

< . >

!

93 1/4 . 4126 92 1/4 7.6%

93 1/4 1152 , 92 1/4 1346 14.4%

93 1/4 2974 , 92 1/4 2490 19.4% 가

93 1/4 1452 3483 , 92 1/4 1185

7007 22.5% 가

93 1/4 1068 2805 92 1/4 894 1120 19.5% 가

93 1/4 3290 7161 92 1/4 3150 1611 4.5% 가

93 1/4 2209 8297 , 92 1/4 1673 251 32.1%

)

B. T. X. Naphthalene

가

가

가

(: , %)										
	93 4			93 1/4			92 1/4			
	Direct	Local	Total	Direct	Local	Total	Direct	Local	Total	
	14,621,	5,108,	19,729,	10,682,	3,840,	14,523,	8,941,	2,915,	11,857,	22.5
	599	039	638	805	678	483	120	887	007	(19.5)

) Direct, %

	Benzene	115	16	14	, ,
	Toluene	30	6	20	,
	Xylene	8	2	25	,
()	Naphthalene	31	1	3	
	Anthraquinone	5	2	40	,
		189	27	14.3	

) . 88

"(: M/T, %)			
			*
Vat	19.3	34,800	58
	21.1	37,900	44
	6.3	11,300	31
	3.2	5,800	48
	11.8	21,300	24
	12.3	22,200	30
	7.8	14,000	50
	5.3	9,600	56
	12.8	23,100	43
	100.0	180,000	43

) 1) 1988

2)*

가 400 190 Benzene , Toluene , Xylene 가 153 81% (Coal tar) Naphthalene , Anthraguinone 가 19% 36

(: M/T, %)						
	1990		1991		1992	
	3,736	33.0	4,011	7.4	3,759	6.3
	4,751	21.9	5,413	13.9	6,712	24.0
	2,858	13.7	2,871	0.0	2,849	0.8
	74	6.3	90	21.6	202	123.5
	73	49.0	77	5.5	43	44.3
	293	11.0	379	29.4	1,203	217.7
	2,062	14.4	2,891	40.2	2,518	12.9
	4,255	2.6	4,079	4.1	3,844	5.8
	8,949	27.2	10,162	13.6	11,174	10.0
	6,403	14.2	7,354	14.9	7,605	3.4
	15	-	-	-	-	-
	68	79.7	162	138.2	165	1.3
	33,536		37,489	17.8	40,072	6.9

(: M/T, %)						
	1990		1991		1992	
	45	2	47	5	43	5
	12	5	-			
	1,956		1,844		1,462	
	1,157	754	1,296	652	2,529	2,159
	20	9	18	9	9	1
	185	-	-	-	-	
	277	1,803	389	1,547	556	2,580
	-	1,033	-	2,423	-	2,308
	34	-	49	-	-	-
	-	156	-	153	-	15
	1,514	-	919	773	1,075	-
	150	-	238	-	214	-
	-	20	-	-	-	-
	259	1,297	247	1,518	312	1,485
	38	-	53	-	0.1	-
	15	438	27	920	-	1,804
	3	-	-	-	-	-
	-	1,417	-	1,393	-	1,635
	36	-	31	-	47	-
	53	-	35	-	54	-
	-	-	149	-	150	-
	-	-	-	-	4	-
	-	-	-	-	0.1	-
	5	-	-	-	-	-
	5,755	6,939	5,344	9,393	6,455	11,992

가 27 190 14%

85%

가 가가

가

가

가 가 가

가

가

가

100

가

(:1000)						
	1991			1992		
	Direct	Local	Total	Direct	Local	Total
	2,540.8	-	2,540.8	3,526.5	-	3,526.5
	6,404.3	4,122.2	10,526.5	7,647.4	5,103.3	12,750.6
	419.2	74.9	494.1	14.1	-	14.1
	164.8	604.7	769.5	355.7	1855.1	2,210.8
	3,215.1	2,395.1	5,610.2	1,967.3	1,407.7	3,375.0
	4,463.4	1,655.3	6,118.7	5,264.1	786.6	6,050.7
	-	-	-	78.0	156.5	234.5
	6,741.7	3,034.8	9,776.5	15,856.1	5,123.1	20,979.1
	-	-	-	4,592.7	468.2	5,060.8
	35,446.7	15,176.9	50,623.7	39,301.8	14,900.4	54,202.2

