

ROLLER AND BUMPER MATERIAL INFORMATION

Base Elastomer	Chemical Name	Advantages	Disadvantages	Max. Service Temp F°	Min. Service Temp F°
Neoprene Black	Chloroprene	Flame and weather resistant. Resists: gasoline, oil, ozone, high temp.	Affected by phosphate hydraulic fluids, aromatic hydrocarbons.	Continuous 200° Intermittent 250°	-40°
Urethane	Di-Isocyanate Polyurethane	Highest abrasion resistance, strength & load bearing. High elongation, hardness. Resistant to ozone & oxygen.	Affected by ether, esters, acid, aromatics, alkalis.	Continuous 200° Intermittent 250°	-65°
White Nitrile	Nitrile Butadiene	Resistant to gasoline, oil alcohol, abrasion.	Affected by degreaser solvents.	Continuous 175° Intermittent 225°	-60°

All durometer ratings are based on a Shore A rating.

Durometer Guide:

Durometer 20 = Stiff Foam Rubber
 Durometer 35 = Pencil Eraser
 Durometer 60 = Auto Tire
 Durometer 80 = Skateboard Wheel
 Durometer 95 = Hockey Puck

Urethane Color Guide:

Durometer 35 = Yellow
 Durometer 60 = Blue
 Durometer 80 = Red
 Durometer 95 = Orange

All Nitrile Rollers and Bumpers are white. All Neoprene Rollers and Bumpers are black.

Roller and Bumper Material Property Comparison Chart:

4 = Excellent 3 = Good 2 = Fair 1 = Poor

Property:	White Nitrile	Neoprene	Urethane
Tensile Strength	2	3.5	4
Ozone Resistance	1	2.5	4
Cut Resistance	2	3	4
Abrasion Resistance	2.5	3.5	4
Tear Strength	2	3	4

Resistance To:	White Nitrile	Neoprene	Urethane
Compression Set	2.5	3	3.5
ASTM #1 Oil	4	2.5	4
ASTM #2 Oil	4	2	4
Reference Fuel B	3.5	2	4
Ketones: MEK	1	2	1
Aromatics: Toluene	3.5	1.5	4
Aliphatics: Hexane	4	3	4
Ethyl Acetate	1.5	3	1.5
Cellosolve	2	4	1.5
Methylene Chloride	1	1	1
Trichloroethylene	1	1	1
Diethylene Glycol	4	4	3
Isopropyl Alcohol	3.5	3.5	3
Caustics: 10% NaOH	3.5	3.5	1
Acids: H2SO4	2	3	1

BEARING RATING CHARTS

Standard Bearing

The following table shows the maximum theoretical radial loads that can be applied to the respective bearings, at a specified RPM, yielding an average life of 2,500 hours.

BEARING TYPE A Standard Double Row

I.D.	O.D.	WIDTH
.313/.317	.870/.875	.498/.502

SINGLE (1) BEARING

Load (lbs)	Speed (rpm)
120	50
80	100
52	250
44	500
32	1,000

BEARING TYPE B Standard Single Row

I.D.	O.D.	WIDTH
.500/.505	1.245/1.250	.370/.380

SINGLE (1) BEARING

Load (lbs)	Speed (rpm)
261	50
174	100
113	250
96	500
70	1,000

BEARING TYPE C Standard Double Row

I.D.	O.D.	WIDTH
.500/.505	1.245/1.250	.745/.755

SINGLE (1) BEARING

Load (lbs)	Speed (rpm)
423	50
282	100
183	250
155	500
113	1,000

Precision Bearing

The following table shows the maximum theoretical radial loads that can be applied to the respective bearings, at a specified RPM, yielding 1,000,000 revolutions or 500 hours of life. The bearings are shielded and pre-lubricated for life with grease.

BEARING TYPE D Precision Single Row

I.D.	O.D.	WIDTH
.3122/.3125	.8747/.8750	.2766/.2813

DOUBLE (2) BEARINGS

Load (lbs)	Speed (rpm)
—	33-1/3
740	50
590	100
410	250
350	500
260	1,000

BEARING TYPE F Precision Single Row

I.D.	O.D.	WIDTH
.4997/.5000	1.1247/1.1250	.3703/.3750

SINGLE (1) BEARING

Load (lbs)	Speed (rpm)
884	33-1/3
772	50
613	100
452	250
358	500
284	1,000

DOUBLE (2) BEARINGS

Load (lbs)	Speed (rpm)
1,768	33-1/3
1,544	50
1,226	100
904	250
716	500
568	1,000

BEARING TYPE G Precision Sealed Single Row

I.D.	O.D.	WIDTH
.4997/.5000	1.1247/1.1250	.3703/.3750

SINGLE (1) BEARING

Load (lbs)	Speed (rpm)
884	33-1/3
772	50
613	100
452	250
358	500
284	1,000

DOUBLE (2) BEARINGS

Load (lbs)	Speed (rpm)
1,768	33-1/3
1,544	50
1,226	100
904	250
716	500
568	1,000

BEARING TYPE E Precision Sealed Single Row

I.D.	O.D.	WIDTH
.3122/.3125	.8747/.8750	.3383/.3430

DOUBLE (2) BEARINGS

Load (lbs)	Speed (rpm)
—	33-1/3
740	50
590	100
410	250
350	500
260	1,000

BEARING RATING CHARTS (cont)

Clutch Bearing

The following table shows the maximum theoretical radial loads that can be applied to the respective bearings, at a specified RPM, yielding 1,000,000 revolutions or 500 hours of life. The bearings are shielded and pre-lubricated for life with grease.

BEARING TYPE H Roller Clutch Bearing

I.D.	O.D.	WIDTH
.3745/.3750	.6245/.6255	.865/.875

SINGLE (1) BEARING

Load (lbs)	Speed (rpm)
367	33-1/3
321	50
254	100
187	250
149	500
118	1,000

BEARING TYPE I Roller Clutch Bearing

I.D.	O.D.	WIDTH
.6245/.6250	.8745/.8755	.990/1.000

SINGLE (1) BEARING

Load (lbs)	Speed (rpm)
610	33-1/3
533	50
423	100
312	250
247	500
196	1,000