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「 2 」 「 1 ! 」

가

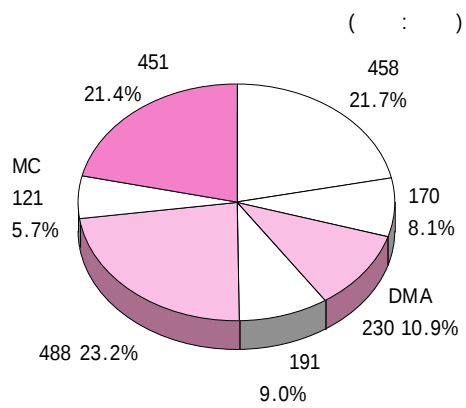
15 2
2300

가

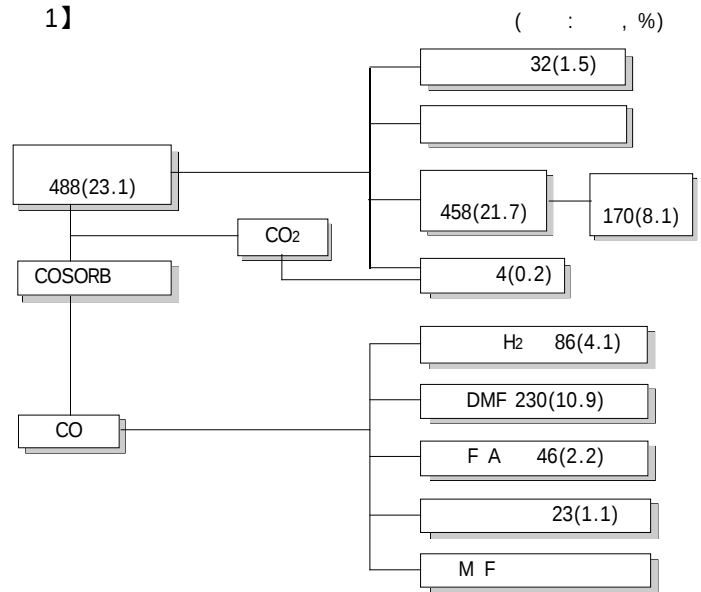
가

3
34.6%(69 2860)

【 2】



【 1】



1537
572 27.1%

2109 72.9%

가

, DMA

MC

21.7% , 169 8700 8.1%,
 CO₂ · H₂ 2.0% 212 3200 10.1%
 DMF 가 229 6500 10.9%, MA 가 32 2600 1.5%, MC 120 7000 5.7%,
 MCL 67 5800 3.2%, 23 3300 1.1%, 40 6700 1.9%, FFA 49 2400
 2.3%, 2 5500 0.1% 498 4000
 23.6%

【 1】 (: 100 , %)

		1993		1994	
			()	()	
		45,758 (21.7)	-200	50,578 (20.9)	
		16,987 (8.1)	800	15,993 (6.6)	
()	(, CO ₂ , H ₂)	4,245 (2.0)	-	4,337 (1.8)	
		21,232 (10.1)		20,330 (8.4)	
	D M F	22,965 (10.9)	9,000	26,791 (11.1)	
()	M A	3,226 (1.5)	-	3,582 (1.5)	
	M C	12,070 (5.7)	-2,900	16,460 (6.8)	
	M C L	6,758 (3.2)	-1,200	7,982 (3.3)	
		2,333 (1.1)	-	2,580 (1.1)	
		4,067 (1.9)	-200	5,578 (2.3)	
	F F A	4,924 (2.3)	100	6,095 (2.5)	
	(가 ,)	255 (0.1)	-	10,855 (4.5)	94 (가 :6,079 :1,774 M M C :2,952)
		49,840 (23.6)	-	71,941 (29.7)	
		45,127 (21.4)	-400	50,000 (20.7)	
		33,739 (16.0)		35,261 (14.6)	
		9,351 (4.4)		6,300 (2.6)	
		902 (0.4)		800 (0.3)	
		4,824 (2.3)		6,848 (2.8)	
		48,816 (23.2)	3,300	49,209 (20.3)	
		210,773 (100.0)	7,800	242,058 (100.0)	가 :1,300

