

Technical Information

POLYURETHANE

FINE CHEMICALS CORPORATION

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1. PU Resin for Shoes (Incl. Action leather)

1) Dry type one component PU Resin for skin layer

Articles	Solid (%)	Viscosity poise/20°C	Solvent	Physical Properties of Film			Characteristics
				100% Modulus (kg/cm ²)	Tensile strength (kg/cm ²)	Elongation (%)	
UB-225A	30±1	600 - 900	MEK,DMF	60 - 70	450 - 550	450 - 550	Low temp. flexibility Hydrolysis resistant
UB-235	30±1	600 - 900	MEK,DMF	30 - 40	400 - 500	500 - 600	Low temp. flexibility Hydrolysis resistant Wet touch
UB-250	30±1	600 - 900	MEK,DMF	110 - 120	550 - 650	450 - 550	Normal type, Enamel type
UB-501MB	30±1	600 - 900	MEK,DMF	60 - 70	400 - 500	500 - 700	Low temp. flexibility Hydrolysis resistant Good for making Molding
UB-515	25±1	600 - 900	MEK,DMF	110-130	300-400	350-450	Heat resistant Good for making Molding Hydrolysis resistant
UB-514E	30±1	600 - 900	MEK,DMF	80 - 100	550 - 650	500 - 600	Low temp. flexibility Hydrolysis resistant Enamel type
UB-517	30±1	600 - 900	MEK,DMF	60 - 70	550 - 650	450 - 500	Low temp. flexibility Hydrolysis resistant
UB-960	30±1	600 - 900	MEK,DMF	60 - 70	450 - 550	500 - 600	Normal type

2) Dry type two component PU Resin for adhesives

Articles	Solid (%)	Viscosity poise/25 °C	Solvent	Physical Properties of Film			Characteristics
				100% Modulus (kg/cm ²)	Tensile strength (kg/cm ²)	Elongation (%)	
UA-5700	70±1	800-1000	MEK,DMF	20-30	200-300	300-400	Hydrolysis resistant
UA-5900	70±1	800-1000	MEK,DMF	20-30	200-300	300-400	Hydrolysis resistant
UA-5900D	70±1	500-800	MEK,DMF	20-30	200-300	300-400	Hydrolysis resistant
UA-5970M	70±1	800-1000	MEK	23-30	200-300	300-400	Hydrolysis resistant
UA-7500NY	70±1	600-900	MEK,DMF	18-25	150-250	300-500	Normal type Low temp. flexibility
UA-7670	70±1	800-1000	MEK,DMF	20-30	200-300	300-500	Normal type

3) Examples according to properties (Leather of Dry & Wet process, Action Leather)

	One component (Skin)	Two component (Adhesive)
Normal type	UB-960	UA-7500NY, UA-7670
Low temp flexibility type	UB-235, UB-225A, UB-501MB	UA-7500NY, UA-7670
Hydrolysis resistance type	UB-235, UB-225A, UB-501MB	UA-5900(D), UA-5700, UA-5970
Enamel type	UB-250, UB-514E	UA-7500NY, UA-5900(D)
Molding type	UB-501MB, UB-515	UA-5700,UA-5900(D), UA-5700

2. PU Resin for garments

1) Dry type one component PU Resin for skin layer

Articles	Solid (%)	Viscosity poise/20 °C	Solvent	Physical properties of film			Characteristics
				100% Modulus (kg/cm ²)	Tensile strength (kg/cm ²)	Elongation (%)	
UB-235	30±1	600 - 900	MEK, DMF	30-40	400-500	500-600	Hydrolysis resistant Wet touch
UB-440	30±1	600 - 900	MEK, DMF	70-80	550-650	400-500	Rigid, Normal type
UB-827D	30±1	600 - 900	MEK, DMF	15-25	500-600	600-750	Soft type
UB-870	30±1	600 - 900	MEK, DMF	50-60	550-650	400-500	Solvent resistant
UB-870E	30±1	600 - 900	MEK, DMF	50-60	550-650	400-500	Enamel type
UB-880ND	30±1	600 - 900	MEK, DMF	20-30	550-700	600-800	Soft type

