

(19) (12) (KR) (A)

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2004 10 22
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(30) 10/133,975 2002 04 25 (US)
(71) 55133-3427 . . 33427
(72) 55133-3427 33427
55133-3427 33427
55133-3427 33427
55133-3427 33427
55133-3427 33427

(74) :
:

(54) / ,

가 / .
, / 130 200
, / ,
가 ,

(hot melt coatable adhesive)'

(, 21)
가 (, 가) , 가 'PSA'
(Dahlquist criterion)

[: Handbook of pressure Sensitive Adhesive Technology, Donatas Satas(Ed.), 2 , p. 17
(1989)] 1 가 $1 \times 10^{-6} \text{ cm}^2/\text{s}$

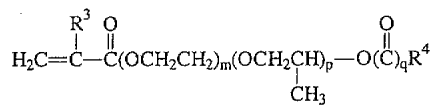
[illegible]

- ('MMB') 가 가 ,
94(); , ,
(
PnB), (TPnB), (DPnB),
(PPH), (PM); ,
X35 X102; PEG 400
(809, CP), PEG 400 (CHP-30N CP) PEG 400 (CPH
-41N CP); , , N- ;
, N- (CP), ,
(50), , 2,2,4- 1,3- (354), , 10,000 ,
5000 , 2500 ,
2- 2 6 .
. 가 , , , , , ,
C2-4 가 가 , , , , , ,
가 . 가 2 가
가 , 2 가 가
가 .
가 가 6%
/7.2% .

[]

		5% PVPI(*)	2%I ₂ /2.4%	18% I ₂
94	()	가	가	가
BSA	N-n-	70 가 가	가	가
R 804	-2-		가	가
R 809	PEG400 -2-		가	가
CPH-30N	PEG400		가	가
CPH-41N	PEG400		가	가
*PVPV = - USP				

, , (IO₃⁻) / 가 , .
가 가 가 . 가 가
()() :



,
 m 2 / ; p 0 50 ; q 0 1 ; R^3 H CH₃ ; R^4 ('p') ('m') ,
 가 , N- , 가 , N-
 가 ,
 가 가 가 가
 가 (,) , 가 가 / 가
 가 , 가 , 가 ,
 가 , 가 , 가 ,
 가 , 가 ,
 / (, /) (, 23)
 가 , 가 ,
 가 , 가 ,
 가 , 가 ,
 / (23) 가 , 가 ,
 , , ,
 , / 가
 가 , 가 /
 ,
 , /
 (Iodophor) /
 (). , , , ,
 , 가 , 가 ,
 ,
 , / ,
 ; (PEG) , PEG () PEG ;
 , N- , N- ,
 , n- ,
 94(, 2- -1,3- ('MMB'), 2-
 , 94가 , / ,

N-
(
09/901,219 (2001 7 9 ; Schaberg)
가
N-
(SIS),
(
(
N-
(
가
가
가
(UV)
5,750,134 5,633,010
가
, 2-
(
, C8-18 , C8-18),
(PCMX),
(8
, (C12-22)
4 4 , 4
5,637,646 4,619,979 4,843,134
5,804,610 가
가 , 가
10 %
5 %
1 %
(solventless)'
가
5
125 가 100 1
%

N- , N- , , 2- - n- , PSA
 90 98% , 2- - n- , , N- , N- 35 55 % 35
 2 10% N- , , N- , PSA , 2- - n- 2 10 %
 55 % 1 , N- , N- .

가
 PSA ' - (wet-stick)' . 가 ,

(a) Tg가 10 () 30 70 ;

(b) 70 30 ;

(c) (a) + (b) 100 10 100 가

WO 00/56828 .

(a) (i) 가 10 4
 1 () ; (ii) 가
 10 1 ;

(b) (i) 4 1 ()
 ; (ii) 1

WO 00/78885 .

