

(19)  
(12)

(KR)  
(B1)

(51) 。 Int. Cl. <sup>6</sup>  
C08K 5/09

(45)  
(11)  
(24)

2002 06 20  
10 - 0323217  
2002 01 22

(21) 10 - 1994 - 0007756  
(22) 1994 04 13

(65) 1994 - 0023953  
(43) 1994 11 17

(30) 08/047,724 1993 04 14 (US)

(73)

44092 - 2298 29400

(72) 44224 3125

(74)

:

(54)

(a)

6

(c)

(b)(a)

6

6

가

, 가

(非相溶性, incompatibility)

가

가

. 1978.

7. 28 2,376,178

Zn, Ca, Pb

가

1954 2 Darby 2,669,549  
PVC PVC

1978 , 10 31 , Gay 4,123,399 - 400  
PVO +

1990 5 22 , 1992 4 7 Bae 5,102,933 10  
, PVC

(a)

6

(a); (a)

6

: (c)

(a)

6

; (b) (a)

6

RCOOH, R, 1, 6, 6, 6, 22, )

18, 가 30, 50, 8, 400

Kirk - Othmer " 3, 1978. John Wiley & Sons New York, pp. 814 - 871

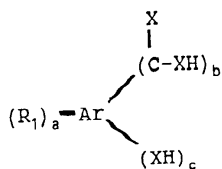
14, 20, 4, 10-, 3-, 8-, 6, 20, )

30, 35, 50, 300, 20, 150, 500, 5000, 800, 2500 Mn ( ), 50, 0, 0, , Mm 500, 1200, 1300

2, 16, 가, 1-, 1-, 1,3-, 2, 6, 2, 4, 4, 50%가

(Mn = 200 - 1500, 300 - 1000), (Mn = 200 - 1000, 300 - 900), 9-

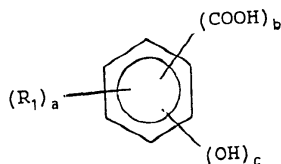
$(\text{CH}_2\text{CH}_2\text{O})_5\text{CH}_2\text{CO}_2\text{Na}$ ;  $-\text{O}-(\text{CH}_2\text{CH}_2\text{O})_{2.5}-\text{CH}_2\text{CO}_2\text{H}$ ;  $-\text{O}-(\text{CH}_2\text{CH}_2\text{O})_{3.3}-\text{CH}_2\text{CO}_2\text{H}$ ;  
 $-\text{O}-(\text{CH}_2\text{CH}_2\text{O})_4-\text{CH}_2\text{CO}_2\text{H}$ ;  $-\text{O}-(\text{CH}_2\text{CH}_2\text{O})_{4.5}-\text{CH}_2\text{CO}_2\text{H}$ ;  $-\text{O}-(\text{CH}_2\text{CH}_2\text{O})_{10}-\text{CH}_2\text{CO}_2\text{H}$ ;  
 $-\text{O}-(\text{CH}_2\text{CH}_2\text{O})_{16}-\text{CH}_2\text{CO}_2\text{H}$ ;  $-\text{O}-(\text{CH}_2\text{CH}_2\text{O})_8-\text{CH}_2\text{CO}_2\text{H}$ ;  $-\text{O}-(\text{CH}_2\text{CH}_2\text{O})_{19}-\text{CH}_2\text{CO}_2\text{H}$ ;  
 $-\text{O}-(\text{CH}_2\text{CH}_2\text{O})_6-\text{CH}_2\text{CO}_2\text{H}$ . (Sandoz Chemical) Sa  
 ndopan™



$(\text{R}_1)_a - \text{Ar} - (\text{C-XH})_b - (\text{XH})_c$

$\text{R}_1$  : 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862, 863, 864, 865, 866, 867, 868, 869, 870, 871, 872, 873, 874, 875, 876, 877, 878, 879, 880, 881, 882, 883, 884, 885, 886, 887, 888, 889, 890, 891, 892, 893, 894, 895, 896, 897, 898, 899, 900, 901, 902, 903, 904, 905, 906, 907, 908, 909, 910, 911, 912, 913, 914, 915, 916, 917, 918, 919, 920, 921, 922, 923, 924, 925, 926, 927, 928, 929, 930, 931, 932, 933, 934, 935, 936, 937, 938, 939, 940, 941, 942, 943, 944, 945, 946, 947, 948, 949, 950, 951, 952, 953, 954, 955, 956, 957, 958, 959, 960, 961, 962, 963, 964, 965, 966, 967, 968, 969, 970, 971, 972, 973, 974, 975, 976, 977, 978, 979, 980, 981, 982, 983, 984, 985, 986, 987, 988, 989, 990, 991, 992, 993, 994, 995, 996, 997, 998, 999, 1000.

