

< () - >

CA

“ ”

30%

, / 가 가 30%
70 가

가 가 ,
가 가

(: 100)							
	1991	1992	1993.(1~6)		1991	1992	1993(1~6)
	74,516	92,448	88,760		188,931	191,102	96,745
				가	166,266	171,541	87,429
	29,148	26,370	26,177		7,463	8,647	4,235
					15,202	10,914	5,081
	82,617	84,336	91,057				
					3,587	4,169	1,799
	-	45	64		6,968	7,503	3,748
				()	(5,419)	(6,147)	(3,150)
	186,281	203,199	206,058		11,821	7,580	3,132
	60,240	72,500	77,067		806	38	5
	52,960	54,427	51,965		5,379	338	6
	149	-	-		2,945	2,805	1,175
	113,349	126,927	129,032		4,303	4,475	1,956
	10,013	10,013	10,013				
	62,919	66,259	67,013		351	416	
	72,932	76,272	77,026	()	(12%)	(12%)	
	186,281	203,199	206,058	()	(92.5.15)	(93.5.18)	

NCC

PVC
가
가

/ ,
EDC / VCM /
PVC

(: 100 , %)				
			1992	
	/	, ,	36,309.4	19
		, ()	43,953.5	23
		(/가)	17,199.2	9
	MMA,DMA,TMA,DMF	, , ,	21,021.2	11
	DMM,DEM,DPM,FFA	, , , ()	5,733.1	3
	MC,MCL,CFM,CTC	, , ,	7,644.1	4
			34,398.4	18
	,F·A, ,CO,MF	-	24,843.3	13
	-	-	191,102	100

가

가

92 가
가

5350 23%, 171 992 9%, 363 94 19%, 439
76 441 4%, 343 984 18%, 210 212 11%, 57 331 3%,
248 433 13% /F·A/ /CO

	(1000)		(%)
	693	3,464	34.6
	650	3,248	32.4
	617	3,084	30.8
	43	217	2.2
	2,003	10,013	100.0

92 1911 184
1.1% 가 , 1573 3511
7.5% 337 6673

78.7% 가
49.1%
168 2754
15.7%
16.2%
254 1570 29.0% , 347

390 6.9%

가

가

가

500 4800 가 28 2517 ,
7.4% 가 6.6% 가 가 484 9300
15 5500 15.2%

가

2 976 17.3% 가 , 6972 ,
10 9232 , 26.8%,104% 가
34 7649 , 18 8000 55.2%
13 2324 38.8%, 2 293 6%,
162 6% 20 6444 36.6%

5%

가

METHYL AMINE/ /

/ 3.1% 가 , 92 200 4400 D.M.F 91 156 6700
10.5% 가

가 , 89 2700 가 CM(CHLORO METHANE) 가
MCL 가 , 91 32 ,92 38 , 93 48 9000
, DMF 가 90 가 93 6315 91 92 92 96
7000 가
89 FURFURYL ALCOHOL , 6000 90 2000
91 4400 , 92 3400
가 가
1440 1100 가 FA가 가
1350

(1993) (: M/T)							
	7	8	9	10	11	12	
	17,100	17,100	16,530	17,100	16,530	17,100	101,460
	29,700	29,700	28,700	29,700	28,700	29,700	176,200
	1,950	1,880	1,880	1,880	1,880	1,880	11,350
M M A	150	150	150	100	100	100	750 100%
D M A	1,740	1,740	1,720	1,740	1,720	1,740	10,400 100%
T M A	150	150	140	150	140	150	880 100%
D M F	2,550	2,550	2,460	2,550	2,460	2,550	15,120
TMA -HCL	360	360	350	360	350	360	2,140
F A	1,350	1,350	1,310	1,350	1,310	1,350	8,020 85%
	240	240	230	240	230	240	1,420
M C	70	70	60	70	60	70	400
M C L	1,440	1,440	1,390	1,440	1,390	1,440	8,540
C F M	1,440	1,440	1,390	1,440	1,390	1,440	8,540
C T C	280	280	280	280	280	280	1,680
C M C	190	190	190	190	190	190	1,140
D P M	-	-	-	-	-	300	300
F F A	360	360	360	360	360	360	2,160