2) Dry type two component PU Resin for adhesives

Articles	Solid (%)	Viscosity poise/20 °C	Solvent	Physical properties of Film			Characteristics
				100% Modulus (kg/cm ²)	Tensile strength (kg/cm ²)	Elongation (%)	
UA-1065M	65±1	700-1000	DMF, MEK, TOL	20-30	200-300	400-600	Non aging type
UA-6600	60±1	400-700	TOL	15-25	300-400	400-500	Normal type
UA-7200	75±1	400-800	MEK	10-20	200-400	450-550	Soft, Tacky type
UA-7270A	70±1	400-600	DMF, MEK, TOL	10-15	100-150	400-600	Soft type, Good adhesion Non-Curling
UA-7560	70±1	400-600	DMF, MEK, TOL	15-25	200-300	400-500	Soft type, Non-Curling

3) Examples according to properties (Garments, Thin-PU)

	One component (Skin)	Two component (Adhesive)
Soft type	UB-827D	UA-7270A, UA-7560
Normal type	UB-870	UA-7270A, UA-7560
Enamel type	UB-870E	UA-7270A, UA-7560
Non aging type	UB-870	UA-1065M

3. PU Resin for Bags

1) Dry type one component PU Resin for skin layer

Articles	Solid (%)	Viscosity poise/20 °C	Solvent	Physical properties of Film			Characteristics
				100% Modulus (kg/cm ²)	Tensile strength (kg/cm ²)	Elongation (%)	
UB-110	30±1	600-900	MEK, DMF	45-55	500-600	400-500	High temp. flexibility
UB-250	30±1	600-900	MEK, DMF	110-120	550-650	450-550	Rigid, Enamel type
UB-330	25±1	600-900	MEK, DMF	200-250	400-500	200-300	Super rigid, Anti-abrasion, Non-Tacky
UB-335	30±1	1300-1500	MFK, TOL	350-450	450-550	100↓	Super rigid, Anti-abrasion, Non-Tacky
UB-440	30±1	600-900	MEK, DMF	70-80	550-650	400-500	Rigid type
UB-990	30±1	600-900	MEK, DMF	90-110	500-600	400-500	Rigid, Anti-abrasion

2) Dry type two component PU Resin for adhesives

Articles	Solid (%)	Viscosity poise/25 °C	Solvent	Physical properties of Film			Characteristics
				100% Modulus (kg/cm ²)	Tensile strength (kg/cm ²)	Elongation (%)	
UA-6045	45±1	700-1000	DMF, MEK, TOL	60-70	400-500	300-450	Good adhesion, Elasticity
UA-6060	60±1	800-1200	DMF, MEK, TOL	35-45	250-400	400-600	Good adhesion, Elasticity
UA-6400	45±1	700-1000	DMF, MEK, TOL	55-65	400-500	300-450	Good Elasticity
UA-6500	45±1	1000-1500	DMF, MEK, TOL	130-150	500-650	300-350	Rigid type, Good adhesion
UA-6700	45±1	1000-1500	DMF, MEK, TOL	35-45	300-450	400-600	Excellent adhesion, Elasticity

3) Examples according to properties

	One component (Skin)	Two component (Adhesive)
Normal type	UB-110, UB-440	UA-6060, UA-6700
Rigid type	UB-990	UA-6060, UA-6700
Super rigid type	UB-330, UB-335	UA-6060, UA-6500
Enamel type	UB-250	UA-6060, UA-6700

4. PU Resin for PVC Semi-PU

1) Dry type one component PU Resin for skin layer

Articles	Solid (%)	Viscosity poise/20 °C	Solvent	Physical properties of Film			Characteristics
				100% Modulus (kg/cm ²)	Tensile strength (kg/cm ²)	Elongation (%)	
UB-308	30±1	600-900	MEK, DMF	70-80	500-600	400-600	Normal type, Heat resistant
UB-309	25±1	600-900	MEK, DMF	250-350	500-600	100-200	Super rigid type Heat resistant

