



Diol Kuraray Polyol

Product Overview

kuraray

Diol

	Structural formula	M.W.	Appearance @25 °C	Viscosity [mPa·s]	Melting point (°C)	Functional Num.
MPD 3-methyl-1,5-pentanediol		118	Liquid	173@20°C	<-50	2
ND 1,9-nonanediol		160	Solid	33@60°C	46	2

Kuraray Polyol

Type		M.W.	Appearance @25 °C	Viscosity [mPa·s]@25 °C	Tg (°C)	Functional Num.	OH Value [mg KOH/g]	
Polyester	Adipate Type	P-510	500	Liquid	540	-76.7	2	213.0-235.0
		P-1010	1000	Liquid	1,500	-70.6	2	106.0-118.0
		P-2010	2000	Liquid	5,700	-66.6	2	53.0-59.0
		P-3010	3000	Liquid	13,800	-64.9	2	35.0-40.0
		P-4010	4000	Liquid	28,000	-64.4	2	26.5-29.5
		P-5010	5000	Liquid	47,000	-63.8	2	21.0-24.0
		P-6010	6000	Liquid	68,000	-64.3	2	17.8-19.8
	3 functional type	F-510	500	Liquid	1,800	-65.5	3	319.5-352.5
		F-1010	1000	Liquid	3,600	-62.5	3	159.0-176.0
		F-2010	2000	Liquid	7,200	-62.7	3	80.0-88.0
		F-3010	3000	Liquid	15,000	-62.7	3	53.0-59.0
	Tere-phthalate + Adipate type	P-2011	2000	Liquid	4,200@60°C	-43.1	2	53.0-59.0
	Tere-phthalate type	P-520	500	Paste	560@60°C	-51.6	2	213.0-235.0
		P-1020	1000	Wax	8,600@60°C	-24.7	2	106.0-118.0
		P-2020	2000	Paste	16,200@80°C	-9.6	2	53.0-59.0
	Iso-phthalate + Adipate type	P-1012	1000	Liquid	1,100@60°C	-51.0	2	106.0-118.0
		P-2012	2000	Liquid	4,000@60°C	-42.0	2	53.0-59.0
	Iso-phthalate type	P-530	500	Liquid	1,100@60°C	-44.3	2	213.0-235.0
	Sebacate type	P-1050	1000	Liquid	1,500	-67.8	2	106.0-118.0
		P-2050	2000	Liquid	5,200	-60.9	2	53.0-59.0
P-3050		3000	Liquid	9,600	-60.0	2	35.0-40.0	
P-4050		4000	Liquid	23,000	-60.6	2	26.5-29.5	
Polycarbonate	C-590	500	Liquid	1,610	-70.2	2	212.0-236.0	
	C-1090	1000	Liquid	1,780@60°C	-53.2	2	106.0-118.0	
	C-2090	2000	Liquid	4,600@60°C	-45.3	2	53.0-59.0	
	C-2050	2000	Liquid	5,200@60°C	-49.9	2	53.0-59.0	
	C-3090	3000	Liquid	15,700@60°C	-42.0	2	34.4-40.4	

Appearance of polyols



Characteristics of polyurethanes with different polyols

	Polyether polyol		Polyester polyol				Polycarbonate polyol		
	Conventional		Conventional	Kuraray Polyol P-series				Conventional	Kuraray Polyol C-series
	PPG	PTMEG	BD/AA	Adipate	Sebacate	Tere-phthalate +Adipate	Tere-phthalate		
Softness	++	+	+	++	++	+	---	-	+
Low temperature resistance	++	+	-	++	++	-	---	-	++
Water resistance	+	+	---	+	++	+	++	++	++
Acid resistance	+	+	---	+	++	++	++	++	++
Alkali resistance	+	+	---	+	++	+	++	++	++
Transparency	+	+	---	++	++	++	++	---	++
Solvent resistance	---	---	+	+	-	+	++	+	+
Heat resistance	---	---	++	+	+	+	++	++	+
UV resistance	---	---	++	++	++	+	+	++	++
Adhesion	---	---	+	++	+	++	++	-	+

++	+	-	---
Excellent	Good	Poor	Very poor

BD : 1,4-Butanediol
AA : Adipic acid

Registration Status

		REACH (Europe)	TSCA (US)	ENCS (Japan)	IECSC (China)	TCSI (Taiwan)	ECL (Korea)	NDSL (Canada)
Diol	MPD	✓*1	✓	✓	✓	✓	✓	✓
	ND	✓*1	✓	✓	✓	✓	✓	✓
Kuraray Polyol	P-xx10	✓*2	✓	✓	✓	✓	✓	✓
	P-xx11	✓*2	✓	✓	✓	✓	✓	-
	P-xx12	✓*2	✓	✓	✓	✓	✓*6	-
	P-xx20	✓*2	✓	✓	✓	✓	✓*5	-
	P-xx30	✓*2	✓*3	✓	✓	✓	✓*6	-
	P-xx50	✓	✓*6	✓	✓	✓	✓*6	-
	F-xx10	✓*2	✓	✓	✓	✓	✓*5	-
	C series	✓*2	✓	✓	✓	✓	✓	-

*1 : Registered by Kuraray. Kuraray Europe GmbH is appointed as OR.

*2 : Constituent monomers are registered by appropriate way.

*3 : SNUR

*4 : Polymer exemption.

*5 : Polymer exemption $MW \geq 1000$.

*6 : Polymer exemption $MW \geq 2000$.

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