(F O R M I C
ACID) 90
가
6300 , 91
6600 , 92 1
가
가
가
85
가

90 7000 ,91 7500 , 92 8000 가
, 4 1 1000
가 BASF 70KG 660~680 , 630~640 , 670
가 20KG 가 520~550

가

CYLINDRICAL

가

HOVAL

(: M/T, 1000)																
	1990				1991				1992				1993			
	330,000	37,675,658	336,301	38,267,891	330,000	37,675,658	271,691	45,231,748	330,000	37,675,658	283,486	42,901,532	330,000	37,675,658	127,497	21,748,452
	18,000	20,123,790	18,125	17,010,541	18,000	20,123,790	18,217	14,900,791	20,000	22,359,766	18,560	15,019,703	20,000	22,359,766	7,469	6,271,425
	16,000	10,190,830	14,554	5,992,793	16,500	10,509,293	13,843	7,847,895	23,000	14,649,318	18,335	9,705,017	23,000	14,649,318	9,813	4,557,484
D M F	16,000	8,540,904	17,791	7,143,743	23,000	12,277,549	16,759	9,523,070	23,000	12,277,549	22,342	11,684,663	28,000	12,609,270	12,956	5,834,489
F A	5,000	2,338,279	6,895	2,416,462	7,700	3,600,950	7,446	2,757,073	7,700	3,600,950	7,754	2,806,572	14,800	5,999,644	3,535	1,433,023
	-	-	-	31,033,527	-	-	-	32,798,925	-	-	-	33,712,309	-	-	-	17,553,153
	-	-	-	2,978,883	-	-	-	15,935,031	-	-	-	13,449,097	-	-	-	7,148,979
	-	-	-	109,441,092	-	-	-	128,994,533	-	-	-	129,278,893	-	-	-	64,547,005

) 3

가 (: M/T, 100 , %)											
	1990		1991		1992		1993				
		58,952.9	46.2	66,630.2	46.3	13.0	68,710.5	44.4	3.1	30,061.3	39.0
		7,885.3	8.1	8,314.9	7.2	5.4	7,927.8	7.6	4.7	10,368.1	16.8
		89,655.2	91.9	107,870.7	92.8	20.3	96,217.8	92.4	10.8	51,470.7	83.2
		97,540.5	100.0	116,185.6	100.0	19.1	104,145.6	100.0	10.4	61,838.8	100.0
		30,272.6	-	41,627.5	-	37.5	25,067.0	-	39.8	21,382.6	-
		8,314.9	-	7,927.8	-	4.7	10,368.1	-	30.8	10,394.9	-
		14,177.5	11.1	17,744.8	12.3	25.2	16,781.3	10.8	5.4	8,154.7	10.6
		4,687.2	33.1	5,332.2	30.0	13.8	6,178.3	36.8	15.9	3,329.5	40.8
		3,071.1	21.7	3,135.4	17.7	2.1	3,691.9	22.0	17.7	1,822.9	22.4
		6,419.2	45.3	9,277.2	52.3	44.5	6,911.1	41.2	25.5	3,022.3	36.8
		42,761.6	33.5	44,619.5	31.0	4.3	51,536.3	33.3	15.5	20,379.3	26.4
		11,398.8	26.7	11,930.3	26.7	4.7	10,317.8	20.0	13.5	3,818.9	18.7
	가	10,537.8	24.6	8292	18.6	21.3	17,562.4	34.1	111.8	5,355	26.3
		41.5	0.1	12.2	0.0	70.6	54.6	0.1	347.5	3.9	0.0
		74.2	0.2	67.1	0.2	9.6	131.7	0.3	96.3	52.9	0.3
		1,525.0	3.6	1,642.6	3.7	7.7	1,843.4	3.6	12.2	781.7	3.8
	가	11,055.6	25.9	11,851.1	26.6	7.2	10,501.4	20.4	11.4	4,471.3	21.9
		300.8	0.7	246.5	0.6	18.1	960.1	1.9	289.5	557.9	2.7
		613.3	1.4	956.5	2.1	56.0	1,048.8	2.0	9.6	648	3.2
		707.7	1.7	230.6	0.5	67.4	202.9	0.4	12.0	97.4	0.5
		6,506.9	15.2	9,390.6	21.0	44.3	8,913.2	17.3	5.1	4,592.3	22.5
		11,589.2	90.8	128,994.5	89.6	11.3	137,028.1	88.5	6.2	58,595.3	76.0
		9,230.5	7.2	13,251.8	9.2	43.6	12,451.9	8.0	6.0	13,247.3	17.2
		2,554.6	2.0	1,728.9	1.2	32.3	5,345.5	3.5	209.2	5,229.3	6.8
		127,677.1	100.0	143,975.2	100.0	12.8	154,825.4	100.0	7.5	77,071.9	100.0
		13,251.8	-	12,451.9	-	6.0	13,247.3	-	6.4	6,676.4	-
		1,728.9	-	5,345.4	-	209.2	5,229.3	-	2.2	4,888.4	-
		3,225.4	-	2,610.7	-	19.1	1,643.5	-	37.0	734	-
	가	109,471.0	-	123,567.2	-	12.9	134,705.3	-	9.0	64,773.1	-