2) Dry type two component PU Resin for adhesives of PVC Leather

Articles	Solid (%)	Viscosity poise/25 °C	Solvent	Physical properties of Film			Characteristics
				100% Modulus (kg/cm ²)	Tensile strength (kg/cm ²)	Elongation (%)	
UA-7060	60±1	600-900	DMF, MEK, TOL	20-30	150-250	250-350	Good adhesion with PVC & Nylon
UA-7200	75±1	400-800	MEK	10-20	200-400	450-550	Adjustment of Tacky touch
UA-7700	45±1	1000-1500	MEK, TOL	20-30	400-500	450-600	Good adhesion with PVC & Nylon

3) Examples according to properties (PVC & Semi-PU)

	One component (Skin)	Two component (Adhesive)
Normal type	UB-308	
Rigid type	UB-308, UB-309	
Super rigid type	UB-309	

5. PU Resin for Direct coating (Normal water resistant)

1) PU Resin for Base layer

Articles	Solid (%)	Viscosity poise/20 °C	Solvent	Physical properties of Film			Characteristics
				100% Modulus (kg/cm ²)	Tensile strength (kg/cm ²)	Elongation (%)	
UB-605	60±1	600-900	MEK, DMF	5 ↓	-	1500-2500	Super soft type, High density
UB-740B	35±1	900-1100	MEK, DMF, TOL	11-15	140-180	500-600	Normal type Good Applicable with Acryl
UB-805H	45±1	1000-1400	MEK, DMF	5 ↓	-	1500-2500	Super soft type
UB-810A	33±1	800-1200	MEK, DMF, TOL	10 ↓	10 ↓		Super soft type Applicable with Acryl
UB-865	40±1	800-1000	MFK, DMF	10-15	50-60	1000-1500	Soft type
UB-897	42±1	800-1000	DMF, TOL	10 ↓	10-20	2000-2500	Good adhesion with textile after water repellent procedure
UB-897G	45±1	1000-1200	DMF, TOL	10-13	150-200	500-600	Good adhesion with textile after water repellent procedure Soft type
UB-1150D	50±1	1200-1500	DMF, TOL	10-20	400-500	600-800	Good adhesion with Nylon, P.E. High density, Water resistant
UA-1145A	45±1	1000-1500	DMF MEK	20-30	400-600	500-700	Soft type One component adhesives
NB-130	30±1	1400-1600	DMF, TOL	20-30	400-500	600-800	Soft type, Non-yellowing type

2) PU Resin for Top layer

Articles	Solid (%)	Viscosity poise/20°C	Solvent	Physical properties of Film			Characteristics
				100% Modulus (kg/cm ²)	Tensile strength (kg/cm ²)	Elongation (%)	
UB-335	30±1	1300-1500	DMF TOL	350-450	450-550	100 ↓	Super rigid type Anti abrasion, Non-Tacky
UB-440	30±1	600-900	DMF MEK	75-85	550-650	450-550	Normal type
UB-730T	30±1	600-900	DMF MEK TOL	30-40	450-550	450-550	Normal type Good Applicable with Acryl
UB-820	30±1	600-900	DMF MEK	30-40	500-600	500-600	Soft type
UB-860	40±1	800-1000	MFK DMF	55-65	450-550	400-500	Soft type High water resistant pressure
UB-861TP	40±1	800-1000	DMF MEK	55-65	450-550	400-500	Soft type High water resistant pressure Applicable with Acryl
UA-1145	45±1	1000-1500	DMF,MEK	90-110	500-700	300-500	Rigid type, One component adhesives
NB-185H	30±1	1400-1600	DMF, TOL	80-90	500-600	450-550	Non-yellowing type

3) Examples according to properties (Garments, Tents, Bags)

	Resin for Top layer	Resin for Base layer
Garments & Tents	UB-861TP, UB-860	UB-865, UB-897,UB-897G, UB-810A
Bags & Textile coating	UB-440, UA-1145, UB-861TP	UA-1150D, UA-1145A, UB-897
Non-yellowing type	NB-185H	NB-130

6. PU Resin for Direct coating (Water resistant & Vapor permeable)

1) PU Resin for Base layer

Articles	Solid (%)	Viscosity poise/20 °C	Solvent	Physical properties of Film			Characteristics
				100% Modulus (kg/cm ²)	Tensile strength (kg/cm ²)	Elongation (%)	
WB-402	40±1	700-900	MEK, DMF	5-15	200-400	500-800	Water resistant, Swelling Type
WB-410B	40±1	800-1000	MEK, DMF TOL	5-10	150-250	600-900	Water resistant, Swelling Type Soft type
WA-6030G	60±1	400-600	MEK, DMF, TOL	15-25	200-300	300-500	Two component & Vapor-permeable adhesives
UA-7200	75±1	400-800	MEK	10-20	200-400	450-550	Two component adhesives Tacky adjustment

