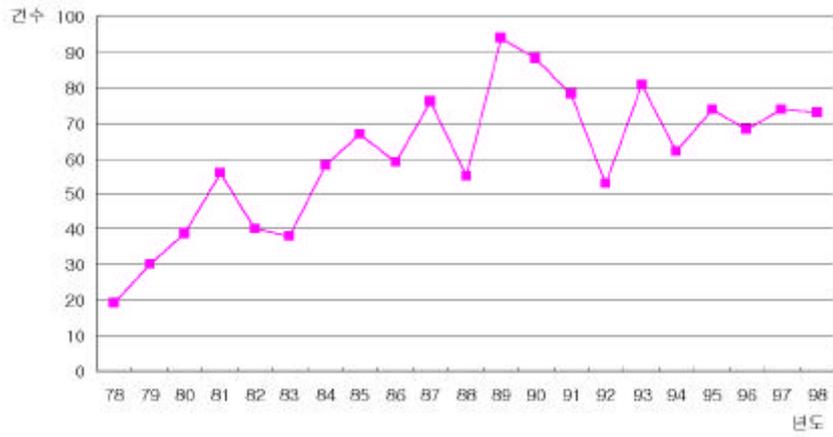


3.

, 89
70
Ciba Geigy가 1 4 ADEKA ARGUS CHEM,
SUMITOMO CHEM, ASAHI CHEM, CHISSO CORP



3-9.

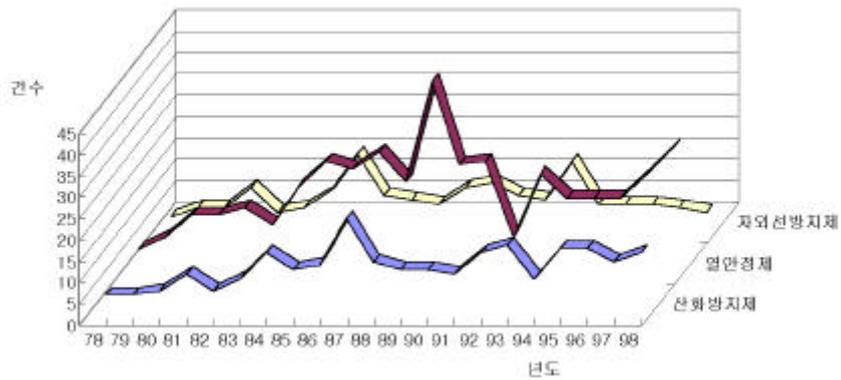
3-1.

85 가 , 93
가 , 32% .
89 , 가
42% 가 , 가
가 . 90
26% 가

3-2-3.

가 가 가 90
 가 . 89
 가
 5 KANEGAFUCHI CHEM., CHISSO, ASAHI CHEM.,
 SUMITOMO CHEM., ADEKA ARGUS CHEM.
 21%

89 가
 , 92 80 가 . 10
 20 . 87 , 80
 90 . 85
 , 93 가 5



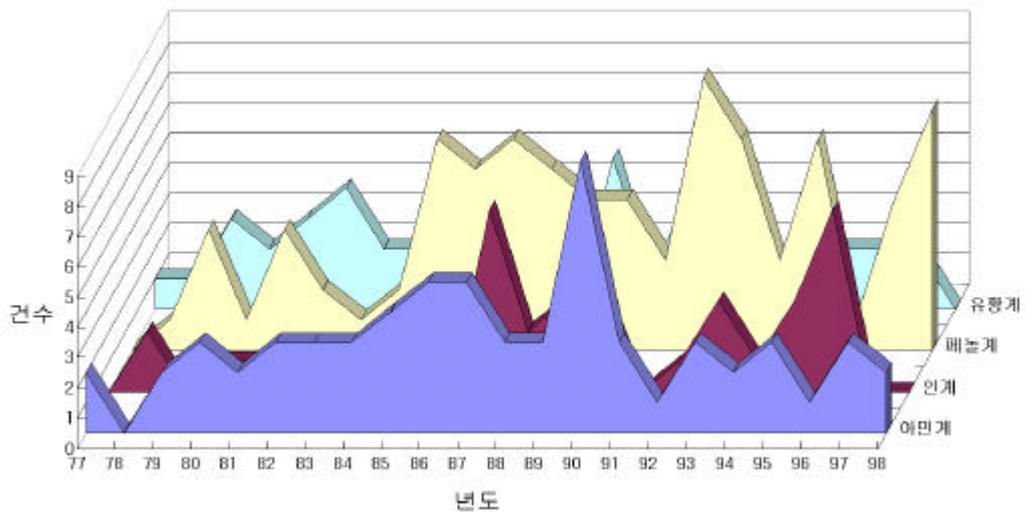
3- 13.