가
 가
 , 4.5 (0.24 kg) 6 가 ,
 8 ,

가 , 45 ° 3
 0 cm/ 가 가

20 μm

가

09/764,478 (2001. 1. 17, Zhou

)

가

가

가

(, 가)
, 170 가

200

가

가

가

90

150

0.5%

20%

2

15

%,

3

5

%

가

,

,

,

,

,

,

,

,

가

,

/

가

,

가

가

40

100

가

, 가

가

가

가

(homogeneous mixing)

$I_2 / I -$
 $/$

/

가

가

(melt-on-demand)

가

,

(

)

C.W.

(

)
 ,
 (gun)
 ,
 (,
 (, Chris Rauwendaal 'Mixing in Single-Screw Extruders', M
 ixing in Polymer Processing ; Chris Rauwendaal
 'Mixing in Single-Screw Extruders', Mixing in Polymer Processing
 ; Marcel Dekker Inc.: New York (1991) pp. 129, 176-177 185-186)
 .
 / 가
 , 가
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 가 가 , 가 .
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 , (,) ;
 (,) .
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 , 가 .
 () ,
 , B.F. () 가 , (,
 (, (ELF ,
) ()) (,
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 , 가 ,
 가 , 가 ,
 , 가 가
 ,
 , , ,
 ,
 (

171,985), (5,215,087 6,
 4,310,509 ; 4,323,557 ; 5,979,450

가

	/	/
PVPI		
2EHA	2-	
AA		
PPEG	PYCAL94/	
EPPG	UCON 50H400, /	-
PG		-
2PE	2-	-
MPD	2- 1,3-	
MMB	3- 3- , 1-	CBC
MPEG 550	MPEG 550/A (550)	-
Irg 651	가 651/A 2,2- -2-	
Irg 1076	가 1076/ 8(e, 5-tert- -4-)	
IOTG		()
(Tegmer) R 804	R 804/ -2	CP
R 80 9	R 809/PEG 400 -2-	CP
PEG400	400, 400	-

					()	()
1	30.00	1.54	0.00	0.00	,	
2	30.00	1.61	1.50	0.00	,	
3	30.00	1.56	0.00	1.40	,	
4	30.00	3.23	0.00	2.83	,	

5 34

(I₂) , 2 (Nal) 6 AA (A-F) 1
4
[2]

	2-EHA	AA	NVP	10% IOTG	10% Irg 651	10% Irg 1076	PPEG	EPPG
	(g)	(g)	(g)	(g)	(g)	(g)	(g)	(g)
A	38.9	50.0	5.0	0.6	1.5	4.0	70.0	0.0
B	43.9	45.0	5.0	0.6	1.5	4.0	60.0	0.0
C	48.9	40.0	5.0	0.6	1.5	4.0	50.0	0.0
D	38.9	50.0	5.0	0.6	1.5	4.0	0.0	70.0
E	43.9	45.0	5.0	0.6	1.5	4.0	0.0	60.0
F	48.9	40.0	5.0	0.6	1.5	4.0	0.0	50.0

(I₂) 4 , R 804, R 809, CPH-30N PPEG 18 %
,
(Nal) 50 %
2 A F 50% Nal 1.2 g 18% I₂ 2.8 g
110 15 , 1 4 0.0508 mm(2 m
il) PET 0.0508 mm(2 mil) ,
가 , 가 가
3

[3]