2) PU Resin for Top layer

Articles	Solid (%)	Viscosity poise/20 °C	Solvent	Physical properties of Film			Characteristics
				100% Modulus (kg/cm ²)	Tensile strength (kg/cm ²)	Elongation (%)	
WB-401	30±1	600-900	DMF, MEK, TOL	20-30	300-500	400-700	Water resistant & Vapor permeable
WB-409	30±1	600-900	DMF, MEK, TOL	20-30	300-500	400-700	Water resistant & Vapor permeable Matt type
WB-450T	30±1	600-900	DMF, MEK TOL	20-30	300-500	500-800	Water resistant & Vapor permeable Good adhesion with Seam Tape

3) Examples according to properties

	Resin for Top layer	Resin for Base layer
Gloss type	WB-401	WB-402
Matt type	WB-409, WB-450T	WB-402
R/P transcription type	WB-401, WB-409	WA-6030G / UA-7200
Soft type (Matt type)	WB-450T	WB-410B

7. Wet processing PU Resin

1) Resin for porous layer

Articles	Solid (%)	Viscosity poise/25°C	Solvent	Physical properties of Film			Applications	Characteristics
				100% Modulus (Kg/cm ²)	Tensile strength (Kg/cm ²)	Elongation (%)		
UW-5040N	35±1	1200-1400	DMF	30-40	350-450	450-550	Nubuck	Wet on Wet
UW-5400	35±1	1200-1400	DMF	35-45	350-450	450-550	Nubuck, Suede	Hydrolysis resistant
UW-5500F	35±1	1200-1400	DMF	35-45	350-450	450-550	Film Nubuck	Hydrolysis resistant
UW-706D	30±1	1200-1400	DMF	35-45	350-450	650-750	Nubuck	Normal soft type
UW-706	30±1	1200-1400	DMF	55-65	350-450	450-550	Nubuck	Normal type
UW-7350NY	31±1	1000-1200	DMF	60-70	500-600	500-600	White Shoes	Normal skin layer Non yellowing type
UW-8350	31±1	1000-1200	DMF	60-70	500-600	400-500	Shoes, skin layer	Normal skin layer
UW-5680G	35±1	1200-1400	DMF	60-70	350-450	400-500	Nubuck	Hydrolysis resistant Good adhesion
UW-5160	35±1	1200-1400	DMF	60-70	350-450	400-500	Nubuck	“
UW-5380	31±1	1000-1200	DMF	80-90	500-600	400-500	Balls, skin layer	“
UW-7090	31±1	800-1000	DMF	90-100	500-600	400-500	Balls, skin layer	Normal type
UW-7015	30±1	1000-1200	DMF	135-155	550-650	400-500	Shoes, skin layer	Normal type
UW-708	45±1	1400-1600	DMF	70-80	350-450	400-500	Nubuck, skin layer	Hydrolysis resistant Good adhesion
UW-706S	30±1	1200-1400	DMF	25-35	350-450	400-500	Nubuck	Normal type
UW-5000M	35±1	1200-1400	DMF	60-70	350-450	400-500	Nubuck	High Anti abrasion Hydrolysis resistant
UW-5060	35±1	1200-1400	DMF	60-70	350-450	400-500	Nubuck	“
UW-5930	30±1	1000-1200	DMF	30-40	350-450	500-600	Dipping	“
UW-7030	30±1	600-900	DMF	35-45	500-600	500-600	Dipping	Normal type
UW-611	32±1	800-1000	DMF	70-80	350-450	500-600	Dipping with Dyeing	Good for dyeing Hydrolysis resistant
UW-637	31±1	600-800	DMF	80-90	300-400	300-400	Micro-fiber Dipping	Hydrolysis resistant
UW-639	31±1	600-800	DMF	100-110	400-500	300-400	Micro-fiber Dipping	“
UW-7062	23±1	500-700	DMF	40-50	300-400	450-550	Garments, skin layer	Soft type. Vapor-permeable

