

<EGE>

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90 Glycol Ether(EGE) 6 7000

() 7000 500 , 5000 , EGE

EM(Ethylene Glycol Monomethyl Ether) Methanol EB(Ethylene Glycol Monobutyl Ether)

n-Butanol Glycol Ether , EM

50% UCC 가

EO 가

UCC EO Alcohol , EO 가

가 , EO 가가 EGE EO 가

ICI · DOW · BASF , EGE

가

UCC

가

< 1> Glycol Ether

Oxide	Alcohol		
Ethylene oxide	Methanol	MG · EM:Ethylene Glycol Monomethyl Ether MDG · DM:Diethylene Glycol Monomethyl Ether MTG · TM:Triethylene Glycol Monomethyl Ether	, JET 가 , , EMA Jet 가 , Brake , hydraulic brake fluids,
	Ethanol	EG · EE:Ethylene Glycol Monoethyl Ether EDG · DE:Diethylene Glycol Monoethyl Ether ETG · TE:Triethylene Glycol Monoethyl Ether	EEA, , Brake , DEA hydraulic brake fluid,
	n-Butanol	BG · EB:Ethylene Glycol Monobutyl Ether BDG · DB:Diethylene Glycol Monobutyl Ether BTG · TB:Triethylene Glycol Monobutyl Ether	, , EBA · Diphthalate , Brake , Cleaning Solvent, DBA hydraulic brake fluid,
Propylene oxide	Methanol	MPG · MPM:Propylene Glycol Monomethyl Ether MPDG · DPM:Dipropylene Glycol Monomethyl Ether MPTG · TPM:Tripropylene Glycol Monomethyl Ether	, , , , DPMA —

EM · EB 7000 92 가

Glycol Ether Ethylene Oxide Alcohol(Methanol, Ethanol, n-Butanol)

, Oxide Propylene oxide Methanol

MPM(Propylene Glycol Monomethyl Ether)

EO Methanol Glycol Ether 가 ,

EO + Ethanol EO + n-Butanol

EGE 91 n-Butanol 7000 , Methanol 3000 , Ethanol 3500 , Ether
 Acetate 4000 1 7500
 91 90 6.1% 가 93 10%
 EM 3200 , EB 7400 , EE 3700 , Ether Acetate 4200 1 8500 5%

EB 40.0%, EM 17.3%, EE 20.0%, Ether Acetate 22.7% EB 가 40%
 가

< 2> Glycol Ether

(:)

		1989	1990	1991	1992
BG	Butyl Glycol(BG)	5,270	5,610	5,950	6,290
	Butyl Di Glycol(BDG)	) 930	990	1,050	1,110
	Butyl Tri Glycol(BTG)				
		6,200	6,600	7,000	7,400
MG	Methyl Glycol(MG)	2,340	2,520	2,700	2,880
	Methyl Di Glycol(MDG)	) 260	280	300	320
	Methyl Tri Glycol(MTG)				
		2,600	2,800	3,000	3,200
EG	Ethyl Glycol(EG)	3,100	3,300	3,500	3,700
	Ethyl Di Glycol(EDG)				
	Methyl Tri Glycol(ETG)				
	Ether Acetate	3,600	3,800	4,000	4,200
		15,500	16,500	17,500	18,500

< 3> Glycol Ether

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	1988	1989	1990	1991.11
MG · BDG (HS 2909.42.0000)	1,914	3,025	3,195	2,430
EG · EDG Alkyl Ether (HS 2909.44.0000)	3,376	3,449	4,250	3,588
BG · BDG (HS 2909.43.0000)	6,262	5,976	8,338	6,415
Ether Acetate (HS 2915.35.0000)	—	—	3,004	3,500

)