1889 3000 92 1911 1.1% 가 91
 44 7000 / 가 가
 92 1.20% 가 , 3.9% 가 3.9%

가		(: /MT)			
		1990	1991	1992	1993,
		308,400	295,400	295,400	295,400
		142,300	167,500	205,000	205,000
		1,207,300	1,164,000	1,060,000	1,060,000
MA		1,040,900	1,017,900	1,017,900	1,017,900
D.M.F		936,315	920,000	967,000	967,000
D.M.M		-	4,400,000	4,400,000	4,400,000
F.F.A		1,105,000	1,218,000	1,180,000	1,000,000
MCL		-	320,000	380,000	489,000
FA		537,000	582,000	612,000	600,000

(: , %)	
	1991
	(7,090,000,000)
	(96,917,000,000)
	(369)
	(2,783)
	10,513
	7,686

88 2.34% 가 가 2.01%
 90 가, 90 4.6%, 91 6.2%, 92 3.9%
 2~3

(: M/T, 100 , %)															
		1990				1991				1992					
		8,943	34.0	1,475	7.0	9,716	36.9	1,833	9.7	24.3	8,400	27.1	1,555	4.6	15.2
		278,758	93.4	39,478	28.7	258,856	92.9	45,136	26.5	14.3	274,117	93.5	48,493	30.8	7.4
		287,701	88.6	40,953	25.8	268,572	88.0	46,969	24.9	14.7	282,517	87.2	50,048	26.2	6.6
		625	2.4	736	2.8	1,113	4.2	1,158	6.1	57.3	1,640	5.3	1,463	4.3	26.3
		17,133	5.7	20,705	6.9	16,374	5.9	19,952	11.7	3.6	15,395	5.3	16,828	10.7	15.7
		17,758	5.5	21,441	6.6	17,487	5.7	21,110	11.2	1.5	17,035	5.3	18,291	9.6	13.4
D.M.F		16,729	63.6	12,592	47.9	15,466	58.8	12,309	65.2	2.2	20,921	67.6	16,590	49.1	34.8
		2,678	0.9	2,602	0.9	3,532	1.3	3,358	2.0	29.1	3,612	1.2	3,454	2.2	2.9
		19,407	6.0	15,194	4.7	18,998	6.2	15,667	8.3	3.1	24,533	7.6	20,044	10.5	27.9
		-	-	3,258	15.5	-	-	1,527	8.1	53.1	-	-	9,324	27.6	510.6
		-	-	27,186	19.7	-	-	35,797	21.1	31.7	-	-	25,416	16.2	29.0
		-	-	30,444	19.2	-	-	37,324	19.8	22.6	-	-	34,739	18.2	6.9
		-	-	2,964	14.1	-	-	2,065	10.9	30.3	-	-	4,835	14.3	134.1
		-	-	47,779	34.7	-	-	65,796	38.7	37.7	-	-	63,145	40.1	4.0
		-	-	50,743	32.0	-	-	67,861	35.9	33.7	-	-	67,980	35.6	0.2
		26,297	100.0	21,025	100.0	26,295	100.0	18,892	100.0	10.1	30,961	100.0	33,767	100.0	78.7
		298,569	100.0	137,750	100.0	278,762	100.0	170,039	100.0	23.4	293,124	100.0	157,336	100.0	7.5
		324,866	100.0	158,775	100.0	305,057	100.0	188,931	100.0	19.0	324,085	100.0	191,102	100.0	1.1