2) Wet processing additives

Articles	Composition	Characteristics & Usage
FW-70	Nonion, Valid component : 100%	High speed saturation of DMF, Non-Curling
FW-80	Nonion, Valid component : 100%	Making Cell smaller
FW-110	Anion, Valid component : 100%	High speed coagulation, Making Cell bigger

8. PU Resin with U.V Resistance

Dry type PU Resin for skin layer and adhesives

Articles	Solid (%)	Viscosity poise/20 °C	Solvent	Physical properties of Film			Characteristics
				100% Modulus (kg/cm ²)	Tensile strength (kg/cm ²)	Elongation (%)	
NB-570	30±1	700-1000	DMF, TOL,IPA	45-55	550-650	500-600	One component & non-yellowing
NB-570E	30±1	700-1000	DMF, TOL,IPA	45-55	550-650	500-600	One component & non-yellowing Enamel type
NA-1900	70±1	500-700	DMF, MEK	15-25	200-300	300-400	Non-yellowing adhesives

9. Forming two component adhesives

Articles	Solid (%)	Viscosity poise/25 °C	Solvent	Physical properties of Film			Characteristics
				100% Modulus (kg/cm ²)	Tensile strength (kg/cm ²)	Elongation (%)	
UF-2000	80±1	1000-1500	TOL	20-25	250-350	400-500	High viscosity Forming adhesives
UF-2000S	80±1	400-600	TOL	18-25	200-300	400-500	High viscosity Forming adhesives
F-2	100	-					Forming agent

10. Cross linking agent & Accelerator

Articles	Solid (%)	Viscosity (cps/20°C)	Solvent	Isocyanate Content(%)	Characteristics
CLA	75±1	1000-2000	Et-Ac	13 ± 1	Normal C.L.A
CLA-Q	50±1	1000-2000	Et-Ac	8.0± 1	Non aging type C.L.A
N-75	75±1	1000-2000	Et-Ac	13± 0.5	Non yellowing type C.L.A
HS-Accel	-	-	TOL, MEK	-	Normal Accel
HI-Accel	22±1	-	MEK	-	High temp. Accel
HI-60Accel	15±1	-	TOL	-	High speed Accel
HF-5Accel	5±1	-	TOL	-	Non aging type Accel

11. Surface coating agent

Articles	Solid (%)	Viscosity Cps/20°C	Solvent	Physical properties of Film			Application	Characteristics
				100% Modulus (kg/cm ²)	Tensile strength (kg/cm ²)	Elongation (%)		
SU-1500	21±1	300-500	MEK,DMF Cyclohexa- none	100-200	300-400	300-350	PU synthetic- Leather	Gloss type
SU-1560	13±1	300-700	MEK,DMF Cyclohexa- none	-	-	-	PU synthetic- Leather	Matt type
SU-301	18±1	5000- 8000	MEK,DMF	200-250	400-500	200-250	PU synthetic- Leather Top Coating	Gloss type Suitable for double coating
SV-2120F	16±1	20-60	MEK,DMF Cyclohexa- none	-	-	-	PVC	Gloss type Good for treatment after coating
SV-2110	10.5±1	50-150	MEK,DMF	-	-	-	PVC	Matt type Excellent Plasticizer migration resistance
SV-2130	10.5±1	50-150	MEK,DMF	-	-	-	PVC	Matt type Non Tackiness

12. Adhesives for dry lamination (Food packing)

Articles	Solid (%)	Viscosity (cps/25 °C)	Solvent	Characteristics
FA-707	40±1	1500-2500	Et-Ac	Normal Type
FA-200	65±1	1500-3000	Et-Ac	Semi-Retort, Good adhesion at the beginning Good chemical resistant
FA-3500P /FA-500R	100	2000-4000	-	Two Component Non Solvent system
FA-100	70±1	2000-4000	Et-Ac	Solvent type, Moisture-curing adhesives
FA-300	100	70000-90000	-	Non solvent type, Moisture-curing adhesives
FA-500	70±1	2000-4000	Ethanol, Methanol	Alcohol Type, Good adhesion

