

<MDI>

BASF .

“ ”

MDI MDI , 5 2
 MDI 6 4 가
 95 가
 MDI PU 가

< 1> MDI (: , %)

		1985	1987	1990	1992	1995
				20,000	40,000	40,000
				20,000	80,000	80,000
		11,000	20,000	32,000	40,000	51,000
가					100.0	128.0
				160.0	50.0	64.0
			100.0	60.0	25.0	30.0

< 2> 가 MDI (: , %)

		1989		1990		1991	
PMDI/ CMDI				6,583	46.0	4,590	23.0
						11,466	57.4
						3,523	17.6
						408	2.0
MMDI				14,410	100.0	19,987	100.0
		7,572	68.0	10,611	75.0	9,421	70.5
		2,274	20.3	3,023	21.3	3,409	25.5
		1,340	11.7	570	3.7	542	4.0
		11,186	100.0	14,204	100.0	13,372	100.0
		11,186		28,614		33,359	

)

(-NOC) 가 ,
 (-NHCO-O-) (-NHCONH-)

2 가

가 Pure MDI, Polymeric MDI, TDI가

MDI Pure MDI MDI Polymeric MDI가

(MDA)

Polymeric MDI Pure MDI Polymeric MDI 2 MDI

MDI Pure MDI MDA MDI 6 MDI 가 MDI

MDI , 93

< 3> MDI

(: , %)

		1987		1989		1991		1993		1995		(87~91)	(91~95)
PMDI		7,500	42.6	9,200	34.1	10,900	30.1	12,500	29.6	13,400	26.2	9.80	5.2
		2,000	11.4	3,300	12.2	5,000	13.8	7,200	17.0	10,000	19.6	26.0	19.0
		200	1.1	2,400	8.8	3,000	8.3	3,500	8.3	4,400	8.6	97.0	10.0
		900	5.1	1,100	4.1	1,500	4.1	1,900	4.5	2,400	4.7	14.0	12.6
				800	3.0	1,600	4.4	1,700	4.0	2,500	4.9		11.7
		10,600	60.2	16,800	62.2	22,000	60.7	26,800	63.4	32,700	64.0	20.0	10.5
MMDI/ MOD MDI	Shoe Sole	3,000	17.0	4,300	15.9	6,100	16.9	5,500	13.0	6,500	12.7	19.4	1.6
		1,700	9.7	2,600	9.6	3,100	8.6	3,600	8.5	4,200	8.2	16.2	7.9
		1,900	10.8	2,200	8.2	3,000	8.3	3,800	9.0	4,700	9.2	12.1	11.9
		400	2.3	1,100	4.1	2,000	5.5	2,600	6.1	3,000	5.9	49.6	10.7
		7,000	39.8	10,200	37.8	14,200	39.3	15,500	36.6	18,400	36.0	19.3	9.2
		17,600	100.0	27,000	100.0	36,200	100.0	42,300	100.0	51,100	100.0	19.8	10.0

4 . 2 가 92 MDI 가 50%

MDI () 4 , 가

(2) (2) MDI

8

4 MDI 가 50%

95 8

5 1000 64% 가

MDI

가

91 MDI 3 3359 PMDI/CMDI 1 9987 , MMDI

1 3372

PMDI/CMDI 1 1466 57.4% , 4590

23.0%, 3523 17.6%

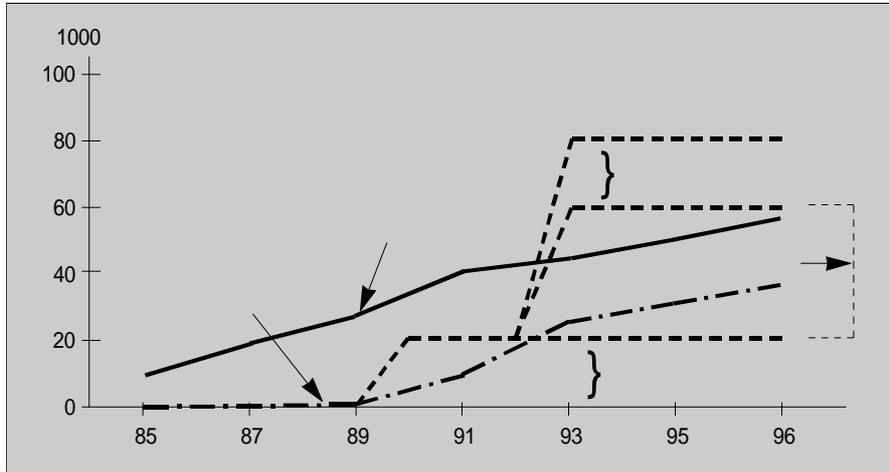
MMDI 9421 70.5% , 3409 25.5% MDI

MDI가

3 6200 PMDI가 2 2000 , MMDI가 1 4200

91 MDI 3 3359 60%
 PMDI Mitsui Toatsu 5060 23.0 %, DM KASEI 6380 29.0%, NPU 3520 16.0%
 68.0% , 20.0%, 9.0%

< > MDI



< 4> MDI (91) (: , %)

