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회사 소개



1989

1998 : { () : }

2000 (160)

2003 (480),

2005 : 75 /2005 , 13 (R&D : 5)



(R&D)

2002 (58) ()

2006 (INNO-BIZ) ()

2004 가 (: 0418258)

(: 0443826)

(: 0439663)



2000 ISO 9001, ISO 14001 (QMI)

2001 KS(11) GQ (12) : 2006

2002

2004 - ()



금속 세정제에 필요한 용제

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- ,
- , -
- 가 ,
- 가 ()
-

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-
- 300ppm 가
-

- 가

일반 용제 및 특수 용제의 일반적 사항

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Aromatic , Sulfur - , ,

	가 , , 가 , , , , , , , , , ,
	(,), 가 , , , , , , , PVC
	- , , dry - cleaning, , , () , , , , ,

일반 용제 및 특수 용제 성상(1)

Name Item	Test Method							
		102	103	104	123	124M	134	147
Sp.Gr.15/4	ASTM D - 1928	0.745	0.75	0.754	0.757	0.759	0.766	0.769
Distillation, IBP	ASTM D - 86	183	195	198	219	224	241	247
5%		186	199	203	222	226	243	252
10%		187	199	204	222	227	244	253
50%		190	206	218	225	229	245	255
90%		194	219	243	228	235	247	258
95%		196	222	245	229	238	247	260
DP		198	244	267	250	258	272	279
Flash Point,		ASTM D - 93	61	77	76	93	92	108
Pour Point,	ASTM D - 97	- 25	- 19	- 10	- 8	- 6	7	7.5
Aromatics,%	UOP 495 - 75	0.12	0.17	0.19	0.14	0.12	0.14	0.12
Sulfur,wtppm	UOP 357 - 80	1	1	1	1	1	1	1
Aniline Point,	ASTM D - 611	-	82.4	84.4	85.4	86.6	89.2	91
Color,Saybolt	ASTM D - 156	30	30	30	30	30	30	30
Viscosity,cSt at 40	ASTMD - 445	1.16	1.41	1.54	1.64	1.74	2.03	2.25

일반 용제 및 특수 용제 성상(2)

Name Item	Test Method										
		150L	150	170	200	240R	240	260	280	300	ES 250
Sp.Gr.15/4	ASTM D- 1928	0.748	0.778	0.781	0.8	0.81	0.81	0.81	0.86	0.86	0.82
Distillation, IBP	ASTM D- 86	150	163	174	204	237	239	260	284	311	255
5%		152	168	177	208	240	244	263	289	315	262
10%		153	169	178	209	241	245	264	291	316	264
50%		155	175	181	214	245	248	266	297	322	270
90%		160	184	187	226	250	253	271	308	335	281
95%		162	188	189	230	254	256	273	311	341	288
DP		165	190	191	235	104	258	274	314	344	298
Flash Point,	ASTM D- 93	32.5	44	52.5	79	104	110	123	141	162	122
Pour Point,	ASTM D- 97	- 55	- 55	- 55	- 55	- 35	- 25	- 20	- 28	- 9.5	- 40
Aromatics,%	UOP 495- 75	0.03	0.06	0.03	0.07	0.01	0.02	0.03	0.72	0.68	8.2
K.B Value	ASTM D- 1133	35	34	34	30	25	24	23	27	23	-
Sulfur,wtppm	UOP 357- 80	1	1	1	1	1	1	1	1	1	1
Aniline Point,	ASTM D- 611	60.4	68	68.6	74	81	82.2	86.8	82.2	87.4	84.6
Color,Saybolt	ASTM D- 156	30	30	30	30	30	30	30	30	30	26
Viscosity,cSt at 40	ASTMD- 445	0.89	1.05	1.11	1.6	2.3	2.4	2.91	5.28	8.35	3.12

일반 용제 및 특수 용제 성상 (3)

Hydrocarbon		Distillation Range	Flash Point	Specific Gravity 60/60	Viscosity 40 cSt	Aniline Point (mixed)	Aromatic Content Vol %	Color Saybolt
Aromatics	ESOL A15	155 - 180	46	0.87	0.95	16	>98.0	+ 30
	ESOL A17	175 - 215	63	0.93	1.20	17	>99.0	+ 30
	ESOL A19	190 - 230	78	0.95	2.0	18	>99.0	+ 30
Dearomatized Aliphatics	ESOL D15	155 - 205	42	0.77	1.15	69	<0.01	+ 30
	ESOL D20	200 - 255	80	0.815	2.33	72	<0.01	+ 30
	ESOL D24	235 - 270	105	0.820	2.8	75	<0.01	+ 30
Iso Paraffins	DISPA 1016	100 - 160		0.735	0.65	70	<0.01	+ 30
	DISPA 1620	160 - 200	43	0.765	1.3	72	<0.01	+ 30
	DISPA 2026	200 - 260	79	0.792	2.5	85	<0.01	+ 30
	DISPA 2735	270 - 350	83	0.835	8	92	<0.01	+ 30
Paraffin	ESOL P16	160 - 205	40	0.765	1.3	72	<0.01	+ 30
	ESOL P20	205 - 260	80	0.792	2.5	85	<0.02	+ 30
	ESOL P27	270 - 350	130	0.835	8	92	<0.03	+ 30
	ESOL P35	350	150	0.85	190	100	<0.04	APAH 10
Naphthenes	ESOL N3	170 - 210	45	0.91	3	35	10 - 20	+ 30
	ESOL N10	280 - 320	150	0.95	10	45	5 - 10	+ 30
	ESOL N50	280	170	0.96	50	45	5 - 10	APAH 50
	ESOL N400	320	200	1.03	450	50	5 - 10	APAH 50