3-3.

3-3-1.

1
가
phenolics, bisphenolics, polyphenolics, thiobisphenolics . 2

가 가



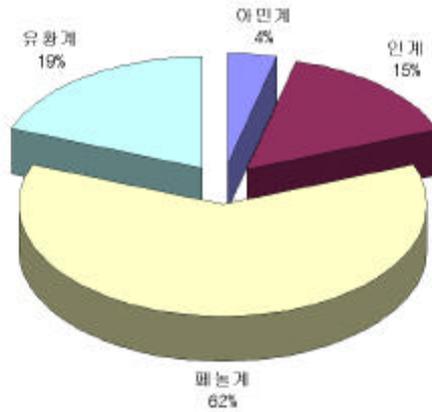
3- 14.

가

3-3-1-1.

26

가



3- 15.

, ,

ABS

(2,4- - -)

,

가 .

2

. 가

46

(; (3,5- -t- -4- -)

, 1,3,5- (3',5'- -t- -4- -)

, EVA

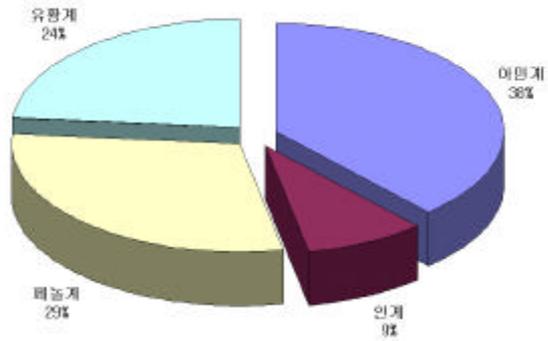
가

- tert- -4-)) (; (-3-
 .
 , - (2- -3- [1-]
) , -3- (3,5- - -4-)
 .
 / (SBR) /
 (NBR) 가
 .
 .

가

3-3-1-2.

, , 가 3
 . Goodyear Tire & Rubber Co.,
 Exxon Chemical, Uniroyal Chemical, Air Products & Chemicals, B.F.
 Goodrich Company, Pennwalt Corporation .



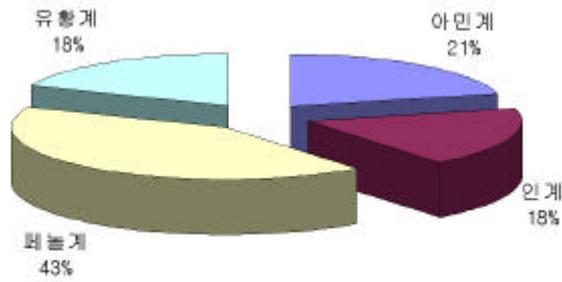
3- 16.

가 Goodyear Tire & Rubber Co. 2 가 가 , Exxon Chemical -N(H) 5, 6 , Uniroyal 가 . Goodrich 2-keto- 1,4- diazacycloalkane 가 가 Atochem North America 가 Phenolic N- (amido)imide , 2 가 . Ablemarle Corp, B.F. Goodrich Company, Goodyear Tire & Rubber Co., Uniroyal Chemical , Ablemarle Corp , B.F. Goodrich 가 ,

가 가
Co.가 9 , 가 Goodyear Tire & Rubber
Uniroyal Chemical , Standard Oil Company, Texaco Inc.,
Tire & Rubber 1978 . 가 가 Goodyear
3,6,9- trioxaundecane- 1,11-bis(3- n- dodecylthiopropionate)
Mercapto acid ester (1982) 1984
1 가 가
thioester .

3-3-1-3.

119 , 가
 , , 가
 . Chisso Corp., Hitachi Chem, JSR, Mitsui Toatsu
 , Chisso phenolic antioxidant
 , Hitachi Chem phenolic
bis(hydroxyalkyl)- benzene
 , JSR
가 .



3- 17.

