

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

(51) 。 Int. Cl. ⁷ (11) 2002 - 0008058
C07C 211/00 (43) 2002 01 29

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(22) 2001 07 18

(30) 09/619,320 2000 07 19 (US)

(71) .
(19898) 1007

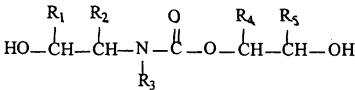
(72) ,
- 39

(74)
:

(54) 3

a) 5 - 2 3
II , b) 2

< II >



R₁ R₂ , , , R₆ - O - R₆ - CO - O - ;
R₆ , 18 ;

R_4 R_5 ;
 R_3 () , HO - CH(R_1) - CH(
 R_2) - .

, 3 , ,

,
 (가 (, 80) () 1 -
 가 가 가) 2 - (

US 4,485,228 4,540,766
 US 4,485,228 2 - 가
 , US 4,540,766 가 1 -

US 4,543,405 , US 4,540,771 4,605,724 ,

EP 0 661 316 EP 0 866 082 2
 / ,
 가 가 2 -
 가
 . US 5,130,405 US 5,175,227 1,3 -

EP 0 767 226 , EP 0 767 228 , EP 0 767 231 , EP 0 767 229 , EP 0 767 232 EP
0 767 227 가 가

< I >

- O - CO - NH - R

, R , C1 - C4 , 1 (R=)
, 2

US 4,820,830

2

US 4,883,854 2 가

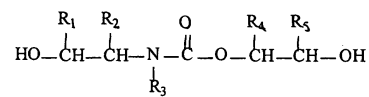
2

가 가 . US 4,542,173 2 가 가
가 - 가 . US 5,175,231 가

, 가 1 가 (VOC),

a) 5 - 2 3
II , b) 2

< II >



R₁ R₂ , , R₆ - O - R₆ - CO - O - ;

R₆ , 18 ;

R_4 R_5 ;

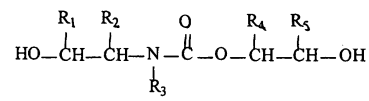
R_3 () , HO - CH(R_1) - CH(R_2) - .

< >

가 3

. 2 가 3 II .

< II >



,

R_1 R_2 , , R_6 - O - R_6 - CO - O - ;

R_6 , 18 ;

R_4 R_5 ;

R_3 () , HO - CH(R_1) - CH(R_2) - .

; R_4 H ; R_5 H, CH_3 , R_1 CH_3 H ; R_2 H , R_3 HO - CH(CH_2) - CH_2 - CH_3 (CH_2)₃ - C_2H_5 .

2 5 - . 5 -

가 . 2

, n -

, n -

1

. 2

1

3

n -

, i -

(Shell)

가

C9

C10

, n -

, t -

가

200, 40 150 가 .
, n - , s - , t - , n - , i - , n - , 2 - ,
, , Solvesso () 100, So
lvesso () 150, Solvesso () 200 ((Exxon Corporation)),
(mineral spirit), n - , n - , i - , t - ,
2 - , n - n -
가 .

3), (, (, (, ,)

W) 4,4' - , 4,4' - , 3,3',5- 가 (Bayer AG) Desmodur (),
가 (, NCO NCO 4),

[illegible]

가 80 가 2 - . 2
가 가 .

가 , , 가 .
< >

105 1
가 가 가 - (Gardner - Holdt tube)

1 3: 3
(g) , 가 (mantle) 가 500 Mℓ 가가

[1]

	1	2	3
	133	133	133
	90		
		104	
			118
	92	98	104

1 126 , 2 140 , 3 143 . 12 가
1 16, 2 19, 3 16 . 1 1 1 2 2
가 2 3 2

4 8:

1 , , 가 1 ℓ , 1 2
a - Huls) IPDI T - 1890 가) (IPDI , - (Creanov
(Bayer AG) Desmodur () 3390 가) 가 , (HDI ,
IR 가 2200 cm - 1 1
g . 3:1 .

[2]

	4	5	6	7	8
1:					
1	315		315		
2		335		335	
3					335
	100	100			100
2:					
IPDI	350	350			350
HDI			210	210	
()	11	15	60	60	18
%	60.3	59.4	69.6	68.5	63.9
가 -	T+1/2	R -	X	U+1/2	Y - 1/4
	2100	1900	3300	2700	2000
	4300	3300	10400	6400	3400
	2	1.7	3.4	2.4	1.7

1 4:

4 7 , 3

1 1,2 1

+ - 270 623 (TMP) (TMP/ = 1/3)

(Perstorp) Polyol () TP 30 .