	PMDI		MMDI			
		M/S		M/S		M/S
Mitsui Toatsu	5,060	23.0	3,266	23.0	8,326	23.0
DM KASEI	6,380	29.0	2,414	17.0	8,794	24.3
Nippon PU	3,520	16.0	3,692	26.0	7,212	19.9
	4,400	20.0	3,124	22.0	7,524	20.8
	1,980	9.0	426	3.0	2,406	6.6
	660	3.0	1,278	9.0	1,938	5.4
	22,000	100.0	14,200	100.0	36,200	100.0

MMDI Mitsui Toatsu 3266 23.0%, DM KASEI 2414 17.0%, NPU 3692 26.0%
 66% , 3124 22%, 426 3.0%

가 90 22 8000 ,
 12 5000 가 57%
 92 28 8000 , 14 가 49%

< 5> MDI 가 (: /)

		1991	1992.1	1992.3	1992.4
MMDI		2,417	2,258	2,256	2,235
		2,403	2,269	2,253	2,260
		2,416	2,258	2,256	2,238
PMDI		1,459		1,246	
		1,716	1,606	1,638	1,522
		1,873	1,648	1,676	1,611
		1,688	2,567	1,533	1,563

, MDI가 가
 95
 28 8000 , 16 7000
 가 58%

MMDI가 6 CIF 2180~2200 , PMDI가 FOB 1420~1450

MDI MMDI · PMDI , MDI가 88

가 2/4 , 가

< 6> MDI (:1000 , %)

	1984	1987	1990	1992	1995	
	900	1,000	1,386	1,816	1,816	6.0
	725	950	1,200	1,300	1,450	4.0
가	81	95	87	72	80	

) 90~95 ,

< 7> MDI (:1000 , %)

	1984	1987	1990	1992	1995	
	85	127	218	288	288	6.0
	79	103	125	140	167	6.0
가	93	81	57	49	58	

) 90~95 , = +

MDI 28 8000 14 ~16 ,
 91 MDI 3 6200 , PMDI 2 2000 60.7%, MMDI/Modified
 MDI 1 4200 39.3% PMDI 가 가, 87~91 20.0%
 , 91~95 10.5%
 MMDI/MOD.MDI 87~91 19.3% 가 , 91~95 9.2% 가가

PMDI 91 1 900 MDI 30.1% 가
 , 5000 13.8%, 3000 8.3%, 1500 4.1%

MMDI/MOD.MDI Shoe Sole 6100 16.9% ,
 3100 8.6%, 3000 8.3%, 2000 5.5%
 91~95 5.4% , 9.4%, 11.7%

PMDI , ,
 10%

, 95 PMDI 1 3400 가 26.2% PMDI 1
 91~95 19.0% , 가 19.6%

PMDI 95 4400 10.0% , 가 8.6%

PMDI 2400 12.6% 가 4.9%

MMDI/MOD.MDI 91~95 9.2% , Shoe Sole
 7.9% , 11.9%, 10.7%

95 Shoe Sole MMDI /MOD.MDI 6500 가 91 16.7%
 12.7% 4200 8.2% 91 8.6%

, MMDI/MOD.MDI 96 4700 9.2%, 3000 5.9%

91 8.3%, 5.5%

91~95 MDI 가 10.0% , 95 5 1100

95 5 1100 · CFC

MDI

9000

Japan BASF MDI 8000~
BASF , 5000

PU
PU

< 8> MDI (:)

가			Licensor	
	Dow Chemical	150,000		
	Mobay	80,000		
	ICI PU	150,000		
	BASF	80,000		
	BASF	120,000		
	Bayer-Shell	36,000		
	ICI	70,000		
	Dow Benelux	70,000	Dow	(C-MDI)
	Bayer	180,000		
	Dow	65,000		
	BASF	60,000		
	Progil-Bayer UGINE	40,000		
	ICI	65,000		
	Montedison	40,000	ICI	
	Bayer	12,000		48,000
	NPU	60,000		
	MTC	55,000		
	SBU	37,000	Bayer	
	DM Kasei	36,000	Dow	
	Takeda-BASF	30,000		
	BASF	20,000	Bayer	
	MTC	(40,000)	BASF	92 가
		(40,000)	MTC	92 가
	HOC	12,500		
		10,000	NPU	
	CBP	20,000	MTC	
	Bayer	20,000		
가	BVK	25,000	MTC	
		1,623,500		

Steel

, CFC

HCFC

PU
PU

가

PU

Unknown System House 가

ICI가 Intergral Foam PU 95%

Raw Motalial 90% , PU PU

PU 가

Dow ,

가

PU BASF, ICI, Dow, Bayer, Montedison 5

< 1992/8/1>