

<EO

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EO
EO
EO

2
가

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“ ”

EO 3 EO(Ethylene Oxide) , 가
EO , EO 가

() 12 EO/EG 8 , 91 20
HPEO(High Purified EO) 1 2000 2

, EO 3 HPEO
() 10 3 , 가
가

() 91 10 EG(Ethylene Glycol) , 가
EO HPEO , EG , HPEO
3

< 1> EO/MEG

(: , %)

			1990	1991		1992		1993		1994		1995	
EO			12,000	16,100	34.2	20,000	24.2	20,000		20,000		20,000	
				1,300		30,000		30,000		30,000		30,000	
			12,000	17,400	45.0	50,000	187.4	50,000		50,000		50,000	
		12,000	17,400	45.0	46,000	164.4	54,000	17.4	68,000	25.9	79,000	16.2	
					4,000		4,000		18,000		29,000		
MEG			71,830	95,000	32.3	200,000	110.5	200,000		200,000		200,000	
				26,000		80,000	207.7	80,000		80,000		80,000	
				3,000		100,000		100,000		100,000		100,000	
			71,830	124,000	72.6	380,000	206.5	380,000		380,000		380,000	
		440,000	480,000	9.1	554,000	15.4	582,000	5.1	610,000	4.8	641,000	5.1	
		368,170	356,000		174,000		202,000		230,000		261,000		

)

91 EO 1 7400 1 6000 ,
1300
EO 91 Glycol Ether(7000) 92
Ethanolamine(2) 가 , EOA(Ethylene Oxide
Additives) 가 가

92 EO 4 6000 ~5 1600 164~197%
 가 EO 가 EO
 EO 가
 91 EO EO EO EOA 2 400 ,
 Glycol Ether 1 400 , Ethanolamine 7400 , PPG 5500 , 1300 4 5000
 , 92 5 1600 91 14.7% 가가

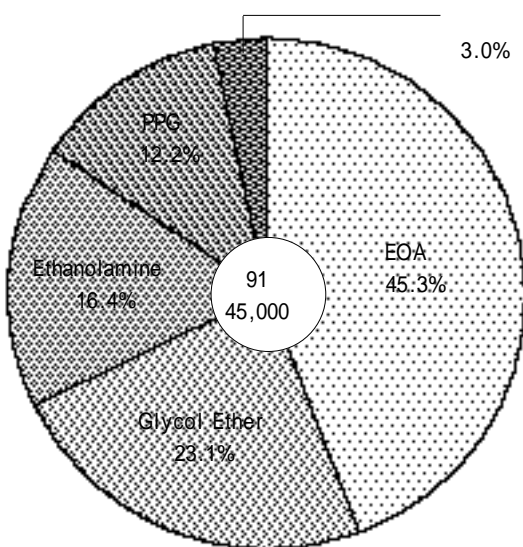
< 2> EO

(: , %)

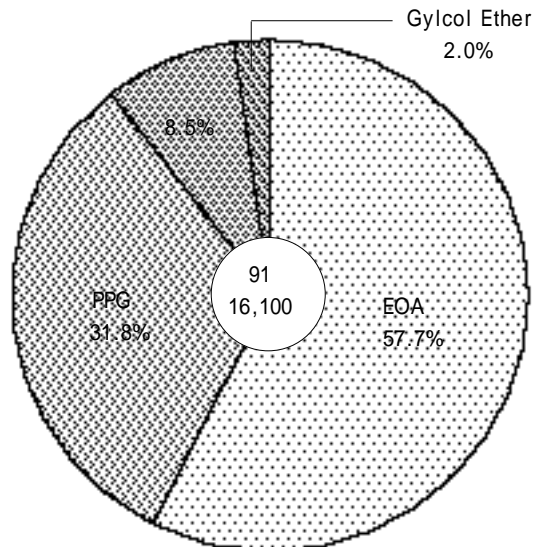
		1988		1989		1990		1991		1992()	
		12,000	12,000			12,000		16,100	34.2	18,000	11.8
		12,000	12,000			12,000		17,400	45.0	48,000	175.9
EOA)	15,400	16,400	6.5	16,600	1.2	20,400	18.1	23,700	16.2	
Glycol Ether		7,300	8,100	11.0	9,050	11.7	10,400	14.9	11,800	13.5	
Ethanol amine		5,200	5,700	9.6	6,600	15.8	7,400	12.1	8,400	13.5	
PPG		4,100	4,400	7.3	4,970	13.0	5,500	10.7	6,200	12.7	
Chlorin chloride POM	· KEP) 800	900	12.5	1,180	31.1	1,300	10.2	1,500	15.4	
		32,800	35,500	8.2	38,400	8.2	45,000	17.2	51,600	14.7	
		20,800	23,500		26,480		27,600		3,600		