13. Adhesives for Textile & Al Foil

Articles	Solid(%)	Viscosity (cps/25 °C)	Solvent	Characteristics
UA-0527	70±1	45,000-65,000	MEK,TOL	Normal adhesives, Soft touch
UA-1007	65±1	5,000-7,000	MEK	Normal adhesives, High elongation
UA-3250	48±1	20,000-30,000	MEK/EA	Fog foil, Hard touch
UA-6550	50±1	20,000-30,000	MEK/TOL	Entire copy, High elongation

14. Adhesives for Wrapping

Articles	Solid(%)	Viscosity (cps/30 °C)	Solvent	Characteristics
UA-950	32±1	13,000-15,000	DMF,MEK	Good adhesion at the beginning Heat resistant
UA-955H	32±1	14,000-16,000	DMF,MEK	Good adhesion with PVC Sheet

15. PU Resin for Seam tape (Hot Melt)

Articles	Solid(%)	Viscosity (cps/25 °C)	Solvent	Characteristics
UTA-0210	30±1	8,000-12,000	DMF,MEK	Good adhesion
UTA-0210H	30±1	8,000-12,000	DMF,MEK	Water resistant
UTA-0240	35±1	8,000-12,000	DMF,MEK	Ant-Blocking

16. PU Resin for Vehicles of Gravure Ink

Articles	Solid(%)	Viscosity (cps/25 °C)	Solvent	Characteristics
GR-909	30±1	4,000-6,000	MEK, TOL	Vehicles of Printing Ink
GR-1030	30±1	300-600	MEK, EA, IPA	Good adhesion
GR-1035	35±1	500-800	MEK, EA, IPA	Good solubility
GR-1058L	35±1	450-750	MEK, EA	Anti-Blocking, Good adhesion

17. PU Forming Resin for Shoe Sole

1) OUT SOLE

ISO		UFO-715P	UFO-731PA	UFO-715P	UFO-700PA	UFO-720P
POLYOL		UFO-2150R	UFO-2310RA	UFO-2140R	UFI-1160R	UFO-2100R
Mixing Ratio (POLYOL/ISO)		100 / 103	100 / 103	100 / 95	100 / 78	100 / 109
Viscosity (cps)	ISO (40 °C)	200 ± 100	200 ± 100	200 ± 100	300 ± 100	400 ± 100
	POLYOL(45 °C)	900 ± 200	800 ± 200	900 ± 200	900 ± 200	1000 ± 200
Component Temp(°C)	ISO	40 ± 2	40 ± 2	40 ± 2	40 ± 2	40 ± 2
	POLYOL	45 ± 2	45 ± 2	45 ± 2	32 ± 2	45 ± 2
Mold Temp (°C)		40 - 50	40 - 50	40 - 50	40 - 50	40 - 50
Cream Time (sec)		8 - 10	6 - 8	7 - 9	8 - 10	7 - 9
Rise Time (sec)		40 - 50	30 - 40	40 - 50	43 - 55	35 - 45
Tack Free Time (sec)		45 - 55	35 - 45	45 - 55	38 - 48	25 - 30
Free Blown Den (g/cm ³)		0.22 - 0.25	0.22 - 0.25	0.22 - 0.25	0.24 - 0.28	0.21 - 0.23
Demold Time (min)		5 - 6	3 - 4	5 - 6	5 - 7	3.5 - 4.5
Mold Density (g/cm ³)		0.35 - 0.50	0.35 - 0.50	0.35 - 0.50	0.50 - 0.60	0.37 - 0.45
Hardness (Shore C)		75 - 85	75 - 85	70 - 80	70 - 80	75 - 85
Tensile Strength (kg/cm ²)		65 - 80	65 - 80	65 - 80	80 - 100	55 - 65
Elongation (%)		350 - 450	350 - 450	400 - 500	450 - 550	350 - 450
Tear Strength (kg/cm)		20 - 30	20 - 30	20 - 30	15 - 25	15 - 25
Main Use		Sandal	Sandal, Casual (Rotary System)	Sandal, Casual (Soft Type)	Integral	Causal