일반 용제 및 특수 용제 성상 (4)

PROPERTY	TEST METHOD	ISOPAR							
		B	C	E	G	H	L	M	V
Distillation, Initial boiling point 50% Dry point	ASTM D 86								
	ASTM D1078	85	100	118	158	179	189	208	279
		88	101	122	164	183	194	228	290
		95	105	143	176	192	210	245	314
density at 15 ,kg/dm3	ASTM D4052	0.691	0.697	0.724	0.751	0.765	0.773	0.79	0.819
Flash Point,	ASTM D56/D93	<0	<0	7	41	58	65	78	134
KB Value	ASTM D1133	31	28	29	28	28	28	27	23
Aniline Point,	ASTM D611	71	80	73	78	79	81	83	97
Aromatic,Content, wt%	UV	0.001	0.007	0.007	0.001	0.001	0.004	0.01	0.6
bromine index, mg/100g	ASTM D2710	5	10	1	10	10	20	25	400
colour (saybolt)	ASTM D156	+ 30	+ 30	+ 30	+ 30	+ 30	+ 30	+ 30	+ 30
Evaporation Rate (n - BuAc= 100)	Exxon Chemical	840	545	155	28	9	4	<1	<1
Viscosity at 25 , mPa.s	ASTM D445	0.39	0.5	0.62	0.8	1.13	1.38	2.12	12
Refractive index at 20	ASTM D1218	1.387	1.393	1.406	1.418	1.431	1.429	1.44	1.452
Litres/tonne at 15	Calculated	1445	1435	1380	1330	1305	1295	1265	1220
TLV(OEL),ppm	ACGIH(Exxon)	400	400	400	300	300	300	300	200

일반 용제 및 특수 용제 성상 (5)

Name Item	Test Method										
		150L	150	170	200	240R	240	260	280	300	ES 250
Sp.Gr.15/4	ASTM D- 1928	0.748	0.778	0.781	0.8	0.81	0.81	0.81	0.86	0.86	0.82
Distillation, IBP	ASTM D- 86	150	163	174	204	237	239	260	284	311	255
5%		152	168	177	208	240	244	263	289	315	262
10%		153	169	178	209	241	245	264	291	316	264
50%		155	175	181	214	245	248	266	297	322	270
90%		160	184	187	226	250	253	271	308	335	281
95%		162	188	189	230	254	256	273	311	341	288
DP		165	190	191	235	104	258	274	314	344	298
Flash Point,	ASTM D- 93	32.5	44	52.5	79	104	110	123	141	162	122
Pour Point,	ASTM D- 97	- 55	- 55	- 55	- 55	- 35	- 25	- 20	- 28	- 9.5	- 40
Aromatics,%	UOP 495- 75	0.03	0.06	0.03	0.07	0.01	0.02	0.03	0.72	0.68	8.2
K.B Value	ASTM D- 1133	35	34	34	30	25	24	23	27	23	-
Sulfur,wtppm	UOP 357- 80	1	1	1	1	1	1	1	1	1	1
Aniline Point,	ASTM D- 611	60.4	68	68.6	74	81	82.2	86.8	82.2	87.4	84.6
Color,Saybolt	ASTM D- 156	30	30	30	30	30	30	30	30	30	26
Viscosity,cSt at 40	ASTMD- 445	0.89	1.05	1.11	1.6	2.3	2.4	2.91	5.28	8.35	3.12

일반 용제 및 특수 용제 성상 (6)

