

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

(51) 。 Int. Cl.7
C08J 9/14

(11)
(43)

10-2004-0007667
2004 01 24

(21)	10-2003-7016080		
(22)	2003 12 08		
	2003 12 08		
(86)	PCT/US2002/018188	(87)	WO 2002/100997
(86)	2002 06 10	(87)	2002 12 19

(30) 60/297,200 2001 06 08 (US)

(71)

101

(72)

,	14206,	,	101
,	14085,	,	5983
,	14228,	,	136
,	14226,	,	18
,	14051,	,	6202

(74)

:

(54) , -

1,1,1,2- , 1,1,1,3,3- -245fa 2- , , 가

2001, 6, 8 가 60/
 297,200

, 1,1,1,3,3- , 2- - .

, , , 가
 ('CFC's') ('HFC's') ('HCFCs')

CFCs HCFCs -

[]

1 1,1,1,2- , 1,1,1,3,3- , 2-
 3

CFCs HCFCs 가 ('
 HFC-245fa'), 2- , 1,1,1,2- ('HFC-134a'), 1,1,1,3,3-

CFC's HCFC's (0)
 ('HFC-245fa') 2- 1,1,1,2- CFC HCFC , 1,1,1,3,3-

가 가 1 가 1

가 , 1 가
 가
 , A B 가 / 가
 가
 1,1,1,2- , 1,1,1,3,3- , 2- , 1,1,1,2- , 1,1,1,3,3-
 , 2-
 , HFC-134a 10-98 , HFC-245fa 1-60 , 2- 1-60
 4.61psia - 25.80 ± 4 , -25.80 ± 2 , -25.80 ± 1
 가 1 1

[1]

	(%)	(%)	가 (%)
HFC-134a	10-98	40-98	80-98
HFC-245fa	60-1	30-1	10-1
2-	60-1	30-1	10-1

CFCs HCFCs

가 (closed)

'Polyurethanes Chemistry and Technology,' Volumes I II, Saunders Frisch, John Wiley and Sons, New York, NY

'A'

1

HFC-245fa 0.1-30 %, 2- 9-10 %
 1 2 3 / - 1

[2]

134a %	245fa %	2- %	%	14.61psia ()
100.00	0.00	0.00	0.00	-25.51
98.60	1.64	0.00	0.00	-25.70
92.85	7.15	0.00	0.00	-25.70
92.73	7.14	0.13	0.00	-25.70
92.50	7.12	0.38	0.00	-25.72
92.27	7.10	0.63	0.00	-25.75
92.04	7.09	0.88	0.00	-25.80
91.81	7.07	1.13	0.00	-25.80
91.35	7.03	1.62	0.00	-25.80
90.89	7.00	2.11	0.00	-25.78

1 2

2

100g
 100g

HFC-134a, HFC-245fa,
 4,4'

2g

가

152g

380

3g

15g

3

#1 , Ter
 ate 2541, , Tegostab B8433 , Dabco K-15 Polycat 8 3
 2kg 1- Conn 2' ITC
 1500rpm 32 1- 32oz.
 32 70 A-

[3]

(pbw)	
Terate 2541 ¹	100.00
Tegostab B8433 ²	2.00
Polycat 8 ³	0.25
Dabco K-15 ³	2.80

HFC-245fa/HFC-134a/	38.00
Lupranate M70L 4	150.10
	250

1 COSA ; =240

2 GoldschmidtChemical Company

3 Air Products amp; Chemicals Inc.

4 2) 40 % (()); 가 = 134; BASF C
orp.

가 Conn 2' 32 , 2 B- 가 32oz. 1000rpm
가 가 가 30

A- 32 10 , B- 가 3000rpm Conn 2' ITC
10 8'x8'x4' (cream), (track free time)

24
2.0 ± 0.1 lb/ft³

ASTM C518 k-

(57)

1. 2- , 14.57psia 1-60 %, HFC-245fa 1-60 % 1,1,1,2- 98-10
% -25.80 ± 4

2. 1 98-40 % 2- 1-30 %, HFC-245fa 1-30 % 1,1,1,2-

3. 1 98-80 % 2- 1-10 %, HFC-245fa 1-10 % 1,1,1,2-

4. 1 -

5. 2 -

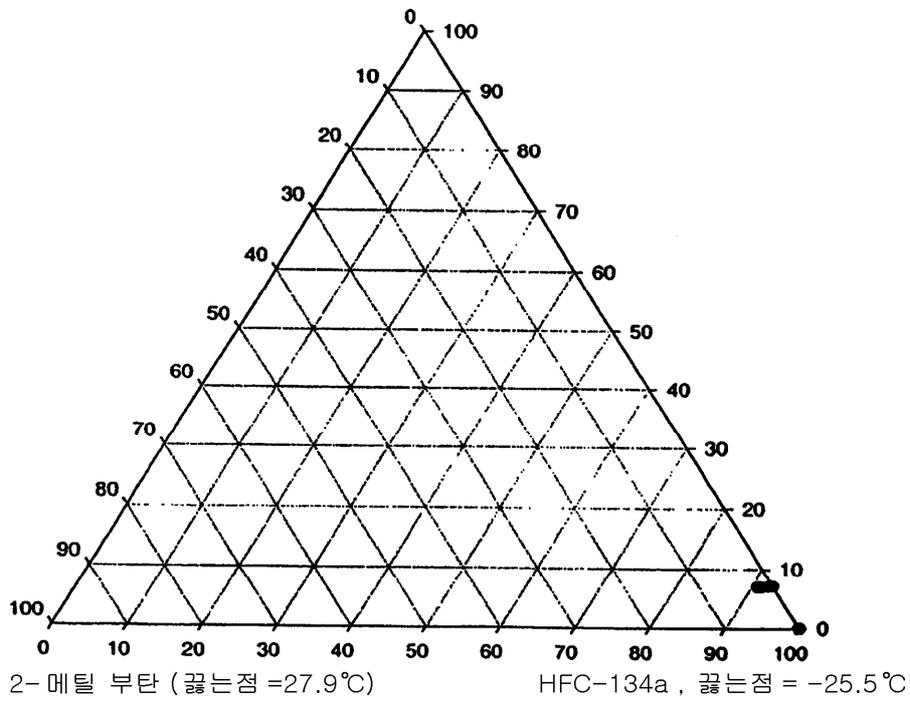
6.

- 3 - .
- 7. 1 .
- 8. 2 .
- 9. 3 .
- 10. 1 - (closed) .
- 11. 2 - .
- 12. 3 - .
- 13. 1 - .
- 14. 2 - .
- 15. 3 - .
- 16. 1 가 .
- 17. 16 , 가 가 .
- 18. 17 , 가 가 .
- 19. 17 , .
- 20. 1,1,1,2- , HFC-245fa 2- 1,1,1,2- , HFC-245fa, 2- 2-
1,1,1,2- - , 1,1,1,2-
- 21. 20 , 1,1,1,2- 2- 2-

- 22. 4 가 .
- 23. 5 가 .
- 24. 6 가 .

1

끓는점의 3원 상태도
HFC-245fa, B.P. = 15 °C



● 표시된 선에서 14.61psia에서의 끓는점은 -25.6 ~ -25.8 °C이다 .