5 34

	CPH -30 I ₂	809 I ₂	804 I ₂	PPEG I ₂	NaI	2						(,) ,
	(g)	(g)	(g)	(g)	(g)	(g)						
						A	B	C	D	E	F	
5	2.8	0.0	0.0	0.0	1.2	25.0	0.0	0.0	0.0	0.0	0.0	
6	0.0	2.8	0.0	0.0	1.2	25.0	0.0	0.0	0.0	0.0	0.0	
7	0.0	0.0	2.8	0.0	1.2	25.0	0.0	0.0	0.0	0.0	0.0	
8	0.0	0.0	0.0	2.8	1.2	25.0	0.0	0.0	0.0	0.0	0.0	
9	0.0	0.0	0.0	0.0	0.0	25.0	0.0	0.0	0.0	0.0	0.0	NA ¹
10	2.8	0.0	0.0	0.0	1.2	0.0	25.0	0.0	0.0	0.0	0.0	
11	0.0	2.8	0.0	0.0	1.2	0.0	25.0	0.0	0.0	0.0	0.0	
12	0.0	0.0	2.8	0.0	1.2	0.0	25.0	0.0	0.0	0.0	0.0	
13	0.0	0.0	0.0	2.8	1.2	0.0	25.0	0.0	0.0	0.0	0.0	
14	0.0	0.0	0.0	0.0	0.0	0.0	25.0	0.0	0.0	0.0	0.0	NA
15	2.8	0.0	0.0	0.0	1.2	0.0	0.0	25.0	0.0	0.0	0.0	
16	0.0	2.8	0.0	0.0	1.2	0.0	0.0	25.0	0.0	0.0	0.0	
17	0.0	0.0	2.8	0.0	1.2	0.0	0.0	25.0	0.0	0.0	0.0	
18	0.0	0.0	0.0	2.8	1.2	0.0	0.0	25.0	0.0	0.0	0.0	
19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	25.0	0.0	0.0	0.0	NA
20	2.8	0.0	0.0	0.0	1.2	0.0	0.0	0.0	25.0	0.0	0.0	
21	0.0	2.8	0.0	0.0	1.2	0.0	0.0	0.0	25.0	0.0	0.0	
22	0.0	0.0	2.8	0.0	1.2	0.0	0.0	0.0	25.0	0.0	0.0	
23	0.0	0.0	0.0	2.8	1.2	0.0	0.0	0.0	25.0	0.0	0.0	
24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	25.0	0.0	0.0	
25	2.8	0.0	0.0	0.0	1.2	0.0	0.0	0.0	0.0	25.0	0.0	NA
26	0.0	2.8	0.0	0.0	1.2	0.0	0.0	0.0	0.0	25.0	0.0	
27	0.0	0.0	2.8	0.0	1.2	0.0	0.0	0.0	0.0	25.0	0.0	
28	0.0	0.0	0.0	2.8	1.2	0.0	0.0	0.0	0.0	25.0	0.0	
29	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	25.0	0.0	NA
30	2.8	0.0	0.0	0.0	1.2	0.0	0.0	0.0	0.0	0.0	25.0	
31	0.0	2.8	0.0	0.0	1.2	0.0	0.0	0.0	0.0	0.0	25.0	
32	0.0	0.0	2.8	0.0	1.2	0.0	0.0	0.0	0.0	0.0	25.0	
33	0.0	0.0	0.0	2.8	1.2	0.0	0.0	0.0	0.0	0.0	25.0	
34	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	25.0	NA
¹ NA												

()

5 34

:
3.9 cm² () No. 137(3M
) 6- , 25 6-
6- 25
가 (*Enterococcus faecalis*
) , ATCC 10741(9.0 x 10⁸ cfu/ml) 50 µl 37 가
10 , 30 , 60 120 . 가 ,
3
2 ml , , 0.1% 가 (BHIB)
가 가 ,
가 가(TSA)
(+) , (-)
1
2 % 2.4 % 4,323,527 (R
osso)
(: 0.037 mm(1.5 mil)) (C1) 4 5 34, 6
35 42, 9 43 47, 12 48 59, 14 60 62, 16
63 64
180 :
1 4 0.0508 mm(2 mil) PET 1.2
7 cm(1/2) 25.4 cm(10) 53# 2.04 kg(4.5 lb) 6
SP 2000(1) 5 180 ° 30.5 cm/
/1/2 , / (N/m)

[4]

