

CHARACTERISTICS OF EACH RUBBER GRADE

The table below shows the types of characteristics of the materials used by Katsura for the covering of rubber rollers.

◎--- Excellent ○--- Good △--- Fair ×--- Poor

Rubber	Nitrile Rubber 1	Nitrile Rubber 2	Chloroprene Rubber	Ethylene Propylene Rubber	Silicone Rubber	Butyl Rubber	Styrene Rubber	Urethane Rubber 1	Urethane Rubber 3	Chlorosulphonated polyethylene Rubber	Fluoro Rubber
Item	NBR	NBR	CR	EPT (EPDM)	Q	IIR	SBR	U	U	CSM	FKM
Abbreviation	NBR	NBR	CR	EPT (EPDM)	Q	IIR	SBR	U	U	CSM	FKM
Katsura Grade Number	200, 800, 6000, W, SW, New TX	FR, M, 1400,L, WHITE EC200	300	700	900	7000	1300	2000, 4000	MC, MC-U MCK	3300	FV
Scientific Name	Acrylonitrile Butadiene Copolymer	Acrylonitrile Butadiene Copolymer	Polychloroprene	Ethylene Propylene Terpolymer	Polysiloxane	Isoprene Isobutylene Copolymer	Styrene Butadiene Copolymer	Polyurethane	Polyurethane	Chlorosulphonated Polyethylene	Fluoroide Hydrocarbon
Hardness Range (Shore-A)	10 - 95	30 - 90	40 - 80	40 - 80	30 - 80	20 - 70	70 - 95	10 - 95	15 - 80	50 - 80	60 - 90
Tensile Strength (Mpa)	4 - 22	4 - 25	7 - 18	11 - 24	4 - 8	8 - 11	4 - 20	2 - 44	2 - 15	15 - 19	10 - 15
Tear Strength (N/mm)	10 - 60	10 - 50	10 - 40	10 - 50	(5 - 15)	15 - 30	17 - 60	10 - 190	10 - 30	40 - 75	20 - 35
Abrasion Resistance	◎	◎	○	○	△	○	◎	◎	○~◎	◎	◎
Compression Set	◎	◎	◎	○	◎	○	○	◎	◎	○	○
Aging Resistance	○	◎	◎	◎	◎	◎	○	△~○	△~○	◎	◎
Ozone Resistance	×~△	○	○	◎	◎	◎	×	◎	◎	◎	◎
Heat Resistance (Highest Temp. used)	120	100	130	150	220	150	120	80	80	160	250
Cool-Resistance (Embrittlement Temp.)	- 10 ~ - 20	- 10 ~ - 20	- 35 ~ - 55	- 40 ~ - 60	- 50 ~ - 100	- 30 ~ - 55	- 30 ~ - 60	- 30 ~ - 60	0	- 20 ~ - 60	- 10 ~ - 50
Flame Resistance	×~△	△	○	×	×~○	×	×	×~△	×~△	○	◎
Volume Inherent Resistance ^{25 °}	10 ⁹ ~ 10 ¹²	10 ⁹ ~ 10 ¹²	10 ¹⁰ ~ 10 ¹²	10 ¹² ~ 10 ¹⁵	10 ¹¹ ~ 10 ¹⁵	10 ¹⁴ ~ 10 ¹⁶	10 ¹⁰ ~ 10 ¹⁵	10 ⁹ ~ 10 ¹²	10 ⁹ ~ 10 ¹¹	10 ¹³	10 ¹³ ~ 10 ¹⁵
Dielectric Ratio (60Hz)	10 ~ 15	10 ~ 15	7.5	3.1 ~ 3.4	3.2 ~ 10	2.1	2.9 ~ 3.0	4.2 ~ 5.5	4.2 ~ 5.5	5.5 ~ 7.5	2.0 ~ 2.5
Strong Acid	○	○	○	◎	△	◎	○	×	×	○~◎	◎
Weak Acid	○	○	◎	◎	○	◎	○	△	×	○~◎	◎
Strong Alkali	◎	◎	◎	◎	◎	◎	◎	×	×	○~◎	◎
Weak Alkali	○	○	○	◎	○	◎	○	×	×	○~◎	◎
Water Resistance	◎	◎	○~◎	◎	◎	◎	◎	×	×	○	◎
Fat Based Solvents	◎	◎	○	×	×~△	×	×	○	◎	△	◎
Aromatic Based Solvents	△	△	×	△	×~△	△	×	△~○	◎	×~△	◎
Alcohol Based Solvents	○	○	◎	◎	◎	◎	◎	△~○	○	◎	◎
Ketone Based Solvents	×	×	△~○	◎	○	◎	○	×	×	△	×
Ester Based Solvents	×	×	△~○	◎	○	◎	△~○	×	×	△	×
Solvents Containing Chlorine	×	×	×	×	×	×~△	×	×	×	×	◎