)

, 92 100 1000 , 1269 2000
 13.1% 50% 가
 가 88 21.8%
 가 166.4% 100%
 328.4% 가 가
 92 127.5% 가
 200% 92 103.59%
 가 99.6%
 가 37.6% 가 50.2% 12.2%
 가 . LPG가 가 91
 가 51.6% , 90 12.2% 91 13.8% 92 12.2%
 90 가 가 가 11%
 90 36.9% 91 34.6%, 92 37.6% 92 가
 가 가 111.8% 가,

		(: 1000M/T,)					
		1991		1992		1993()	
LDPE		14	75	47	260	18	98
		12	81	37	228	18	107
		26	156	84	488	36	205
HDPE/		46	219	217	1,010	103	446
PP		31	165	125	589	60	286
		77	384	342	1,599	163	732
SM		88	330	280	1,007	119	431
EO/EG		31	111	72	324	43	193
		119	441	352	1,331	162	624
		-	36	-	265	-	101
		-	92	-	269	-	108
		-	128	-	534	-	209
		148	660	544	2,545	240	1,076
		74	449	234	1,410	121	694
		222	1,109	778	3,952	361	1,770

		(: M/T)					
		1991		1992		1993()	
S M		180,000	79,373	180,000	239,209	115,000	102,100
E G		88,000	31,594	88,000	106,714	55,000	47,300
HDPE		120,000	40,542	120,000	144,513	72,000	71,500
P P		175,000	42,983	175,000	190,928	105,000	83,400
LDPE		92,000	30,523	92,000	82,890	48,300	40,000
		-	-	-	-	-	-
		583,000	225,015	583,000	764,254	395,300	344,300

1964 19 4400 , 67 73
 76 51 3800
 80
 85 , 90
 90 91
 92 Sodium Carboxy Methyl Cellulose
 93 CA
 가
 2~3

(1993) (: %)						
	S M	E G	LDPE	HDPE	P P	
M/S	15	14	7	9	9	

F (: M/T, %)						
	1985	1988	1990	1991	1992	가
	7,860	11,891	15,571	14,319	14,536	10.5
	4,187	2,189	1,838	674	527	26.2
	12,047	14,008	17,409	14,993	15,063	3.7
	11,619	11,924	10,585	5,338	2,799	12.2
	428	2,084	6,824	9,655	12,264	68.1

, 90 가 CM(Chloro Methane) 가 2
 가 가 2
 92 2500 CMC 가 3000
 92 CMC 가 ,93
 가 2500~3000 가 6000 가
 가 CM 가 3
 , CM 92
 , 5 (가 100%)
 , 94 1/4 가 가
 가 가
 CA 가 2 3
 Sodium Methylate/Sodium Ethylaltema
 Sodium Alkoxide 100 , 30 BASF
 가 3
 가
 가 가 38% 가 24%

?

가 100 1300 34 6400 34.6%
 2.2% 32 4800 32.4%, 30 8400 30.8%, 2 1700
 2~3

가

1,2

F (: %)					
	1988	1989	1990	1991	1992
	99.4	99.1	99.9	98.7	84.2
	97.3	79.9	91.7	55.7	49.4
	1.1	14.2	6.3	32.8	28.4
	0.0	0.3	1.2	7.1	4.6
	1.0	4.7	0.6	2.7	1.9
	0.0	0.0	0.1	0.4	0.0
	0.0	0.0	0.0	0.3	9.2
	0.0	0.0	0.0	0.0	3.2
가	0.0	0.0	0.0	0.3	1.8
	0.0	0.0	0.0	0.0	0.8
	0.2	0.2	0.0	0.4	2.9
	0.4	0.7	0.1	0.6	3.2
	100.0	100.0	100.0	100.0	100.0