) EO = + EO EO

< 1> EO



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EO 91 1 6100 PEG
 EOA 8980 57.7%, PPG 4950 31.8%, Glycol Ether 300 2.0%, 1300

8.5%

< 3> EO

(:1000 /)

	1987	1988	1989	1991
	2,991	3,109	3,210	3,500
	444	444	444	475
	128	128	278	328
	1,711	1,721	1,745	1,910
	529	529	672	754
	615	615	753	1,065
	1,566	1,593	1,641	1,807
	7,984	8,139	8,743	9,839

EO EOA 2 400 45.3%, Glycol Ether 1
 23.1%, Ethanolamine 7400 16.4%, PPG 5500 12.2%, 3.0% 4 5000

EO , 93 EO
 309 MEG 180 (58.3%), EOA 42 (13.6%), Ethanolamine 28 (9.1%),
 Glycol Ether 17 (5.6%), DEG 19 9000 (6.4%), TEG 6 4000 (2.1%), PEG 5 2000
 (1.7%), 10 (3.2%) < 5 >
 EG EO 129 가 32.6%, 21.7%,
 Glycol Ether 13.2%, PEG 15.4%, 17.1% 가

EOA 10~ 15% , EO
 EO (88~93) 3.0%, 3.7%
 Glycol Ether 0.3%

91 EO 1 6100 EOA 57.7%, PPG 31.8%
 EO 가가 ,
 5000 EOA 1 8750 7000 ,
 5000 , 2800 EOA 2 2800 , 1 5000 EO
 가 , 91 EOA EO 8980 EO 가 67.0%

6 7000 EM(Ethylene Glycol Monomethyl Ether) EB(Ethylene
 Glycol Monobutyl Ether) , 가 ,
 5000 3100 EO 가 , 7000 4300 EO 가

94 EM · BM EE Glycol Ether , 1 4000 2
 EO

Mono Ethanolamine 3000 , Diethanolamine 7000 , Triethanolamine 1 2
 가 , 50% 가

8200 EO 가, 80% 가 1 3100 , 100% 가 1 6000 EO 가

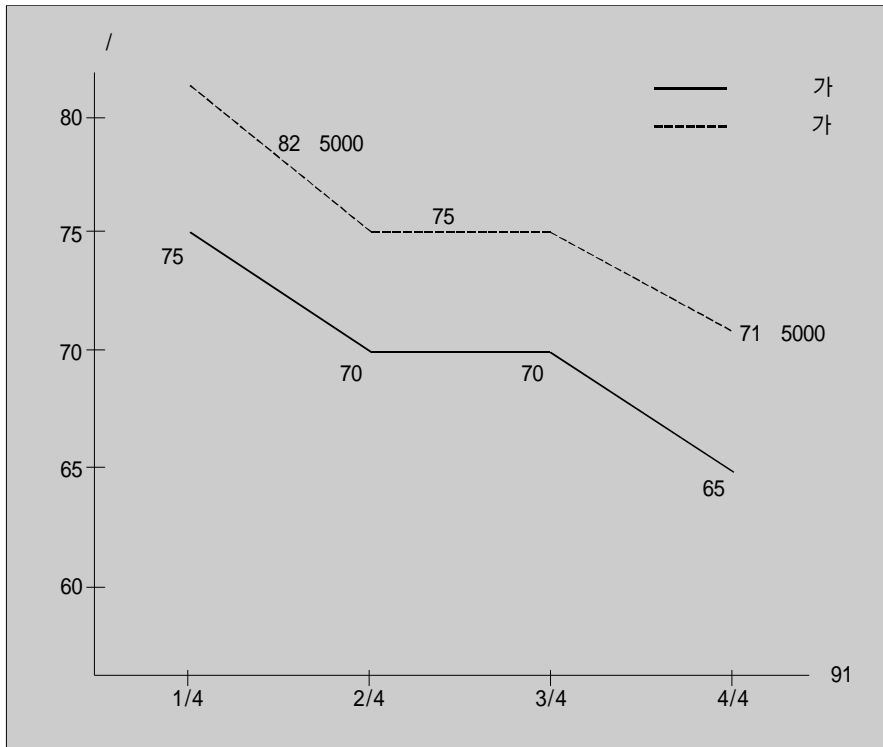
EO EOA 1 5000 (EOA 2 2800), Glycol Ether 3100