91 EGE 1 7500 EB 40 · EE 20 · EM 17%

, EM 가 88 2 5000 93 2 4000 ,

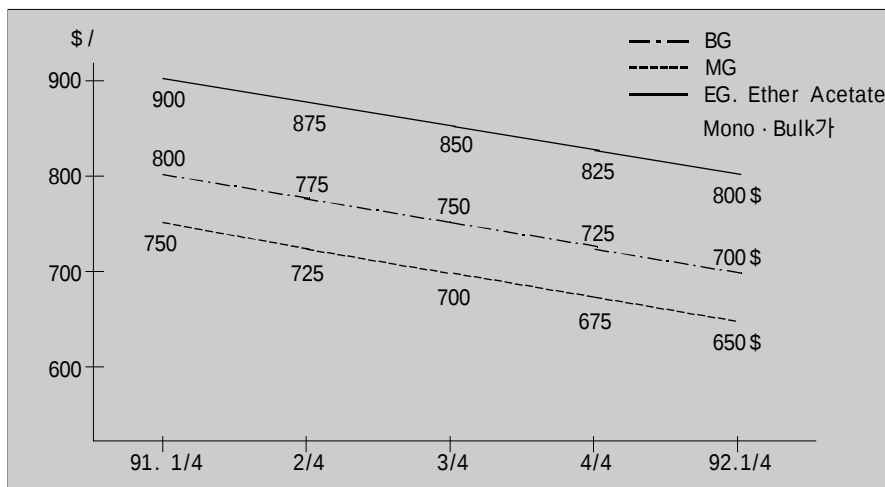
88 1 8000 93

EM 가 7000 93 8000

EE 88 2 7000 93 2 2000 ,

3 5000 2 88 1 93 1 6000

< > Glycol Ether 가



EM EE 가 EPA EM · EE
EEA, EMA

EB 88 11 3000 93 13 6000

6 5000 6

88 3 7000 93 4 3000

EB EPA OSHA

EM EE MPM PMA PM Blend
, E-Series , P-Series 가

< 4> Glycol Ether

(:%, 1000)

		1991	1988	1993	1988	1993	1988	1993
EM (MG)	JET 가	60.0	75.0	75.5	44.0	44.4	-	-
	PCB	30.0	12.5	9.4	17.0	22.2	-	-
	Solvent	10.0	-	-	17.0	85.6	100.0	100.0
	(EMA)	-	12.5	15.1	22.0	27.8	-	-
		100.0(3)	100.0(25)	100.0(24)	100.0(18)	100.0(18)	100.0(7)	100.0(8)
EE (EG)	EEA	-	85.0	95.7	57.0	75.0	71.0	70.0
	Solvent {	-	15.0	4.3	) 29.0	-	) 26.0	) 27.0
		90.0	-	-		10.0		
		-	-	-		15.0		
	()	10.0	-	-	-	-	-	-
		100.0(4)	100.0(27)	100.0(22)	100.0(35)	100.0(20)	100.0(14)	100.0(16)
EB (BG)	Solvent {	90.0	50.0	49.0	49.0	46.7	89.0	90.0
		-	15.0	14.7	16.0	13.3	-	-
		-	23.0	25.0	23.0	25.0	11.0	10.0
	(EBA · Diphthalate)	-	12.0	11.3	12.0	15.0	-	-
	()	10.0	-	-	-	-	-	-
		100.0(7)	100.0(113)	100.0(136)	100.0(65)	100.0(60)	100.0(37)	100.0(43)

< 5> Glycol Ether (1993)

(:1000)

	1988	1993	1988	1993	1988	1993	1988	1993
Ethylene Glycol Monomethyl Ether(EM)	25	25	18	18	7	5	50	48
Ethylene Glycol Monoethyl Ether(Ee)	27	21	35	20	14	10	76	55
Ethylene Glycol Monobutyl Ether(EB)	113	136	65	60	38	50	216	246
Diethylene Glycol Monomethyl Ether(DM)	15	15	11	11	3	5	29	31
Diethylene Glycol Monoethyl Ether(DE)	9	12	27	31	4	5	40	48
Diethylene Glycol Monobutyl Ether(DB)	34	39	24	28	9	15	67	85
Triethylene Glycol Monoethers(TM,TE and TB)	25	29	35	50	-	-	60	70
E-Series Glycol Ethers	15	18	-	-	3	5	18	23
E-Series Glycol Ethers(Mixtures and Blends)	15	18	-	-	-	-	15	18
Propylene Glycol Monomethyl Ether(PM)	43	50	52	108	3	5	98	163
Dipropylene Glycol Monomethyl Ether(DPM)	10	14	13	27	-	-	23	41
P-series Glycol Ethers	2	11	6	40	-	-	8	51
Total	329	383	286	393	81	100	703	879

, EE , EM DM JP-5
가
P-Series Glycol Ether 가 , PM 87 6 5000 93
13 5000 , PE(Propylene Glycol Monoethyl Ether) 6000 1 5000