5 34 1

	10			30			60			120			(N/m)
	Rep 1	Rep 2	Rep 3	Rep 1	Rep 2	Rep 3	Rep 1	Rep 2	Rep 3	Rep 1	Rep 2	Rep 3	
C1	+	+	+	+	+	+	+	+	+	-	-	-	¹ NA
5	-	-	-	-	-	-	-	-	-	-	-	-	482
6	+	+	+	-	-	-	-	-	-	-	-	-	563
7	-	-	-	-	-	-	-	-	-	-	-	-	558
8	-	-	-	-	-	-	-	-	-	-	-	-	547
9	+	+	+	+	+	+	+	+	+	+	+	+	201
10	-	-	-	-	-	-	-	-	-	-	-	-	355
11	-	-	-	-	-	-	-	-	-	-	-	-	407
12	-	-	-	-	-	-	-	-	-	-	-	-	404
13	-	-	-	-	-	-	-	-	-	-	-	-	368
14	+	+	+	+	+	+	+	+	+	+	+	+	265
15	-	-	-	+	-	-	-	-	-	-	-	-	475

16	-	-	-	-	-	-	-	-	-	-	-	-	447
17	-	-	-	-	-	-	-	-	-	-	-	-	482
18	-	-	-	+	-	-	-	-	-	-	-	-	444
19	+	+	+	+	+	+	+	+	+	+	+	+	403
20	-	-	-	-	-	-	-	-	-	-	-	-	420
21	-	-	-	-	-	-	-	-	-	-	-	-	532
22	-	-	-	-	-	-	-	-	-	-	-	-	493
23	-	-	-	-	-	-	-	-	-	-	-	-	543
24	+	+	+	+	+	+	+	+	+	+	+	+	523
25	-	-	-	-	-	-	-	-	-	-	-	-	468
26	-	-	-	-	-	-	-	-	-	-	-	-	644
27	-	-	-	-	-	-	-	-	-	-	-	-	578
28	-	-	-	-	-	-	-	-	-	-	-	-	523
29	+	+	+	+	+	+	+	+	+	+	+	+	468
30	+	+	+	-	-	-	-	-	-	-	-	-	517
31	-	-	+	-	-	-	-	-	-	-	-	-	506
32	-	-	-	-	-	-	-	-	-	-	-	-	598
33	-	-	-	-	-	-	-	-	-	-	-	-	NA
34	+	+	+	+	+	+	+	+	+	+	+	+	545
NA													

가 , 201 644 N/m . 5, 7, 8, 10 13, 15 18, 20 23, 9, 1
25 , 355 644 N/m . 10
28 31 33
4, 19, 24, 29 34 (,
35 42
IOA NVP , 5 2
(G-H) 1 4 .

[5]

G H

	IOA	NVP	10% IOTG	10% Irg 651	10% Irg 1076
	(g)	(g)	(g)	(g)	(g)
G	90.0	10.0	0.6	1.5	4.0
H	95.0	5.0	0.6	1.5	4.0

G H 150 10 1 4
2.5 % NaI , 2 % I 2 PHE 3040
PHE 3040 6 가 4 5 5 6

140 160 150
가 184
180
149 160 0.002 0.005 (51 130) 15
, H.P. ()
5 34
6
[6]

35 41 1 ,

		NVP/ PHE 3040 30/40 (%)	(m)	10			30			60			120		
				Rep 1	Rep2	Rep3	Rep1	Rep2	Rep3	Rep1	Rep2	Rep3	Rep1	Rep2	Rep3
C1	0	0	0.0254	+	+	+	+	+	+	+	+	+	-	-	-
35	90	10	0.0508	+	+	+	+	+	+	+	+	+	-	-	+
36	90	10	0.1270	+	+	+	+	+	+	+	+	+	-	-	-
37	80	20	0.0508	+	+	+	+	+	+	+	+	+	-	-	-
38	80	20	0.1270	+	+	NT 1	+	+	+	+	-	+	-	-	-
39	90	10	0.0508	+	+	+	+	+	+	-	-	+	-	-	-
40	90	10	0.1270	+	+	NT	+	-	-	-	-	-	-	-	-
41	80	20	0.0508	+	+	+	+	+	+	-	-	-	-	-	-
42	80	20	0.1270	+	+	+	+	+	+	-	-	-	-	-	-
1															