(5000
4000

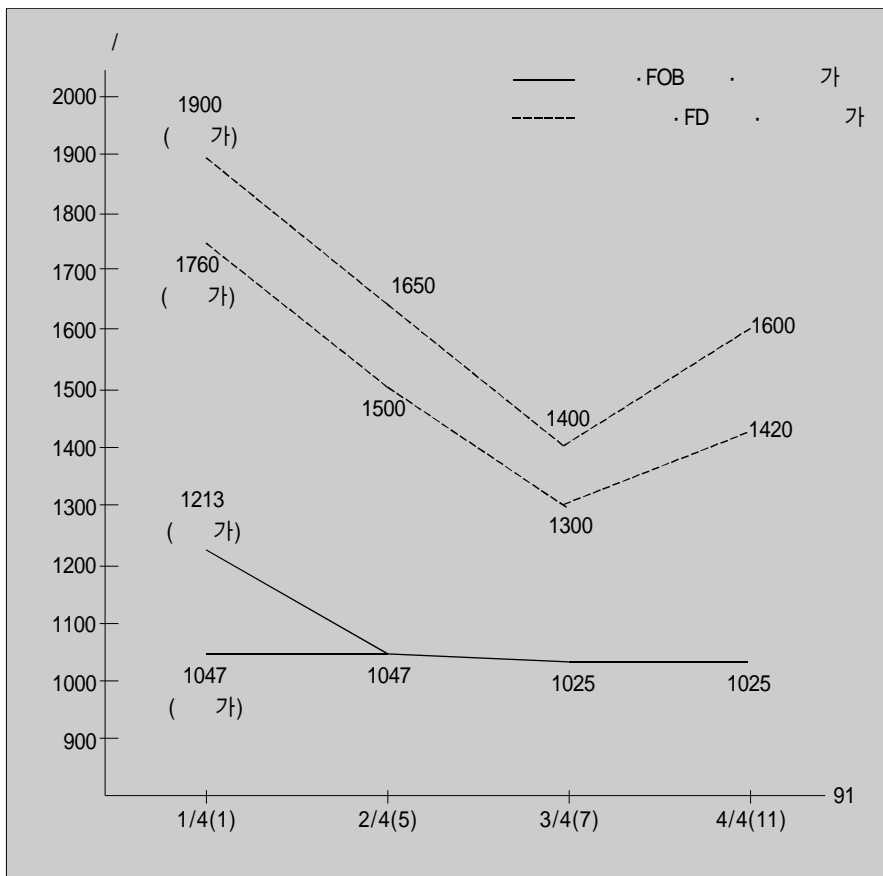
), Ethanolamine 8200 (50% 가), PPG 6200 , 1500