)

451 2700 21.4% , 488 1600
 23.2% 5
 , DMF, FFA,
 , 93 78
 33 42.3%
 가
 DMF 90
 (229 6500) 39%
 8
 MC ,

66 , 가 33
 51 5000 , 가 28 9000
 78.0%, 87.6% 가
 1 . 2 가
 67 27 4000 23 가 90 15 8000
 92 13 3000
 2 가
 UR 2~3 가
 가 92 12 7011 , 93 12 6638 , 94 3
 11 9541 92 153 , 93 120 , 94 3 120
 가 가
 29 , 12

【 2】

(: M/T, ,)

Chlor Alkali 가	55,000 50,000	320		
E D A DETA TETA TEPA A E P	6,000	80		700 500
Cellulose HPMC M C	2,500	130		600 600
Babituric Acid	600	10	B	100 300 300
METAC ATAC	1,000	10		
	-	550	-	1,700 1,400

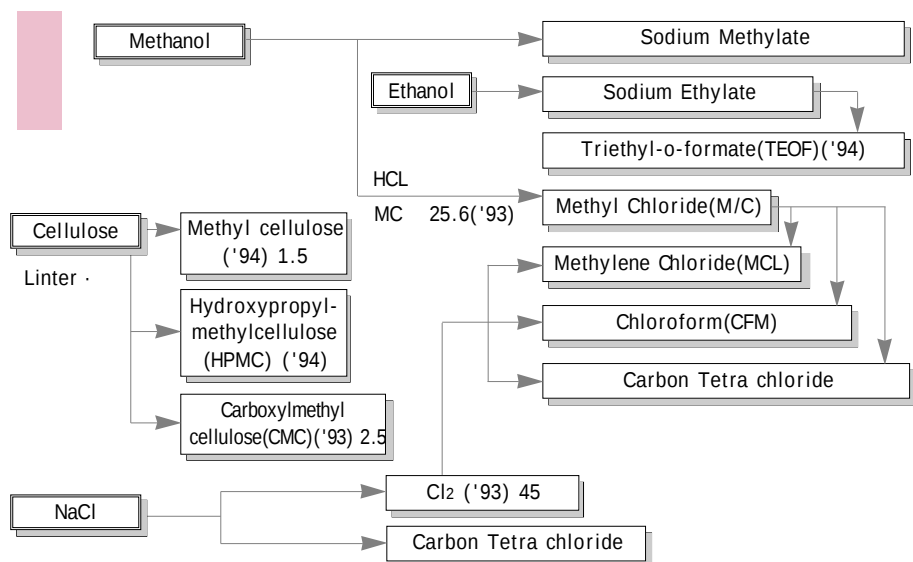
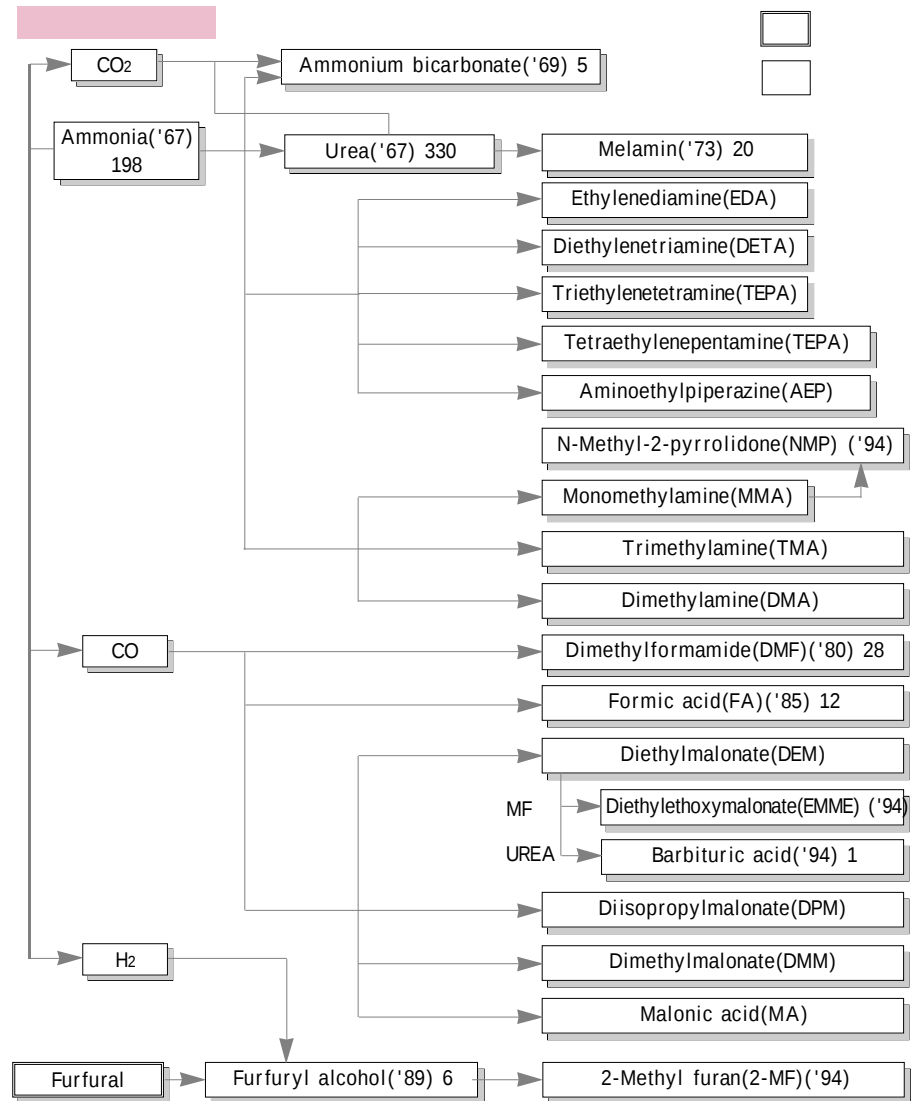
94 2420 5800
 14.8% 가
 , DMF 267 9100
 16.7% 가 MC가 164 6000
 36.4%, MCL 18.1% 가
 가 60 7900 ,
 17 7400 MMC 29 5200
 가 가
 94
 93 21.7% 94
 20.9%
 10.1% 8.4%
 23.6% 29.7%
 DMF, MC, 가 ,
 가