35 42 40 42 60 120
43 47

I 7 1 4 EVA

[7]

I

	IOA	NVP	10% IOTG	10% Irg 651	10% Irg 1076
	(g)	(g)	(g)	(g)	(g)
I	91.00	9.00	0.03	0.15	0.30

Nal 25 % , 20 % .

Nal/I₂ POE 10 (8) I(IOA/NVP=91/9) ,
(43 45 , POE 10 (126) ,
46 47 (130 170) (184) ,
가 0.0381 mm(1.5 mil) PET
(DCP-)

[8]

43 47

	91/9 IOA/NVP (%)	I ₂ (%)	Nal (%)	POE 10 (%)
43	95.50	2.00	2.50	0.00
44	93.25	3.00	3.75	0.00
45	91.00	4.00	5.00	0.00
46	85.50	2.00	2.50	10.00
47	83.25	3.00	3.25	10.00

5 34 (bare) PET (: 0.0381 mm(1.5 mil))
9

[9]

43 47 C1

	10			30			60			120			N/m
	Rep1	Rep2	Rep3	Rep1	Rep2	Rep3	Rep1	Rep2	Rep3	Rep1	Rep2	Rep3	
C1	+	+	+	+	+	+	+	+	+	-	-	-	NA
43	+	+	+	+	+	+	+	+	+	-	-	-	486
44	+	+	+	+	+	+	-	-	-	-	-	-	589
45	+	+	+	+	-	+	-	-	-	-	-	-	488
46	+	+	+	+	+	+	+	+	+	-	-	-	843
47	+	+	+	+	+	+	-	-	-	-	-	-	773

43 47 / , POE 10 ,

43, 45, 27

(Schoniger) () ±0.1 g
, 500 ml
18 M , 10 ml 5% (EM) 20
가 , 125
. 30 , 10 가
, (EM) ()
(silver billet combination electrode) 751T
0.005 N % 10
% 100

[10]

43, 45, 27 1

	I ₂ /NaI (%)	(%)	(%)	(%)
C1	2/2.4	4.03	3.48	86.4
43	2/2.5	4.12	3.91	94.9
45	4/5	8.23	6.61	80.3
27	1.7/2.1	3.56	2.74	77.0

(27, 43 45) (C1)

48 59

7 / 2/2.5 I 11 POE 10
. POE 10

[11]

48 59

	91/9 IOA/NVP (%)	I ₂ (%)	NaI (%)	POE 10 (%)
48	95.5	2.0	2.5	0.0
49	95.5	2.0	2.5	0.0
50	85.5	2.0	2.5	10.0
51	85.5	2.0	2.5	10.0
52	80.5	2.0	2.5	15.0
53	80.5	2.0	2.5	15.0
54	75.5	2.0	2.5	20.0
55	75.5	2.0	2.5	20.0
56	70.5	2.0	2.5	25.0
57	70.5	2.0	2.5	25.0
58	65.5	2.0	2.5	30.0
59	65.5	2.0	2.5	30.0

43 47 12
IOA/NVP 가
PET (5 34)
12

[12]