PROPERTY	TEST METHOD	EXXSOL						
		D 30	D 40	D 60	D 80	D 100	D 110	D 130
Distillation,	ASTM D 86							
Initial boiling point		139	159	182	200	239	246	277
50%		151	172	196	222	246	257	288
Dry point		165	193	215	240	266	272	307
density at 15 ,kg/dm3	ASTM D4052	0.769	0.777	0.780	0.790	0.810	0.815	0.813
Flash Point,	ASTM D56/D93	29	44	63	79	103	114	138
KB Value	ASTM D1133	33	32	31	30	27	27	24
Aniline Point,	ASTM D611	64	70	72	76	79	82	90
Aromatic,Content, wt%	UV	0.007	0.5	0.2	0.5	0.5	0.6	0.8
bromine index, mg/100g	ASTM D2710	15	30	30	30	100	100	100
colour (saybolt)	ASTM D156	+ 30	+ 30	+ 30	+ 30	+ 30	+ 30	+ 30
Evaporation Rate	Exxon Chemical	42	12	4	<1	<1	<1	<1
Viscosity at 25 , mm ² /s	ASTM D445	0.98	1.24	1.65	2.17	3.19	3.6	5.4
Refractive index at 20	ASTM D1218	1.419	1.426	1.434	1.44	1.448	1.45	1.45
Litres/tonne at 15	Calculated	1305	1290	1285	1270	1240	1230	1235
TLV(OEL), ppm	ACGIH(Exxon)	300	300	300	300	300	300	300

일반 용제 및 특수 용제 성상(7)

TDM (Tertiary Dodecyl Mercaptan)

Test Items		Test Method	Specification	Typical Value
Sp. Gr., 15/4 ° C		ASTM D- 1298	0.8500 - 0.8700	0.8577
Distillation, ° C (760mmHg)	IBP	ASTM D- 86	Min 227	229
	50%		-	234
	95%		Max 248	239
Mercaptan Sulfur, wt%		UOP- 163	Min 15.6	15.8
Refractive Index, 20 ° C		ASTM D- 1218	1.456 - 1.466	1.4622
TDM Purity, wt%		G/C	Min 98.5	99
Color	Saybolt	ASTM D- 156	Min 28	30
	Apha	ASTM D- 1209	0	0
Apperance		Visual	Liquid Clear	Liquid Clear

- ABS, SBR, SB - LATEX				
-				
- 가				
(, , 가 , 가 , 가)				
-				
-				
-				

폴리부텐의 적용 개소

	LV 100, HV 15		
	HV 1900, SV 7000		, , -
	HV 300, HV 1900		
	HV 100, HV 300, HV 1900	,	,
	HV 100, HV 300, HV 1900	-	
	HV 15 ~ HV 1900	, 2 -	, , ,
	HV 15E, HV 35E		MP, MF , , - ,
	LV 25, LV 15E		- , , P.O.F ,
Caulking and Sealing Compounds	HV 35, HV 100		-
	HV 100, HV 300		- - ,
	HV 100, HV 300		- , , -
	HV 300, HV 1900F		,
	HV 100, HV 1900		, -
	HV 300, HV 1900		
	HV 35, HV 100		가 , - , , , , 가
	HV 1900		, , ,
	HV 35, HV 50, HV 100		, 가 , - -
	HV 35, HV 50, HV 100		, ,

플리부텐의 규격과 일반성상

ITEM	LV - 7	LV - 10	LV - 25	LV - 50	LV - 100	HV - 15	HV - 35	HV - 50	HV - 100	HV - 300	HV - 1900	HV - 3000
(V.P.O) Number averaged Molecular weight	300	330	390	430	500	630	750	800	980	1,400	2,900	3,700
(40 , cSt) Kinematic Viscosity	12.1	19.4	52.5	110	205	655	2,300	3,450	9,500	26,000	160,000	320,000
(100 , cSt) Kinematic Viscosity	2.7	3.6	6.4	9.5	14	31	85	110	220	590	3,710	5,700
Viscosity index	33	36	41	43	46	67	96	98	107	155	257	259
(15 , g/cm ³) Density	0.830	0.833	0.844	0.851	0.856	0.870	0.880	0.884	0.890	0.898	0.910	0.910
(COC,) Flash Point	136	140	150	162	166	170	180	184	220	236	260	270
(Saybolt) Color	+ 10<	+ 10<	+ 10<	+ 10<	+ 10<	+ 10<	+ 10<	+ 10<	+ 10<	+ 10<	+ 10<	+ 10<
가 (mgKOH/g) Total Acid Value	0.01>	0.01>	0.01>	0.01>	0.01>	0.01>	0.01>	0.01>	0.01>	0.01>	0.01>	0.01>
() Pour Point	- 55	- 52.5	- 40	- 35	- 32.5	- 20	- 15	- 12.5	- 7.5	0	17.5	22.5
(Wt, ppm) Water Content	20	20	20	20	20	10	10	10	10	10	10	10
(Wt, ppm) Sulphur	1>	1>	1>	1>	1>	1>	1>	1>	1>	1>	1>	1>
(80) Power Factor)	-	-	0.00005	-	-	0.00001	0.00001	-	0.00001	0.00001	-	-
(80) Volume Resistivity	-	-	5 × 10 ¹⁵	-	-	5 × 10 ¹⁵	5 × 10 ¹⁵	-	5 × 10 ¹⁵	5 × 10 ¹⁵	-	-
(80) Dielectric Constant	-	-	2.11	-	-	2.15	2.17	-	2.18	2.19	-	-
(kv/2.5mm) Dielectric Strength	-	-	50	-	-	50	50	-	50	50	-	-

Thank You!