



(72)

2-5-4-1-402

2-18-33 1-3

가 5-22-9

(74)

:

(54)

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, UV , ( )

,

,

.

, ,

.

,

1

가 2

,

1 , 2

1 , 2

가

.

.

,

.

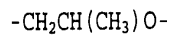
,

.

가 C1 - C6

1 가 3

1



UV 1 , 1

0.65 , .23 50% RH 0.50 3 0.60 ,

가 UV / UV 가 UV / UV

1 1 ( ) 1 , 가 ( )  
- ( ) , 1 ,  
1,200 , 1,500 13,000 0.01meq/g

1.1 - 2 - ( ) 가

- ( ) ; - ( )  
- ( ) ; - ( )  
- ( ) ;

가 . , C2 - C6 가  
 C1 - C6 , 가 , 가  
 가 .  
 1 , 1  
 1 ,  
 , 2- , 3- -1- , 3,3- ( )  
 , 가  
 ( , )  
 , 1.5 6.0 .

, EXCENOL 720, 1020, 2020, 3030, 4030, PREMINOL 3010, 4002, 4010(  
 Asahi Glass Urethane Co., Ltd. ), PPTG 2000, PPTG 1000(Hodogaya Chemical )  
 가 .

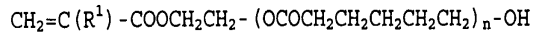
( 0.01meq/g ) /  
 , 가 ( ) , , ,  
 , 가 , 가  
 (in situ) .

1 , 가 1  
 , 가 1  
 ( ) 50wt.% , 가 65wt.%

( )

80 % 가 ( ) 1 ( ) 3 - 20 % ( )  
 pany of Japan) PTGL 1000(Hodogaya Chemical Com  
 emical Company) 가 PTGL 2000(Hodogaya Ch  
 ,가 PTHF2000(BASF)가  
 PPG3000(BASF)  
 ,가  
 ,가  
 00 , 1 100 10,000, 500 50  
 100 1,500 3,500 가 .가 가 500 4,000  
 10,000, 500 5000, 2,000 4,000  
 , 2,6- , 1,3- , 1,4- , 2,4- , 1,5  
 , m - , p - , 3,3' - , 3,3' - - 4,4' -  
 , 4,4' - , 3,3' - , 4,4' -  
 (2- ) , 6- - 1,3- , 4-  
 (4- ),  
 , 2,5- ( ) - [2.2.1] , 2,6- ( )  
 [2.2.1] 1,6- , 2,2,4-  
 , 2,4-  
 가  
 - ( ) 가 1  
 - ( ) (1 - ( ) ) 가 2  
 - ( ) (2 - ( ) )가  
 1 ( ) 2- ( ) , 2- ( )  
 ) , 4- ( ) , 1,6- ( ) , 2- - 3-  
 ( ) ( ) , 1,4- ( ) , 2- ( )  
 , 4- ( ) , ( ) ,  
 ( ) ( ) 2 ( ) 가 :

2



( 2 , R<sup>1</sup> , n 1 - 3 )  
 ( ) , 2 - ( ) , 2 - ( )  
 ( ) , 2 - ( ) , 4 - ( ) ,  
 ( ) , 가 , ( ) ( )

[2.2.2] , , 가 ,  
 , 1,4 - [2.2.2] , 2,6,7 - - 1,4 -  
 0.01 1wt% . 5 - 90 ,  
 10 - 80 .

(breaking elongation) ,  
 500 40,000, 700 30,000 .

가 20 85wt.%, 25 80wt.%,  
 .

, p - , 4,4' - , ,

( ) 가 , - , - .

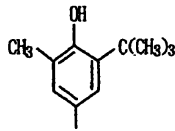
UV , - UV , - UV  
 - UV , 2 - - 4 - , 2 - - 4 - , 2,2' - -  
 - 4 - - UV , 2 - (2' - - 5' - )  
 , 2 - (2' - - 3',5' - t - ) , 2 - (2' - - 5' - t - ) , 2,4  
 - - t - - 3',5' - - t - - 4' - , - UV  
 가

, Sumisorb 110, 130, 140(Sumitomo Chemical Co., Ltd. ) , Seesorb 102, 103, 501, 202, 712, 704(Shi pro Kasei K.K. ) , Tinuvin P, 234, 320, 326, 327, 328, 329, 213(Ciba Specialty Chemicals Co., Ltd. )  
 , 2 - - 4 - 2 - - 4 -