94

5 320 가 5 5000 , 5 CA(Chloro-Alkali)
 80 6000 , 130 2500
 (130) , 600 Babituric Acid (10) , 1000
 (10)
 가

【 2】

(: 1000M/T)



가 가 Chloro Methane

가 , 가 1/4 1 1000

가 5 4 4000

Chlorinated PP · Chlorinated PE PVC 가

가 CA 가 가 100 가

가 20 7 200

가 가

EDA(Ethylenediamine), DETA(Diethylenetriamine), TETA(Tri-ethylenetetramine), TEPA(Tetraethylenepentamine), AEP(Aminoethylenepiperazine)

가 , 가 , 가

3320 DOW, UCC

EDA 44.3%, DETA 19.6%, TETA 31.0%, TEPA 3.6%, AEP 1.5%

EDA DETA 550 가 , 가

가 CO Diethylmalonate(DEM) MF

EMMA(Diethylmalonate) Babituric Acid

EMMA 4000 가 90 50%

가 EMMA 가

DEM Sodium Ethylato Babituric Acid Pyrimidine

B2 600 Takeda

Pyrimidine

, B2

93 CMC(Carboxylmethylcellulose) 5 Methyl

Cellulose HPMC(Hydroxylpropylmethylcellulose) 1500

MC 1000 Shinetsu DOW, Wolff, Berol

가 가 가