48 59 1

	(mm)	10			30			60			120		
		Rep1	Rep2	Rep3	Rep1	Rep2	Rep3	Rep1	Rep2	Rep3	Rep1	Rep2	Rep3
C1	0.0254	+	+	+	+	+	+	+	+	+	-	-	-
48	0.0508	+	+	+	+	+	+	+	-	-	-	-	-
49	0.1270	+	+	+	+	+	+	-	-	-	-	-	-
50	0.0508	+	+	+	+	+	+	-	-	+	-	-	-
51	0.1270	+	+	+	+	+	+	-	+	-	-	-	-
52	0.0508	+	+	+	+	+	+	+	-	+	-	-	-
53	0.1270	+	+	+	+	+	+	+	+	+	-	-	-
54	0.0508	+	+	+	+	+	+	+	+	+	-	-	-
55	0.1270	+	+	+	+	+	+	+	+	+	-	-	-
56	0.0508	+	+	+	+	+	+	-	+	-	-	-	-
57	0.1270	+	+	+	+	+	+	+	+	+	-	-	-
58	0.0508	+	+	+	+	+	+	-	-	-	-	-	-
59	0.1270	+	+	+	+	+	+	+	+	+	-	-	-

PSA , POE 10

60 62

IOA NVC 1 4 EVA
J, K L 13

[13]

J, K L

		IOA	NVC	10% Irg 651	10% IOTG	10% Irg 1076
		(g)	(g)	(g)	(g)	(g)
60	J	87.0	7.0	1.5	0.5	4.0
61	K	84.0	10.0	1.5	0.5	4.0

62	L	81.0	13.0	1.5	0.5	4.0
----	---	------	------	-----	-----	-----

I 2 Nal J, K L 25 mg 110
15 I 2 2.8 g 50% Nal 1.2 g
154 1 4
1 4 0.0508 mm(2 mil) PET
0.0508 mm(2 mil)
35 64 14

[14]

60	62	C1										
	10			30			60			120		
	Rep1	Rep2	Rep3	Rep1	Rep2	Rep3	Rep1	Rep2	Rep3	Rep1	Rep2	Rep3
C1	+	+	+	+	+	+	+	+	+	-	-	-
60	+	+	+	+	+	+	-	-	+	-	-	-
61	+	+	+	+	+	+	+	+	+	-	-	-
62	+	+	+	+	+	+	+	+	+	-	-	-

IOA/NVC 가
63 71
가 1 4 가 EVA AA 15

[15]

63	71									
	2EHA	AA	10% IOTG	10% Irg 651	10% Irg 1076	PPEG	PG	2PE	MPD	MMB
	%	%	%	%	%	%	%	%	%	%
63	25.9	29.4	0.3	0.9	2.3	41.2	0.0	0.0	0.0	0.0
64	29.4	33.3	0.3	1.0	2.7	0.0	33.3	0.0	0.0	0.0
65	27.5	31.3	0.3	0.9	2.5	0.0	37.5	0.0	0.0	0.0
66	29.4	33.3	0.3	1.0	2.7	0.0	0.0	33.3	0.0	0.0
67	27.5	31.3	0.3	0.9	2.5	0.0	0.0	37.5	0.0	0.0
68	29.4	33.3	0.3	1.0	2.7	0.0	0.0	0.0	33.3	0.0
69	27.5	31.3	0.3	0.9	2.5	0.0	0.0	0.0	37.5	0.0

70	29.4	33.3	0.3	1.0	2.7	0.0	0.0	0.0	0.0	33.3
71	27.5	31.3	0.3	0.9	2.5	0.0	0.0	0.0	0.0	37.5

63 71 PVPI 4% 1 4 0.0508 mm(2 mil) PET
0,0508 mm(2 mil)
63 64 5 34
16

[16]

	10			30			60			120		
	Rep1	Rep2	Rep3	Rep1	Rep2	Rep3	Rep1	Rep2	Rep3	Rep1	Rep2	Rep3
C1	+	+	+	+	+	+	+	+	+	-	-	-
63	+	+	+	+	+	+	+	+	+	-	-	-
64	+	+	+	+	+	+	-	-	-	-	-	-

64 60
72
A) , / (/ (PVP/V
가
50/50 / 36% 24,906
97/3 / 1663.3 g
(, 415.8 g, EM) 가
74.88 g, PVP/VA E-535() 83.2 g, () 9.98 g 가 ,
50/50) 8.32 g (/ 가 ,
) , 60 (POM-1506G
) 1
/ , 45 1 1.9 cm(3/4) (1, 2 3
USA) 121 , 135 149 , 149
, 50
(finger tack)

73

M 140 1701 10 , 20 30 1 4 NaI
. 가 18 .