Ar 가



$(\text{R}_1)_a - \text{C}_6\text{H}_3(\text{COOH})_b(\text{OH})_c$

가 8 14 22  
 18  
 가 6 ;  
 2 8 18  
 가

(b) (a) (a)  
 (C.A.S.) IIb  
 가

가 0.1:1 15:1 0.5:1 4:1

가 (a) (b)  
 ( ) ( )  
 가

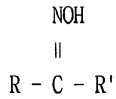
8 30 1가 가  
 10 1가 1가

4.5 1 4.5 2 8 3.5  
 가

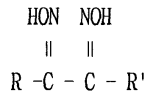
2,501,731; 2,616,905; 2,616,911; 2,616,925; 2,777,874; 3,256,186; 3,384,585, 3,365,  
396; 3,320,162; 3,318,809; 3,488,284; 3,629,109

가 , , 가 , 가 가  
X Y 가 , AY XB 가 A B 가

; , O- ; , , ;  
, 1,8- ; ; ;  
; - - - - ; - ;  
; ;



( R R' (R R' 가 ) . )  
;



가 ;  
가 , R -CH<sup>3</sup> , R' -H  
R -CH<sub>3</sub> R' QH

가 R R'

R R'

( , )

, R R' 가

R+R'

R R' 1 6  
7 , R

( ),

( )

가

4,326,972

가 ; 가 가  
가 가 가 4-12

가

%

8 70,

15 40,

25

90,

18

30

84,

68

80

%

3 %

0.01

10,

55

0.1 5,

0.5

3%

, 가

가 ,

, ( Zn) 가 .  
. 가

가 가  
;  
/

가 HC1  
가

" " " "

1

, 903 ( ), /1  
483 , 191 , 153 ( ) 1000  
가 . 82 - 87 1 . 40 - 46 . 442 )  
119 가 . 40 - 46 ( 442 )  
가 242 3 가 . 가 ,  
150 , 66 . 150  
9.3 kPa (70 mmHg ) 가 가 ( )  
175 ). 14 % Ca TBN400 . (TBN  
, (56,100 mg KOH) × 가 / , mg KOH/g ).

2

1 85.4 1 13.6  
( / " 22% Zn Hex - Cem <sup>TM</sup> "  
22 % Zn) 가 . ( )

3 ( )



4 - 7

:

실시예	실시예 1의 Ca Zn 옥토에이트 혼합물(wt.%)	옥토에이트 (wt. %)	중량비 Ca/Zn	메틸 에틸 케톡심(wt. %)
4	43.6	55.4	0.5	1
5	60.5	38.5	1.0	1
6	75.1	23.9	2.0	1
7	85.4	13.6	4.0	1

8 - 18

:

실시예	염 1		염 2		착화제	
	유형	%	유형	%	유형	%
8	Ca (실시예 1)	96.8	Zn 옥토에이트	3.1	MEKO <sup>a</sup>	0.1
9	Ca (실시예 1)	75.1	Zn 옥토에이트	23.9	MEKO	3.0
10	Ca (실시예 1)	21.6	Zn 옥토에이트 <sup>b</sup>	68.3	MEKO	10.0
11	Ca (실시예 1)	75.1	Zn 옥토에이트	23.9	아세트알독심	0.5
12	Ca (실시예 1)	75.1	Zn 옥토에이트	23.9	에틸 프로필 케톡심	2.0
13	Ca (실시예 1)	75.1	Zn 옥토에이트	23.9	벤즈알독심	1.0
14	Ca (실시예 1)	62	Ba 데카노에이트	36	MEKO	2.0
15	Ca (실시예 1)	68	Cd 옥타노에이트	30	MEKO	2.0
16	Ba <sup>c</sup>	84	Zn 옥토에이트	15	MEKO	1.0
17	Ba <sup>c</sup>	80	Zn 스테아레이트	19	MEKO	1.0
18	Ca <sup>d</sup>	75	Zn 옥토에이트	24	MEKO	2.0

a MEKO =

b 18 %

c 31 % 35 % , 1 C<sub>12</sub> - C<sub>20</sub>

d , 1 /1 , CO<sub>2</sub> 가가 ,

19

1 60 , 17 19 , 20 ,  
1

20

( 가 ) 96 2 4

“ ” ‘ ’  
“ ” ‘ ’  
“ ” ‘ ’

(57)

1.

:

(a) 6

(b) (a) 6 ;

(c) , , , , , - , -  
, , , .

2.

1 , 가 .

3.

1 , 가 0.01 10 % .

4.

1 , , , .

5.

1 , (a)가 8 .

6.

1 , .

7.

1 , .

8.

6 (a) 6 , (b) (a) - , , , , , - , , .

9.

8 , 가 .

10.

8 , 가 0.01 10 % .

11.

8 , , , .

12.

8 , .

13.

8 , .

14.

- 1 7 .

15.

14 , - 100 1 10 .