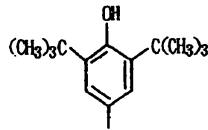
UV 0.05wt%, 0.05 3wt.%, 0.1 1.5wt.% 가

가, 2, (hindered) 가  
 (2,4,6- ) , 1-  
 (3,5- -t- -4- ), [3-3(  
 -t- -4- -5- ) ], 2,2'- - (3,5- -t- -4'- )  
 , N,N'- -p- , - - , 2,6- -t- -p- , 2,2'-  
 (4- -6-t- ), 4,4- (3- -6-5- ), 3,5- -t- -4-  
 , 3-(3,5- -t- -4- ) , 1,1,3- (2- -4-  
 -5-t- ) , 1,3,5- -2,4,6- (3,5- -t- -4- ) ,  
 (3,5- -t- -4- ) , ( 3-3',5'- -t- -4'- -

3



4



3 - , 3,9- [2- {3- (3-t- -4- -5- ) } - 1,1- ] - 2,4,8,10- [5.5] , - {3- (3-t- -5- -4- ) } 4 -  
 , - (3,5- -tert- -4- ) , - {3- (3,5- -t- -4- ) } , 2,2- - {3- (3,5- -t- -4- ) } , 3,5- -t- -4-  
 (3,5- -t- -4- ) } , - 3- (3,5- -t- -4- ) , 3,5- -t- -4- 가 , l  
 RGANOX 245, 1010, 1035, 1076, 1222(Ciba Specialty Chemicals Co., Ltd. ) , Sumilizer GA - 80, BP101(S  
 umitomo Chemical Industries Co., Ltd. ) , 3,9- (2- {3- (3-t- -4- -5- ) } - 1,1- ) - 2,4,8,10- [5.5] ,  
 - {3- (3-t- -5- -4- ) } 2,2- - {3- (3,5- -t- -4- ) } 가

- 0.1 3wt%, 0.15 1.5wt% 가 .

2 , 가 . 2





가 , 가  
 , 1- , 2,2- -2- ,  
 , 4,4'- , 4,4'- , 3- , 4-  
 , 1-(4- )-2- -2- -1- ,2- -2- -1- -1-  
 , 2- , 2- -1-[4-( ) ]-2-  
 - -1- ,2,4,6- - (2,6- )-2,4,4-  
 가 가 Irgacure 184, 369, 651,  
 500, 907, CGI1700, CGI1750, CGI1850, CG24 - 61, Darocur 1116, 1173(Ciba Specialty Chemicals Co., Ltd.  
 ); Lucirin TPO 8728(BASF ); Ubecryl P36(UCB )  
 , N- , 4- , 4- , 4-  
 , 4- 가 , Ube  
 cryl P102, 103, 104, 105(UCB )

t% 0.3 - 7wt% (E) 0.1 - 10w

가 가  
 가 가  
 ( ) , ( ) , ( ) ,  
 ( ) , ( )  
 가 , 가 , (leveling agent), , 가  
 , , , , 가  
 Silicone Co., Ltd. ) KBE903, 603, 403(Shin - Etsu Chemical Co., Ltd. ) SH6062, 6030(Dow Corning Toray  
 Silicone Co., Ltd. )

, 가 , X- ,  
 , - , - , -

- 1) 1200 mw 1 , UV ,
- 2) 가 3,9- [2- {3- (3-t- -4- -5- ) } -1,1-  
 ]-2,4,8,10- [5.5] , {3- (3-t- -5- -4- ) } , UV  
 }, 2,2- - {3- (3,5- -t- -4- ) } , UV  
 가 2- -4- 2- -4- 1)
- 3) 가 - / , ( 500 40,000 )  
 - 2) ,

4) 1 , - , UV , 20 - 85wt%, 0.1 - 3wt%, 0.05 - 3wt%, 10 - 80wt% 0.1 - 10wt% 1), 2) 3)

(A)

(96.4g), 2,6 - t - p - 3000 (0.02g) (0.008g) (868.8g), 15  
 , 50 , (0.08g) 가 , 1 35 가  
 , 2 - , (33.6g) 가 , ( ) 1.26wt%  
 가 0.1wt% 60

