70	2.68	-11.33	-25.34	13.70	210.68
	10.0	381.95	654.95	2.62	-10.67			
2 wt% GEPDM	2.5	367.89	640.89	2.72	-12.01			
	5.0	371.67	644.67	2.69	-11.33	-13.04	23.58	108.45
	10.0	381.49	654.49	2.62	-10.67			
3 wt% GEPDM	2.5	359.60	632.60	2.78	-11.98			
	5.0	370.87	643.87	2.70	-11.33	-11.85	20.98	98.50
	10.0	370.24	643.24	2.70	-10.63			
4 wt% GEPDM	2.5	365.05	638.05	2.74	-12.00			
	5.0	369.68	642.68	2.71	-11.32	-9.02	12.87	75.00
	10.0	384.06	657.06	2.60	-10.67			

VITA

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