(: 1000)			
	1990	1991	1992
	41,020,594	21,432,642	11,984,824
()	25,913,385	15,374,484	8,444,094
()	15,107,209	6,058,158	3,540,730
가	40,377,079	32,017,698	26,217,613
	643,515	(10,585,056)	(14,232,789)
	3,336,808	4,581,284	4,895,181
	(2,693,293)	(15,166,340)	(19,127,970)
	960,064	699,553	678,037
	5,105,507	5,265,111	8,956,322
	(6,838,736)	(19,731,898)	(27,406,255)
	674,101	1,605	236,556
	-	528	4,528
	(6,164,635)	(19,730,821)	(27,174,227)
	(6,164,635)	(19,730,821)	(27,174,227)

가

, 64

가

, 76

84

25%

NCC

EO

PVC

PVC

/

가

가

CA

가

CA

가

92

2000

가 가

SM/PS/EPS

2~3

H

90

가

CA

가

가

/

90 1

가

93

50%

60%

가 1 3000

가

가

가

가

가

가

92 가
 SM PP 가 가
 51 8000 , 92 47 , 93 43 7000
 91 51 2000 , 92 37 2000 , 93 36
 8% 가
 7000
 PP 91 가 55 6000 93 46 8000 가 91 65 7000
 41 1000 가

가
 ABB Lummus, Badger, Scientific Design,
 , Nippon Zeon, Krupp Koppers
 HDPE Formulation
 , HDPE
 Condensate , SM
 Process Condensate
 92 428.50% ,

가 , 가

1050 38.6%, PS 31.2%, SM 21.5%

73

	(:)				(:)			
	1989	1990	1991	1992	1989	1990	1991	1992
	336.8	604.2	619.6	825.5	729.3	1,681.0	1,744.1	1,708.2
	689.9	1,587.5	1,898.6	1,672.8	133.3	241.2	107.4	124.1
	1,665.1	2,472.5	3,073.6	2,879.3	91.6	175.5	16.1	6.9
	424.2	980.8	1,416.1	828.3	20.2	44.1	67.8	74.8
	747.7	908.9	945.8	1,379.0	80.6	172.8	186.3	227.1
	1,171.9	1,889.8	2,361.9	2,207.3	31.3	46.9	102.3	145.3
	221.0	271.7	366.7	366.7	0.0	0.5	121.5	121.9
	132.7	151.5	183.8	183.8	2.5	5.5	0.1	0.3
	139.4	159.4	151.3	111.7	10.5	30.7	18.9	3.7
	493.1	582.7	711.6	672.0	(가) 41.8	118.2	92.7	112.7

, 75
 가 75%,
 25%
 77
 38%,
 37%,
 25%

85
 86 , 90

SM/PS 가 , 92
 1708 2000 2.0% , 3 7000

323.4%,
EPS

145 3000
99.6%

, 2
가

SM/PS

/ 가 가
/ 가

92 5
가 , 11
가

93 5
가
. 7 10
8 , 11

1992. 5. 1		
8.21 1		
8.31 1		
9.22 2		
10. 9 2		
11.24		9
-	,	,
12.24	(가)	
1993. 2. 8		
2.17	가 가	
5.12	가	,
5.16	()	
7. 5 ()		
7.10		가
8. 2		
8. 4		
11. 9	,	

가
119 8482 92
,91 214 90 410
191 142 274
가
가
92 Viscose F

4

, staple 77 66 15
110
90 1 585 ,91 5338 ,92 2700

staple 83 , 92 filament 33
92

7% 가 .

F 1 5000 가 가 1.7% 가, 85 ~92 가 9.5%

92 F 84.4%, 가 ,

가 , 92 49.4%, 28.4%

가 84.2% 9.2%, 2.9%

가 F 가

Chemical Wood Pulp

427 가 93 ~94 1

가 95 211 2000

142 ,

1970 93 ~95 2 가 95

402 , 2000 104 가 .

F

가 .

< 1993/11/1 >