[18]

75-77 2

	17		NaI		I 2	
		(g)	(g)	(g)	(g)	()
C2	M	100.0	2.5	0.0	2.0	
75	M	100.0	2.5	1.0	2.0	
76	M	100.0	2.5	1.4	2.0	
77	M	100.0	2.5	1.4	2.0	

가 35-42 , 가 가
 , 가
 . 100 ml 25 184 g ,
302 g 가 , 가

78 85

76 77 PHE 3040 1 4 가 35
150 160 8 10
42 150 2
35 42 1 4 PET ,
19 .

[19]

			PHE3040	
		()	()	()
78	76	90	10	50
79	76	90	10	125
80	76	80	20	50
81	76	80	20	125
82	77	90	10	50
83	77	90	10	125
84	77	80	20	50
85	77	80	20	125

30 cm/ (12 /) ()
ASTM D882-97 ' (/), ' (/) ' 76, 79
(MPa) 20
81 2 , 77, 83 85 3

[20]

76, 77, 79, 81, 83 85

	(MPa)	(%)	(MPa)
76()	0.193	1100	0.248
77()	0.110	500	0.152
79	0.690	670	1.586
81	1.241	610	3.034
83	0.483	700	0.710
85	1.103	500	2.000

PHE 3040 가 가 (76 77) 10 가 (79, 81 85)

78 85 3
A: ()
B: - - - - (G 1652); C: - - (D 1107). 2 가 (78-85) (21) (50 %) 24 2 kg 1 (78-85) IMASS (PP) 2 1 30
/ (3 M90, 15 35 oz/in , N/m 21

[21]

3가 78-85

	A	B	C	
	(N/m)	(N/m)	(N/m)	(N/m)
78	424	274	230	118
79	396	294	219	201
80	404	250	151	143
81	402	282	268	170

82	364	199	108	89
83	368	244	200	182
84	363	262	166	135
85	447	321	322	230

가 , 가 .
가 가
가 , 가 가

(Probe Tack Test)

TA-XY2 ()
ASTM D 2979-95 22 .

[22]

76-85

	(g)
76()	294
77()	250
78	261
79	429
80	228
81	420
82	250
83	376
84	278
85	441

22 , PHE 3040 10 20%가
가
5 20% .
%

가 가

(57)

1.
(a) 가 ;
(b) 가 ;

16.

1 N- , / , N- , ; 2- -1,3- , 3-
 , n- ; 2- , N-n- -2-
 , PEG400 -2- , PEG400 , PEG400

17.

1 , .

18.

17 ,

(a) Tg가 10 () 30 70 ;

(b) 70 30 ;

(c) (a) + (b) 100 10 100 가

19.

1 , .

20.

18 ,

(a) (i) 가 10 4
 1 () ; (ii) 가
 10 1 ;

(b) (i) 4 1 ()
 ; (ii) 1

21.

1 , .

22.

21 ,

23.

(a) 가 ;

(b) ,
 , 130 200 /
 , /

24. 23 , 가 .
25. 23 , .
26. 23 , .
27. 23 , .
28. 1 , / 가 .
29. 28 , / 가 .
30. 1 , 가 .
31. 23 , 가 .
32. 30 , , , , .
33. 30 , .
34. 33 , , , , , .
35. 34 , , , , .
36. 30 , (surgical incise drape) .
37. / , .
38. 37 , 가 .
39. 가 37 .

39 40. , 가 .

41.

1 .

42.

23 .

30 43. .

31 44. .

36 45. .

46.

45 , 2 가 .