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(12)

(KR)
(A)

(51) 。 Int. Cl.⁷
C08G 69/48

(11)
(43)

10-2004-0012826
2004 02 11

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| (86) | PCT/EP2002/005149 | (87) | WO 2002/92664 |
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| (30) | 10123733.2 | 2001 05 15 | (DE) |
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| | , 67112 | - | | 43 |
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(74)

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(54) 2,6-

b) 2,6-

, 2,6- , , CIELAB,

a)

b) 2,6-

(yarn)

(:)

[Ullmann's Encyclopedia of Industrial Chemistry, 5th ed., vol. A10, VCH Verlagsgesellschaft mbH, Weinheim, Germany, 1987, pp. 567-579]

(solid shade)

2 3가

가

가

가

가

가

가

3

DIN 75202(1996 5

DIN 2

A)

a)

), -6,6(

), -7(

), -4,6(

), -11(

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-6(-6,10(

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가

(

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((KEVLAR, (NOMEX,) , US-A-3,287,324) -) () , US-A-3,671,542)

2가

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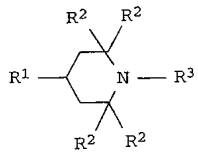
가

DE-A-14 95 198 , DE-A-25 58 480 , EP-A-129 196 [Polymeri
 zation Processes, Interscience, New York, 1977, pp. 424-467, pp. 444-446]

- C₂ C₂₀, C₂ C₁₈ (: ,)
- C₂ C₂₀, C₃ C₁₈ (: 6- 11- (: ,) ,)
- C₂ C₂₀, C₃ C₁₈ (: 6- 11-
- C₂ C₂₀ (: 6- 11-)
- C₂ C₂₀, C₃ C₁₈, n- , i- , n- , i- s- C₁-C₄ 6- (: 11-)
- C₂ C₂₀, C₂ C₁₄ (:) C₂ C₂₀, C₂ C₁₂ (: ,)
- C₈ C₂₀, C₈ C₁₂ (:) C₂ C₂₀, C₂ C₁₂ (: ,)
- C₉ C₂₀, C₉ C₁₈ C₂ C₂₀, C₂ C₁₂ (:)
- C₂ C₂₀, C₂ C₁₄ (: m- p-) C₆ C₂₀, C₆ C₁₀ (: m-
- C₈ C₂₀, C₈ C₁₂ (:) C₆ C₂₀, C₆ C₁₀ (: m- p-
- C₉ C₂₀, C₉ C₁₈ C₆ C₂₀, C₆ C₁₀ (:) C₆ C₁₀ (: m-
- C₂ C₂₀, C₂ C₁₄ (:) C₇ C₂₀,

:

< >



R¹ C₁-C₈ (R⁵), -(NH)R⁵ (R⁵), -(CH₂)_x(NH)R⁵ (x 1 6), -(CH₂)_yCOOH (y 1 6), -NH₂

R² C₁-C₄ (n-, i-, n-, i-, s-),

R³ C₁-C₄ O-R⁴ (R⁴ C₁-C₇) , 3 , 2 가

4- -2,2,6,6-

.05 % , 0.1 % 1 0.01 % , 0

(II) 1 0.8 % , 0.6 % , 0.4 %

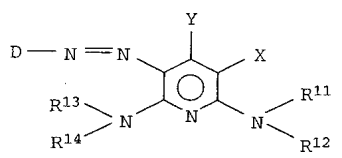
100 0 5 , 0.02 2 가

23 WO 99/48949 , EP-A-822 275 , EP-A-843 696 WO 95/28443 , WO 97/05189 a) WO 98/50610 , WO 99/463 10030515.6 , 10030512.1

a) b) 2,6-

b) 2,6- :

< >



R¹¹ R¹³ , /

C_1-C_8- , $i-$, $n-$, $n-$, $i-$, $s-$, $n-$, $n-$, $2-$, $COOH, C_2-C_6-$, $C_1-C_{10}-$, C_1-C_8- , $OH, =O, C_1-C_8-$ 가

C_8- , $OH, =O, C_1-C_8-$, $COOH, C_2-C_6-$, $C_1-C_{10}-$, C_1-

$(4n+2) - (n=0, 1, 2, 3)$, C_1-C_8- , $i-$, $n-$, $n-$, $2-$, $1, 2, 3, 4$ (:)

C_8- (: , $i-$, $n-$, $n-$, $i-$, $s-$, $n-$, $n-$, $n-$, $n-$, $2-$, $OH, =O, C_1-C_8-$, $COOH, C_2-C_6-$, $C_1-C_{10}-$, C_1-C_8-)가

$(4n+2) - (n=0, 1, 2, 3)$, $1, 2, 3, 4$

C_1-C_8- (: , $i-$, $n-$, $n-$, $i-$, $s-$, $n-$, $n-$, $n-$, $n-$, $2-$, $OH, =O, C_1-C_8-$, $COOH, C_2-C_6-$, $C_1-C_{10}-$, C_1-C_8-)가

$R^{12} R^{14} / R^{12} R^{14}$

C_1-C_8- , $i-$, $n-$, $n-$, $i-$, $s-$, $n-$, $n-$, $2-$, $COOH, C_2-C_6-$, $C_1-C_{10}-$, C_1-C_8- , $OH, =O, C_1-C_8-$ 가

$OH, =O, C_1-C_8-$, $COOH, C_2-C_6-$, $C_1-C_{10}-$, C_1-C_8- 가

$(4n+2) - (n=0, 1, 2, 3)$, C_1-C_8- , $i-$, $n-$, $n-$, $2-$, $1, 2, 3, 4$ (:)