2) MID SOLE

ISO		UFM-770P	UFM-770P	UFM-780PA
POLYOL		UFM-2700R	UFM-2790R	UFM-2890RA
Mixing Ratio (POLYOL/ISO)		100 / 100	100 / 90	100 / 90
Viscosity (cps)	ISO (40°C)	500 ±100	500 ±100	500 ± 100
	POLYOL(45°C)	1100 ± 200	1100 ± 200	1100 ± 200
Component Temp(°C)	ISO	40 ± 2	40 ± 2	40 ± 2
	POLYOL	45 ± 2	45 ± 2	45 ± 2
Mold Temp (°C)		40 - 50	40 - 50	40 - 50
Cream Time (sec)		8 - 10	8 - 10	6 - 8
Rise Time (sec)		55 - 65	55 - 65	55 - 65
Tack Free Time (sec)		70 - 80	70 - 80	60 - 70
Free Blown Density (g/cm ³)		0.13 - 0.15	0.13 - 0.15	0.13 - 0.15
Demold Time (min)		5 - 6	7 - 8	3 - 4
Mold Density (g/cm ³)		0.30 - 0.40	0.30 - 0.40	0.30 - 0.40
Hardness (Shore C)		50 - 65	50 - 65	55 - 65
Tensile Strength (kg/cm ²)		20 - 35	20 - 35	20 - 35
Elongation (%)		400 - 500	400 - 500	350 - 450
Tear Strength (kg/cm)		15 - 25	10 - 15	10 - 15
Main Use		-	-	Rotary System

18. Resin for Elastomer

Articles	GM-800	GM-900	GM-950	TM-800	TM-900	TM-950	EM-800	EM-900	EM-950
NCO-Prepolymer									
Appearance	Liquid	Liquid	Liquid	Solid	Solid	Solid	Solid	Solid	Solid
NCO-Content (%)	4.0-4.4	4.8-5.2	6.8-7.2	3.8-4.2	4.4-4.7	5.5-5.9	3.9-4.3	4.9-5.3	6.5-6.9
Viscosity (poise/80°C)	4 - 8	3 - 6	2 - 5	15 - 23	6 - 12	4 - 7	18 - 25	10 - 15	6 - 12
Weight	1.06	1.05	1.05	1.07	1.06	1.06	1.07	1.06	1.06
Processing Condition									
MOCA Weight (PHR)	11.5-12.6	13.7-14.9	19.5-20.6	10.9-12.0	12.6-13.5	15.7-16.9	10.5-11.6	13.2-14.3	17.6-18.7
Pot life (min)	14 ± 1	10 ± 1	5 ± 1	15 ± 1	10 ± 1	5 ± 1	4 ± 1	5 ± 1	2 - 3
Hardening time & temp (hrs/°C)	24 / 110	24 / 110	24 / 110	24 / 110	24 / 110	24 / 110	24 / 110	24 / 110	24 / 110
Physical properties of ELASTOMER (JIS K-6301)									
Degree of hardness (Shore A)	80 ± 2	90 ± 2	95 ± 2	80 ± 2	90 ± 2	95 ± 2	80 ± 2	90 ± 2	95 ± 2
100% MODULUS (kg/cm ²)	45	70	97	58	82	140	55	79	120
Tensile strength (kg/cm ²)	200	280	340	300	420	460	275	400	440
Tear strength (kg/cm)	50	80	85	68	95	120	70	80	85
Elongation (%)	600	470	430	550	450	380	500	420	400
Rebounding elasticity (%)	35	35	36	60	55	50	45	35	33
Compression set properties of the foam(%) (70°C×22hrs)	42	40	35	35	26	30	34	28	32