가 가

가

가

가

92 가 7.1%(Direct 10.98%)

가

가

가

	()	()	()			(M/T)	
			1986	1987	1988		
()	6	280	69	99	136	2,800	
()	5	107	67	84	84	3,200	
()	4	63	32	34	50	1,900	
	3	56	21	40	47	2,000	
()	7	60	9	12	10	180	
()	6	32	4	6	8	150	
()	(27)	(369)	(214)	(273)	(316)	500	
()	-	-	-	-	-	540	
()	-	-	-	-	-	150	
	-	16	-	-	-	100	
()	-	29	-	-	-	40	
()	11	370	129	207	306	2,300	
()	25	358	139	183	267	1,000	
()	(2,000)	200	150	200	250	1,000	
()	6	95	127	204	236	600	
()	10	160	122	160	190	2,200	
()	4	100	28	35	47	-	
()	7	50	34	33	34	100	
()	12	45	180	-	-	170	
	-	7	-	-	34	-	
()	3	35	13	19	18	-	
()	1.6	32	5.7	-	-	500	

	1)							2)	3)
								B	A
								B	A
								B	A
								B	A
								B	A
								B	A
								B	A
								B	B,C
								B	A
								B	B

- 1) : :
 2) A : B :
 3) A : 5 B : 1995~2000 C : 2000

) . +

가

50%

Vat 가

가 (: M/T,)					
PRODUCT	가 (93.7)	1989	1990	1991	1992
2-NAPH.-1.5-DISULF.ACID	4.20 ~ 7.20	137	133	140	180
2-NAPHT.-3, 6, 8-TRISULF.ACID	3.40 ~ 10.40	195	278	290	290
BROMAMINE ACID	16 ~ 18	140	172	257	261
FISCHERS BASE	13 ~ 14	66	75	83	100
GAMMA ACID	6 ~ 10	50	88	100	140
G-SALT	3.70 ~ 4.10	65	83	89	91
H-ACID	3.20 ~ 7.50	2,060	2,660	3,050	3,300
J-ACID	7 ~ 10	170	168	176	230
METHAMINIC ACID	7 ~ 9.80	125	150	91	105
M-PHENYLENEDIAMINE	4.70 ~ 4.80	229	245	343	350
ANILINE-O-SULFONIC ACID	9.20 ~ 9.80	110	90	103	100
PHENYLPERI ACID	10	17	20	15	19