C_8- (: , $i-$, $n-$, $n-$, $i-$, $s-$, $n-$, $n-$, $n-$, $n-$, $2-$, $OH, =O, C_1-C_8-$, $COOH, C_2-C_6-$, $C_1-C_{10}-$, C_1-C_8-)가

C_8- (: , $i-$, $n-$, $n-$, $i-$, $s-$, $n-$, $n-$, $n-$, $n-$, $2-$, $OH, =O, C_1-C_8-$, $COOH, C_2-C_6-$, $C_1-C_{10}-$, C_1-C_8-)

(4n+2) - (, n 0 , 0, 1, 2 3)
 3 4 (: ,)
 , n- , n- , 2- -) , OH, =O, C 1 -C 8 - , COOH, C 2 -C 6 - , C 1 -C 10 -
 C 1 -C 8 - (: ,) , (: ,)
 : , ,) , 가 (, , i- , n- , n- , i- , s- , n- , n- , n- , n- ,
 C 1 -C 8 - (: , , i- , n- , n- , i- , s- , n- , n- , n- , n- ,
 2- -) , OH, =O, C 1 -C 8 - , COOH, C 2 -C 6 - , C 1 -C 10 - C 1 -C
 8 - (:) , (: , ,)

R 11 R 12 R 13 R 14
 (N-) (: N-)

- , 2- , R 11 R 13 , R 12 R 14 2- , 3- -n
)- , 3- -n- , 2- - , 2-(p-)- , 2-(p- -n

X

C 1 -C 8 - , , i- , n- , n- , i- , s- , n-
 , n- , n- , n- , 2- - , COOH, C 2 -C 6 - , C 1 -C 10 - , OH, =O, C
 1 -C 8 - (: ,)가

C 8 - , OH, =O, C 1 -C 8 - , COOH, C 2 -C 6 - , C 1 -C 10 - C 1 -
 (: ,)가

/ C 1 -C 8 - , , i- , n-
 , n- , i- , s- , n- , n- , n- , n- , 2- -)
 (4n+2) - (, n 0 , 0, 1, 2 3)
 1 , 2, 3 4 (:
 C 8 - (: , , i- , n- , n- , i- , s- , n- , n- , n- , n- , 2-
 -) , OH, =O, C 1 -C 8 - , COOH, C 2 -C 6 - , C 1 -C 10 - C 1 -C 8 -
 가 (: ,) , (: ,) ,
 : , ,) , 가 (C 1 -C 8 - (: , ,)
 C 8 - , i- , n- , n- , i- , s- , n- , n- , n- , n- , 2- -) , OH, =O, C 1 -
 (: , COOH, C 2 -C 6 - , C 1 -C 10 - C 1 -C 8 -)
 (: ,) , (: ,)

(4n+2) - (, n 0 , 0, 1, 2 3)

3 4 (: ,)
 , n- , n- , 2- -) , OH, =O, C 1 -C 8 - , COOH, C 2 -C 6 - , C 1 -C 10 -
 C 1 -C 8 - (: ,) , (: ,)
 : , ,) , 가 (, , i- , n- , n- , i- , s- , n- , n- , n- , n- ,
 C 1 -C 8 - (: , , i- , n- , n- , i- , s- , n- , n- , n- , n- ,

a) b)가 , b)
 (:) a) , (, -), 3 (,
 (,) 가 .
 b)가 a) , 1 (, (,
) , (b) , -), 3 (,
 b) b) .
 b) a) , b) 가 a)
 b) a) ,

DIN 51562-1 -4 96%

500mg 50Mℓ , 96 %

(Ubbelohde) No. II

3

0.3

25 ± 0.05

가

(RV)

$$RV = T/T_0$$

(, T

() , T₀

()

7:3(w/w)

25Mℓ

1g

/

(70

% 1.72Mℓ, 1000Mℓ

100Mℓ

0.1g

50Mℓ

100Mℓ)

0.05g

1kg

(1)

4-

-2,2,6,6-

0.12 % (

-6

가 2.77 ,

가 34meq/kg

(1)

가 2.80 ,

가 44meq/ kg

-6,6

(1)

(1)

0.3 %

(1)

(1)

(

(1)

6.7dt

ex 60%/13dtex 40%,

, 54

(stitch)/10cm

(pile)

6.7dtex 60%/11dtex 40%)

260g/m²

가

(8)

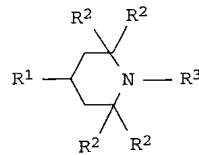
1/10'

(1)/ 3 (1) 3
 (1)/ 3 (1) 3
 (1)/ 3 (1) () 3 (2) 3
 (1)/ 3 (1) () 3 (2) 3

(57)

a) 1. b) 2,6-

2.



1 , 가 , R² , R³ , C₁-C₄ (, R¹ O-R⁴ (, R⁴ C₁-C₇)) .

3.

2 , R¹ -(NH)R⁵ (, R⁵ C₁-C₈) ,
 -(CH₂)_x (NH)R⁵ (, x 1 6 , R⁵ C₁-C₈) , -(CH₂)_y COOH (, y 1 6) ,

4.

2 3 , R¹ NH₂ .

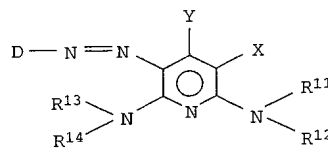
5.

2 4 , R² 가 .

6.

1 5 , 가 4- -2,2,6,6-

7.



1 6 b)가 2,6-
 (, R¹¹ R¹³ , / , R¹¹ R¹² R¹³ R¹⁴ , R¹²
 R¹⁴ , X , D) , Y