< 6> P-Series Glycol Ether

(:1000)

	1987	1993
Propylene Glycol Monomethyl Ether(PM)		
Propylene Glycol		
Monomethyl Ether Acetate(PMA)	13	33
Solvent for surface Coatings	25	46
Solvent for Printing Inks	7	12
Pesticides	5	12
Industrial cleaners	4	4
Leather	2	8
Resins	2	3
Electronics Chemicals	—	5
Miscellaneous	7	12
	65	135
Propylene Glycol Monoethyl Ether(PE)		
Solvent for Printing Inks	5	10
Solvent for Surface Coatings	1	5
	6	15
Propylene Glycol Monobutyl Ether		
(PB.PNB and PTB)		
Solvent for Industrial Cleaners	-	5
Miscellaneous	-	20
	-	25
	71	175

PB, PNB, PTB Propylene Glycol Monobutyl Ether 93 2 5000 가
 P-Series Glycol Ether 87 7 1000 93 17 5000
 40% .

< 7> Glycol Ether

(:1000)

가				
	ARCO CHEMICAL	BAYPORT, TX	40	P-SERIES
	DOW CHEMICAL	MIDLAND, MI	50	E-SERIES, P-SERIES
		PLAQUE, INE, LA	55	
	EASTMAN CHEMICAL(EASTMAN KODAK)	LONGVIEW, TX	102	E-SERIES
	CAIN CHEMICAL(OCCIDENTAL PETROLEUM)	BAYPORT, TX	50	E-SERIES
	SHELL CHEMICAL	GEISMAR, LA	30	EB DB
	UNION CARBIDE	SEADRIFT, TX	123	
		SOUTH CHARLESTON	9	E-SERIES, P-SERIES
		TAFT, LA	41	
	OLIN	BRANDENBURG, KENTUCKY		E-SERIES, P-SERIES
			500	
	BP CHEMICALS BELGIUM	ANTWERPEN	68	E-SERIES PE
	BP CHIMIE	LAVERA	35	E-SERIES, P-SERIES
	ICI FRANCE	CHOCQUES	28	E-SERIES
	BASF	LUDWIGSHAFEN	85	EM, EB, PM
	HUELS	MARL	44	EE, EB
	DOW STADE	STADE	60	PM, PMA
	HOECHST	GENDORF	18	EM, EB
	MONTEDIPE SPA	PRIOLO	12	EE, EB
	SHELL NEDERLAND	PERNIS	62	EM, EB, PM
	PLC-ICI	WILTON	53	E-SERIES
			465	
	DAICEL CHEMICAL	OHTAKE, HIROSHIMA	8	EE(7), EB(1)
	KYOWA YUKA	YOKKAICHI, MIE	13	EB
	MARUZEN PETROCHEMICAL	GOI, CHIBA	5	EB
	MITSUI TOATSU	SAKAI, OSAKA	6	EM
	NIPPON NYUKAZAI	KAWASAKI,	22	EM(10), EB(12)
	NIPPON SHOKUBAI/KAGAKU KOGYO	KANAGAWA	12	EE
	TOHO CHEMICAL		8	EM
	YOKKAICHI CHEMICAL	YOKOSUKA,	15	EE(2), EB(13)
		KANAGAWA	89	
		YOKKAICHI, MIE	1,054	

가 P-Series

E-Series

E-Series

UCC

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Olin

E-Series

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가

가 Propylene Oxide P-Series			91	PO		
EO			EO	PO		
			Glycol Ether	가		
EB	1/4	mono, bulk	800	4/4	725	, 1 700
EM	mono, bulk	1/4	750	4/4	675	, 1 650
800	, EE	Ether Acetate	가	1/4	900	
	Glycol Ether가			EO	Alcohol	가
	7000	EM · EB	, 10	가		
	UCC	가				가
	EGE	1 7500	UCC가 50%, Shell 30%, Shokubai			
10%, DOW · ICI · BASF	가 10%					
Shell						
UCC			가			
	UCC					
	EO가			EO	가	
		EO 가	가			
가		가	EM			
EO가	EO	가	UCC	가		
70	가	72 5000			EM	EB
가		가			가	가가
	1/4	70	EGE	가	가가	
	80					
, 가						
	Final Product		Formulation Technical Service			