92 4 72
91 3 7489 6.9%

가 가 92
7605 , 91 7354
3.4% 91 90 6403
14.8% 가 92 가

가 가

28%

가
91 1 162 10%
가

가 1 1174 91 13.6%

91 5413 24% 가 6712

92 202 , 91 90 123.5% 가

. 91 90 74 21.6% 가 , 가

가 92 1203 , 91 379 217.7% 가 가
91 92

92 1 9858 , 91 3 2549 40% 91
8109 3.5% 가 8393 91 2 4440 53.1% 1

1465

가

가

92 1 8447 , 91 1 4704 25.5% 가 , 91

90 1 2694 15.8% 가 가

가

가

가

가

가

20

(1988)	(: M/T)
2'-Naphthol'-6, 8'-Disulfonic Acid (C'-Acid)	120
Benzaldehyde	276
O'-Chloro Benzaldehyde	477
Caprylic Acid	1,280
Salicylic Acid	537
Beta'-Oxynaphthoic Acid (Bon Acid)	277
Demethyl Sulfate	638
Cyclohexylamine	424
O'-Chloro'-P'-Nitro Aniline	80
6'-Bromo'-2, 4'-Dinitro Aniline	450
2, 6'-Dichloro'-P'-Nitro Aniline	150
Orthanilic Acid	80
Metanilic Acid	170
Alpha'-Naphthylamine	656
2'-naphthylamine'-3, 6, 8'-Trisulfonic acid	120
4, 4',-Diaminostilbene'-2, 2'-Disulfonic Acid	520
Phenyl Peri Acid	56
7'-Amino'-1'-Naphthol'-3'-Sulfonic Acid (Gamma'-Acid)	39
8'-Amino'-1'-Naphthol'-3, 6'-Disulfonic acid (H'-Acid)	2,200
2'-Amino'-5'-Naphthol'-7'-Sulfonic Acid(J'-Acid)	77
O'-Anisidine	38
P'-Anisidine	70
Dianisidine	40
Diethanolamine'-4'-Methoxy Acet Anilide	200
3'-(N, N'-Beta'-Hydroxy Ethyl) Amino'-4'-Methoxy Acet Aniline	300
Aceto Acet'-O'-Toluidine	350
Aceto Acet'-2, 5'-Dimethoxy'-4'-Chloro Anilide	146
1, 4'-Diamino'-2, 5'-Dimethoxy'-4-Chloro Anilide	50
1'-(2, 5'-Dichloro)-4'-sulfohenyl'-3'-Methyl'-5'-Pyrazolone	40
1'-Phenyl'-3'-Methyl'-5'-Pyrazolone	52
Cyanuric Chloride	456
1, 3, 3'-Trimethyl'-2'-Methylene Indoline	142
2'-Amino-6'-Mithoxy Benzothiazole	70

) 1988

80

가

가

3.3-Dichloro Benzidine

Dihydrochloride, Benzidine Dihydrochloride, O-Tolidine Base, O-Tolidine Dihydrochloride, O-Dianisidine Base, Dianisidine Dihydrochloride, Blue B Salt 92 4688 , 91 1948 140.7%

가

91 90 1911 1.9%

[illegible]

P-phenylenediamine . P-phenyl-endiamine Disperse Yellow 3, Safranin B
 Polyamide
 O- 3,4-dichloroaniline
 P- 7 5000 , poly
 Phenylsulfide Pigment Red 88
 O- 55% O- 45% P-
 O-aminophenol Phoslon()
 xlenol 3,5-xlenol , Vitamin E, 3,5-dimethylaniline(
)
 170 95%
 m- (→
), m- (→m-)
 140 4,4'-diphenylmethane
 diisocyanate(MDI) 가
 , Hydroquinone
 N- N-methylaniline N, N-dimethylaniline N,
 N-dimethylaniline 9000 Triphenylmethane
 Michlers Ketone , Triphenylmethane Basic Violet 3, Basic
 Green 4
 Phenylhydrazine 8000 Phenylhydrazine 1-phenyl-3-
 methylpyrazolone-(5)(PMP) , PMP 1-phenyl-2, 3-dimethylpyrazolone-
 (5) () Pigment Orange 13
 Indigo Tatzin (Acid Yellow 23), Acid Orange 7, Solvent Red 19,
 Solvent Red 23, Pigment Yellow I
 O- 57 ~ 60%, m- 3 ~ 4%, P-
 37 ~ 40%
 O- 2,4/2,6-dinitrotoluene(TDI) 2,
 4, 6-Trinitrotol-uene O-toluidine, O-tolidine
 O-toluidine Diketene Pigment Yellow 14 N-acetoacetyl-o-toluidid
 O-tolidine Acid Red 114
 m- m-toluidine Disperse Red 65
 P- 2,4-TDI DASDSA() 4-nitrotoluene-2-
 sulfonic acid , P- P-toluidine
 Pigment Yellow 1, Pigment Yellow 3, Pigment Red 57 :1(4B-Toner)
 benzotrichloride m-trifluoromethyl aniline
 (Vat Yellow 2)
 P-toluene Sulfonic acid 2-chloro-5-amino-p-
 toluenesulfonic acid (CLT-acid) , LT-acid Pigment Red 52 : 1 Pigment Red 53 :
 1
 Xylene Phthalic anhydride DOP, DINP 가 2-chloroanthraquinone
 (Indanthron), phthalocyanine 가
 m-xylene 2,4-xylidine N-acetoacetyl 2,4-xylidid(AAX)

	A-AX	Pigment Yellow 13	.
P-xylene	Pigment Violet 19	Quinacridone	, Pigment Violet 19
P-xylene	2, 5-dibromo-1,4P-xylene arylamine		2.5-dibromoterephthalic acid
			< 1993/11/1>