1 - 4

5 - 7

1

1

50

(ORC Co., Ltd. " SMX - 3500/F - OS" ) 254 $\mu$ m 가 1J/cm<sup>2</sup> 3.5kW  
 (release paper) , 23 130 $\mu$ m  
 3 (Toshiba) FL20SSN/18 50%RH  
 1200lx 0.  
 6cm 1mm/ , 25mm , 23 50%RH JIS K7127  
 ( / ) 가

1

A: 2,2 - - [ - 3 - (3,5 - t - 4 - ) ]

B: - { 3 - ( 3 - t - 5 - 4 - ) }

] - 2,4,8,10 - C: 3,9 - [ 2 - { 3 - ( 3 - t - 4 - 5 - ) } - 1,1 -  
 [ 5.5 ]

UV A: 2 - - 4 -

UV B: 2 - - 4 -

UV C: 2 - (2' - - 5' - )

- A: - 1 - (2 - ) - 4 - - 2,2,6,6 -

A: 2,4,6 -

A: -

[ 1 ]

	1	2	3	4	5	6	7
(a)	72.0	72.0	72.0	72.0	72.0	72.0	72.0
	5.5	5.5	5.5	5.5	5.5	5.5	5.5
	15.5	15.5	15.5	15.5	15.5	15.5	15.5
N -	7.0	7.0	7.0	7.0	7.0	7.0	7.0
A	0.3	0.3	0.3	-	0.6	-	-
B	-	-	0.3	-	-	-	-
C	0.3	0.3	-	0.6	-	-	-
UV A	0.15	-	0.15	0.15	-	0.15	-
UV B	-	0.15	-	-	-	-	-
UV C	-	-	-	-	-	-	0.15
A	-	-	-	-	-	0.6	0.6
A	1.2	1.2	1.2	1.2	1.2	1.2	1.2
A	0.30	0.30	0.30	0.30	0.30	0.30	0.30
	102.25	102.25	102.25	102.25	102.25	102.25	102.25
(kg/cm <sup>3</sup> )	0.101	0.103	0.099	0.101	0.104	0.98	0.100
(kg/cm <sup>3</sup> )	0.071	0.069	0.069	0.074	0.043	0.027	0.023
( / )	0.70	0.67	0.69	0.73	0.41	0.28	0.23

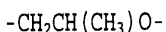
1 , (A), UV

(57)

1.

(a) 1 ( ) ;

( 1)



(b) ;

(c) UV

(d) 23

50%RH

3

0.50

2.

1

1200

3.

1

2

( )

50wt.%

4.

1

3

UV

5.

1

4

6.

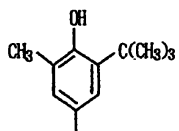
1

5

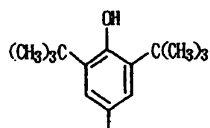
3

4

( 3)



( 4)



7.

1 6 ,  
 UV 2 - - 4 - 2 - - 4 -

8.

1 7 ,  
 2,4,8,10- } 2,2- - 3,9- [2- {3- (3-t- -4- -5- ) } -1,1- ]-  
 [5.5] , - {3- (3-t- -5- -4- ) }  
 {3- (3,5- -t- -4- ) }

9.

1 8 ,  
 0.65

10.

1 9 ,  
 가

11.

1 10 ,  
 2 가

12.

1 11 ,  
 가

13.

1 12 ,  
 가

14.

1 13 ,

가

15.

1 14 , , , 가

16.

1 15 , 가

17.

1 16 ,

18.

1 17 , 0.01meq/g

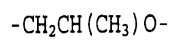
19.

1 18 , 0.01meq/g

20.

(a) 1 ;

( 1)



(b) ;

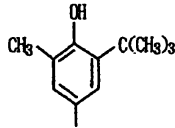
(c) UV , 23 50%RH 3  
0.50

21.

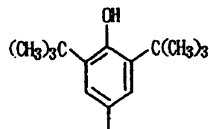
15

가 3 4

( 3)



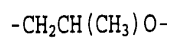
( 4)



22.

( ) (a) 1 ;

( 1)



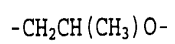
(b) ;

(c) UV

23.

(a) 1 ;

( 1)



(b) ;

(c) UV .