Sumitomo Chem 6 가

Nippon Zeon, Polyplastics, Chisso 가

. Sumitomo Chem
가 가 가 가

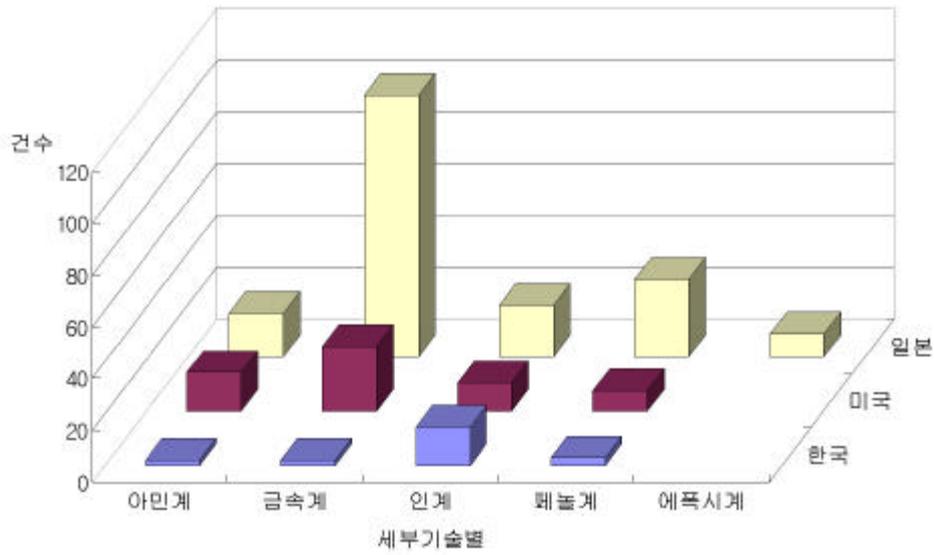
N- phenyl-N'- alkyl-p- phenylene diamine, p- aminodiphenylamine,
N- cyclohexyl-p- phenylenediamine
2,6- dimethylpiperidine naphthylamine
, Sumitomo Chem

3- 3- 2.

가 , 가

가

가



3- 18.

3- 3- 1- 1.

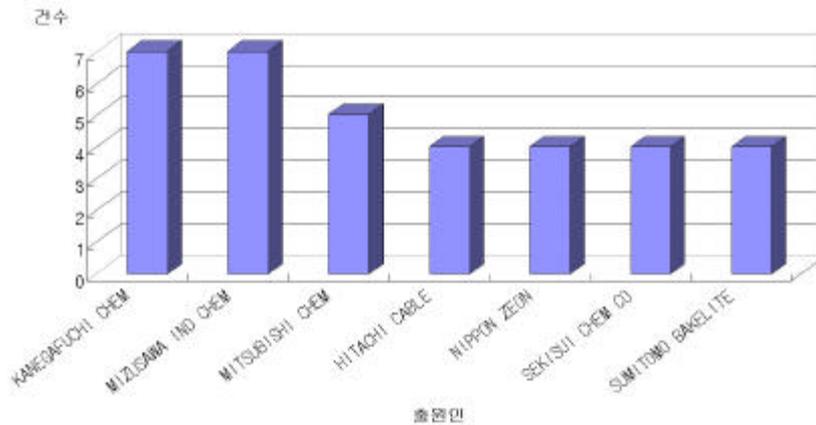
3- 3- 1- 2.

가 가 59
 , 가 42%, 가 25%, 가
 19%, 가 14% . 가 가
 , Morton Thiokol Inc., M&T Chemicals, Carstab
 Corporation . 1970 M&T Chemicals
 , 1980 Carstab Corporation mercapto
 phenol , mercapto phenol , Organic
 antimony PVC , Morton
 Thiokol zinc mercaptoesters

3-3-1-3.

가 가
가 57%, 가
177
17%, 가 11%, 가 10%, 가 5%
가
가

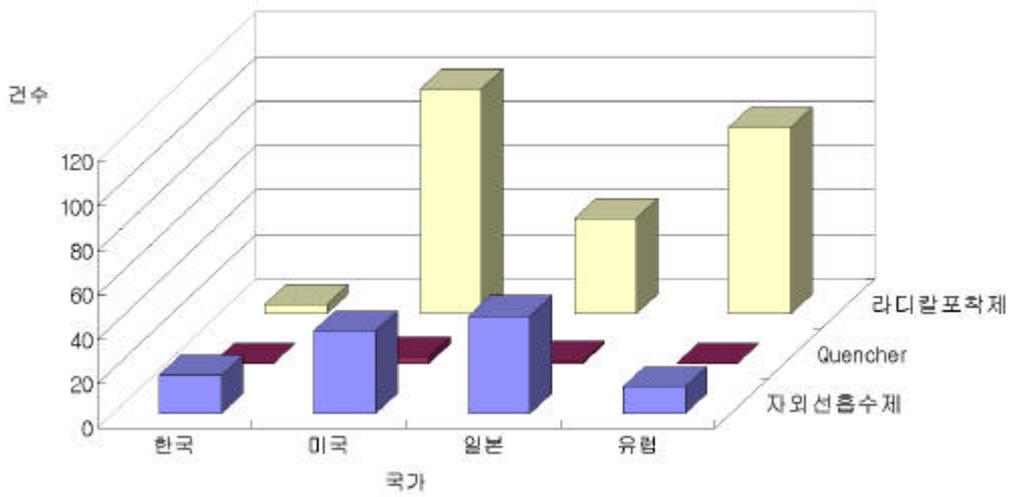
1996 Mizusawa Ind Chem
, V
가
Kanegafuchi Chem,
Mizusawa Ind Chem, Mitsubishi Chem