3

< 2> EO가



< 3> EO 가



		EO		MEG	
Union Carbide	USA, Canada	1,240	13.3	1,225	15.2
State	Eastern Europe	1,129	12.1	626	7.8
Shell	USA, W Europe	685	7.3	460	5.7
Dow	USA, Canada, W Europe	560	6.0	535	6.7
Hoechst	USA, W Europe	450	4.8	465	5.8
BASF	USA, W Europe	420	4.5	180	2.2
Texaco	USA	415	4.4	340	4.2
Oxy Petrochemical	USA	402	4.3	400	5.0
State	PR of China	350	3.7	390	4.9
SABIC	S Arabia	348	3.7	434	5.4
Pemex	Mexico	328	3.5	120	1.5
ICI	W Europe, Australia	276	3.0	97	1.2
BP	W Europe	275	2.9	235	2.9
Nippon Shokubai	Japan	210	2.2	210	2.6
Mitsui Toatsu	Japan	200	2.1	205	2.6
Erdoelchemie	W Germany	175	1.9	110	1.4
Mitsubishi Petrochemical	Japan	174	1.9	174	2.2
Oxiteno	Brazil	165	1.8	175	2.2
Nisso Yuka	Japan	155	1.7	193	2.4
CW Huels	W Germany	150	1.6	(90)	-
Mobil	S Arabia	128	1.4	158	2.0
Dupont	USA	123	1.3	150	1.9
Oriental Union	Taiwan	120	1.3	150	1.9
Quantum	USA	100	1.1	105	1.3
Texas Eastman	USA	100	1.1	95	1.2
Ethylene Glycols(Singapore)	Singapore	90	1.0	113	1.4
China Man-Made Fibre	Taiwan	85	0.9	105	1.3
Honam Petrochemical	S Korea	80	0.9	90	1.1
SPDC	S Arabia	74	0.8	93	1.2
Petkim	Turkey	55	0.6	68	0.8
Berol Kemi	Sweden	50	0.5	10	0.1
Olin Chemical	USA	50	0.5	-	-
Sun Refining	USA	50	0.5	-	-
Enimont Anic	Italy	40	0.4	45	0.6
Montedipe	Italy	30	0.3	25	0.3
IPCL	India	20	0.2	20	0.2
India Glycols	India	18	0.2	20	0.2
NOCIL	India	14	0.2	10	0.1
State	N Korea	10	0.1	8	0.1
Glicoles Mexicanos	Mexico	-	-	100	1.2
Polioles	Mexico	-	-	76	0.9
Idesa	Mexico	-	-	26	0.3
		9,344	100.0	8,041	100.0

: TECNON

EO

EO

EO가

92 EO 3 4000

가 , 1/4 가 82 5000 2/4 · 3/4 75

가 EO

4/4 71 5000 , 1/4 가

가

가

가

< 5> EO (:1000 , %)

		1988	1993	(88~93)
	BASF	220	220	
	DOW	225	270	
	Formosa Plastics	-	240	
	Hoechst Celanese	240	250	
	Olin	50	50	
	Oxy Petrochemical	260	290	
	PD Glycol	245	290	
	Quantum	100	100	
	Shell	375	395	
	Sun	50	50	
	Texaco	410	415	
	Texas Eastman	100	100	
	Union Carbide(Seadrift)	340	410	
	Union Carbide(Taft)	595	715	
		2,788	3,090	
		9	4	
		2,797	3,094	
	MEG	1,666	1,803	1.6
		364	422	3.0
		235	282	3.7
	Glycol Ether	175	172	-0.3
	Diethylene Glycol	165	199	3.8
	Triethylene Glycol	54	64	3.5
	Polyethylene Glycol	46	52	2.5
	91	100	2.8	
		2,796	3,094	2.0

Agent EO

Glycol Ether EO

EO EO가

EO 가

EO가

EO 가

EO

PPG · EOA EO

EOA , Glycol Ether

EO가 71 5000

EO 91 MEG 313 6000 MEG 151 2000
EO 334 2000 799 951 84% 가

91 EO 가 90 6.9% , 92 4.1%, 93 3.4%
91 ~2001 10 4.1% , EG EO 4.3%, Glycol Ether
가 3~5%

EO
3~4 EO/EG 35% 가 가 15~20%

EO 가 79% 가
UCC 12 46.5 EO가 48
가 1 46.5 가
가 1/4 48.5 2/4 47.5 , 4/4

46.5
EO 가 EO , 가 , EO
EO , Glycol Ether, Ethanolamine
EOA 가 가 ,

EO
500 EO 가 , EO 가
가 95 350 , 87 95
MEG 440 가
, UCC 가