19. Polyester Polyol for producing Polyurethane

Articles	OHV (mg KOH/g)	AV (mg KOH/g)	Color (APHA)	Water content (ppm)	Viscosity (cps/75 °C)	Composition
EB-50	215±10	MAX 0.3	MAX 50	MAX 300	50-150	AA, BD
EB-86	165±10	MAX 0.3	MAX 50	MAX 300	130-230	AA, BD
EB-11	112±5	MAX 0.3	MAX 50	MAX 300	150-250	AA, BD
EB-86T	56±3	MAX 0.3	MAX 50	MAX 300	600-800	AA, BD
EB-86B	37.5±2	MAX 0.3	MAX 50	MAX 300	1500-2000	AA, BD
EB-86C	28±2	MAX 0.3	MAX 50	MAX 300	2000-2500	AA, BD
EB-35M	37.5±2	MAX 0.3	MAX 50	MAX 300	1300-1800	AA, MPD
EB-35T	56±3	MAX 0.3	MAX 50	MAX 300	400-600	AA, MPD
EB-45	37.5±2	MAX 0.3	MAX 50	MAX 300	1500-2000	AA, BD/HD
EB-45T	56±3	MAX 0.3	MAX 50	MAX 300	500-700	AA, BD/HD
EB-52	37.5±2	MAX 0.3	MAX 100	MAX 300	1500-2000	AA, NPG
EB-53	56±3	MAX 0.3	MAX 100	MAX 300	700-1000	AA, NPG
EB-200	200±10	MAX 0.3	MAX 50	MAX 300	100-200	AA, BD/EG
EA-50D	112±5	MAX 0.3	MAX 100	MAX 300	150-200	AA, BD/EG
EA-50	56±3	MAX 0.3	MAX 100	MAX 300	600-800	AA, BD/EG
EA-55	45±3	MAX 0.3	MAX 100	MAX 300	800-1000	AA, BD/EG
EA-40	35±2	MAX 0.3	MAX 100	MAX 300	1500-2000	AA, BD/EG
EA-37	30±2	MAX 0.3	MAX 100	MAX 300	1800-2300	AA, BD/EG
EA-25	28±2	MAX 0.3	MAX 100	MAX 300	1800-2300	AA, BD/EG
EA-63	56±3	MAX 0.3	MAX 100	MAX 300	600-800	AA, EG
EA-16	37.5±2	MAX 0.3	MAX 100	MAX 300	1500-2000	AA, HD
EA-16T	56±3	MAX 0.3	MAX 100	MAX 300	700-1000	AA, HD

Articles	OHV (mg KOH/g)	AV (mg KOH/g)	Color (APHA)	Water content (ppm)	Viscosity (cps/75 °C)	Composition
EA-60	56±3	MAX 0.3	MAX 100	MAX 300	600-800	AA, EG/DEG
EA-77	32±2	MAX 0.3	MAX 100	MAX 300	1700-2200	AA, BD/EG/DEG
EA-20	30±2	MAX 0.3	MAX 100	MAX 300	1800-2300	AA, BD/NPG
EA-66	56±3	MAX 0.3	MAX 100	MAX 300	600-800	AA, EG/PG
EA-67	56±3	MAX 0.3	MAX 100	MAX 300	700-1000	AA, PG
EA-30NE	47±3	MAX 0.3	MAX 100	MAX 300	5500-6500	AA/IPA, EG/DEG/NPG
EA-76	45±3	MAX 0.3	MAX 100	MAX 300	5500-6500	AA/IPA/SA, EG/NPG
EA-30	37.5±2	MAX 0.3	MAX 100	MAX 300	7000-8000	AA/IPA, EG/NPG
EF-75	75±5	MAX 0.3	MAX 100	MAX 300	400-600	AA, EG/DEG
EF-36	66±3	MAX 0.3	MAX 100	MAX 300	500-700	AA, EG/DEG
EF-73	56±3	MAX 0.3	MAX 100	MAX 300	700-900	AA, EG/DEG
EF-23	75±5	MAX 0.3	MAX 100	MAX 300	600-800	AA, EG/DEG/TMP
EF-33	56±3	MAX 0.3	MAX 100	MAX 300	1000-1500	AA, DEG/TMP
EF-34	75±5	MAX 0.3	MAX 100	MAX 300	700-900	AA, DEG/TMP
EF-74	64±3	MAX 0.3	MAX 100	MAX 300	500-700	AA, EG/DEG

AA : Adipic Acid

BD : 1,4-Butanediol

HD : 1.6-Hexanediol

GL : Glycerin

MPD : 3-Methyl-1,5-Pentanediol

IPA : Isophthalic Acid

DEG : Diethylene Glycol

PG : Propylene Glycol

TMP : Trimethylolpropane

SA : Sebacic Acid

EG : Ethylene Glycol

NPG : Neopentyl Glycol