3- 19.

3-3-3.

, Quenchers, (HALS)



3- 20.

3- 3- 1- 1.

1998

2- (2-

- 3- () - 5-)- 2H-

(Hydroxy Benzophenone)

3-3-1-2.

가 1990

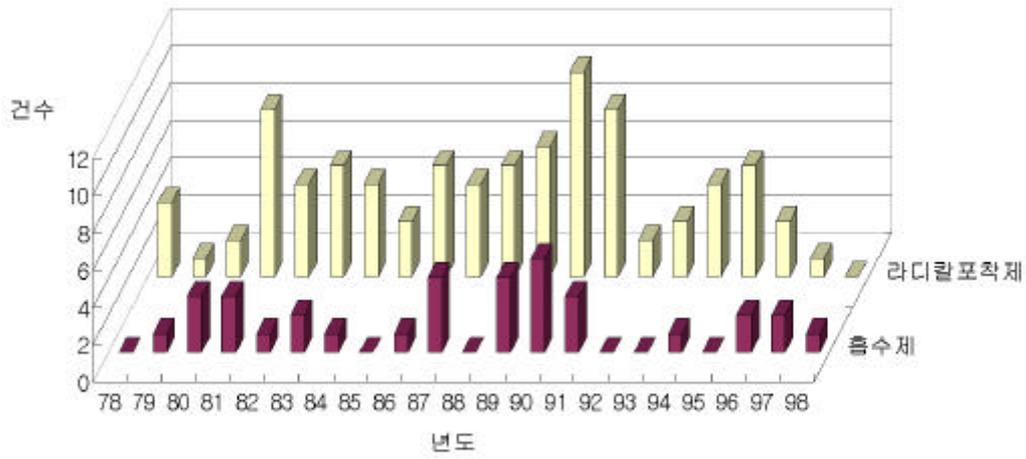
1980

가

Ciba Geigy Corp 1975

HALS

가



3-21.

3-3-1-3.

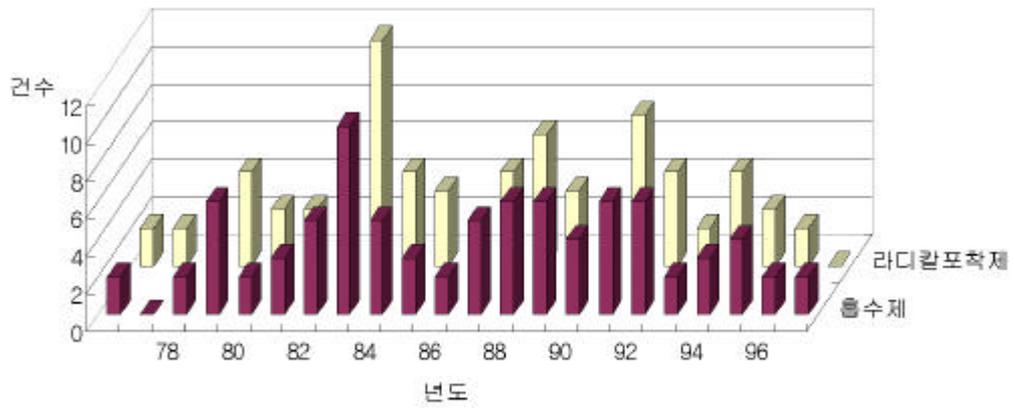
가

가

가

Adeka Argus Chem, Sumitomo Chem, Asahi Denka,
 Sankyo Co, Mitsubishi Chem
 Chisso Corp가

가



3- 22.

3- 3- 1-4.

1980

가

1990

Ciba Geigy Corp

Ciba Geigy Corp

가

Hoechst AG,

Sandoz Ltd, BASF AG

가

가

가