3,4 , 2 + - 311 542 TMP (TMP/ = 1/

3) Polyol () TS 30 .

[3]

	1	2	3	4
Polyol () TS30	93.3	93.3		
Polyol () TP30			81	81
IPDI	105			105
HDI		63	63	
	40	58	52.7	34.7

9:

1 3 , n - 117 n - 52

104 . 10 110 가 , 가 16 .

5:

1 3 , US 4,820,830 n - 46

75 90 . 5 가 ,

가 10 .

10 11:

9

4 8 , (IPDI , - (Creanova -
Huls) IPDI T - 1890 가) 1050 (10) (HD
I , Desmodur () 3390 가) 630 (11) n - 119
(10) 299 (11) 9 819 .

[4]

:	10	11
:	69.3	67.2
:	Z6 - 1/4	Z4 - 1/4
	2500	3700
	7400	9800
	3	2.6

6 7: 5

10 11 , 9 819 n - 63 (6) 193 (7) 5 633 .

9:

1 n - 25% (HDI , Desmodur () 3390 가) 3 n - .

12: 3

12 2 , Terathane () 1000 (Dupont)) 1000 g 599.86 g (+18 g) 0.14 g 444 g . %가 3.7%가 50 1 266 g 가 114 g .

[5]

:	12
	70.5
	Z2
	5000
	7900

13: 3

13 Terathane () 1000 1000 . 3.5% .

[6]

:	13
	69.5
	G+1/3
	2100
	3200

14: 3

13 Terathane () 1000 (Enichem) Ravecarb () 102
1000 4%

[7]

:	14
	70.8
	Y
	3400
	7700

15 16: 2 -

().

[8]

	15	16
1	83.29	83.29
	4.47	4.47
1	2.36	2.36
3 -	3.43	3.43
	0.68	0.68
	0.3	0.3
Byk 306 ((Byk chemie))	0.05	0.05
Byk 332 ()	0.1	0.1
Byk 361 ()	0.2	0.2
1%	1.49	1.49
	0.25	0.25
Tinuvin 292 ((Ciba))	0.3	0.3
Tinuvin 1130 ()	0.6	0.6
	0.3	0.3
4	106	
10		81.6
2	120	82
1. Solvesso () 100 (), =18/22/10 47.7%, OH =145, = 80002. Desmodur () 3390 () 12.8%		

/ 가 1.05 .

60

30 60 .

[9]

	15	16
20	82.5	85.2
	91.5	92.4
가	90	
(Fisher) 1 /1 ((knoops))	7.7/19.9	6.5/18.5
(Persoz) 1 /1 ((seconds))	225/347	192/330

17: 1

()

[10]

1	9.97
2	18.52
Luwipal () 018 ()	21.49
Byk 325 ()	0.12
Tinuvin () 292 ()	0.51
Tinuvin () 1130 ()	1.02
Irganox () 1010 () (30%)	0.35
Rheomet () TTA () (33%)	0.17
(/ 15/50 35%)	1.31
4	28.86
	5
Solvesso () 100	10.68
Solvesso () 150	2
1. Solvesso () 100 (), Solvesso () 150 () = 18/16, OH = 145, = 60002. - (sag) / = 2/1 (- 5% Solvesso () 100/Solvesso () 150 = 63/24 55.7%) 가	

Solvesso () 100/Solvesso () 150가 1/1
60

30 145

24

[11]

20	91.7
()	16.3
()	221
	5
(10%)	

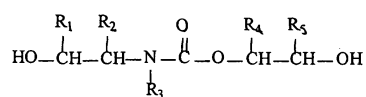
(57)

1.

a) 5 - 2 3
II ,

b) 2 .

< II >



,

R_1 R_2 , , , $R_6 - O -$ $R_6 - CO - O -$;

R_6 , 18 ;

R_4 R_5 ;

R_3 () , HO - CH(R_1) - CH(R_2) - .

2.

1 , 2 ,

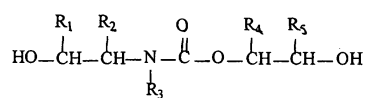
.

3.

a) 5 - 2 3
II ,

b) 2 .

< II >



,

R_1 R_2 , , , $R_6 - O -$ $R_6 - CO - O -$;

R_6 , 18 ;

R_4 R_5 ;

R_3 () , HO - CH(R_1) - CH(
 R_2) - .

4.

3 , 2 ,

5.

3 ,
 .