

P2754

MATERIAL HANDLING

Material

Nitrile, urethane or neoprene bonded to a steel insert.
Hardness from 20-80 durometer (Shore A).

Technical Notes

Bearings included (held in place with snap rings). For more details on bearings please see technical pages. Assembled with socket

head cap screw, spacer and lock nut.

| Order No. | Material | Durometer | d_1 | l_1 | d_2 | l_2 | l_3 | Bearing type |
|---------------|----------|-----------|--------------|-------|----------|-------|-------|--------------|
| P2754.15A20NI | Nitrile | 20 | 38,1 (1,5") | 31.80 | 5/16-18" | 16.00 | 3.05 | A |
| P2754.20A20NI | Nitrile | 20 | 50,8 (2,0") | 23.37 | 1/2-13" | 27.94 | 3.05 | B |
| P2754.20A35NI | Nitrile | 35 | 50,8 (2,0") | 23.37 | 1/2-13" | 27.94 | 3.05 | B |
| P2754.20A60NP | Nitrile | 60 | 50,8 (2,0") | 23.37 | 1/2-13" | 27.94 | 3.05 | B |
| P2754.20A80NI | Nitrile | 80 | 50,8 (2,0") | 23.37 | 1/2-13" | 27.94 | 3.05 | B |
| P2754.20B20NI | Nitrile | 20 | 50,8 (2,0") | 49.28 | 1/2-13" | 35.81 | 6.35 | C |
| P2754.20B35NI | Nitrile | 35 | 50,8 (2,0") | 49.28 | 1/2-13" | 35.81 | 6.35 | C |
| P2754.20B60NI | Nitrile | 60 | 50,8 (2,0") | 49.28 | 1/2-13" | 35.81 | 6.35 | C |
| P2754.20B80NI | Nitrile | 80 | 50,8 (2,0") | 49.28 | 1/2-13" | 35.81 | 6.35 | C |
| P2754.25A20NI | Nitrile | 20 | 63,5 (2,5") | 23.37 | 1/2-13" | 27.94 | 3.05 | B |
| P2754.25A35NI | Nitrile | 35 | 63,5 (2,5") | 23.37 | 1/2-13" | 27.94 | 3.05 | B |
| P2754.25A60NI | Nitrile | 60 | 63,5 (2,5") | 23.37 | 1/2-13" | 27.94 | 3.05 | B |
| P2754.25A80NI | Nitrile | 80 | 63,5 (2,5") | 23.37 | 1/2-13" | 27.94 | 3.05 | B |
| P2754.25B20NI | Nitrile | 20 | 63,5 (2,5") | 49.28 | 1/2-13" | 35.81 | 6.35 | C |
| P2754.25B35NI | Nitrile | 35 | 63,5 (2,5") | 49.28 | 1/2-13" | 35.81 | 6.35 | C |
| P2754.25B60NI | Nitrile | 60 | 63,5 (2,5") | 49.28 | 1/2-13" | 35.81 | 6.35 | C |
| P2754.25B80NI | Nitrile | 80 | 63,5 (2,5") | 49.28 | 1/2-13" | 35.81 | 6.35 | C |
| P2754.40A20NP | Nitrile | 20 | 101,6 (4,0") | 23.37 | 1/2-13" | 27.94 | 3.05 | B |
| P2754.40A35NP | Nitrile | 35 | 101,6 (4,0") | 23.37 | 1/2-13" | 27.94 | 3.05 | B |
| P2754.40A60NI | Nitrile | 60 | 101,6 (4,0") | 23.37 | 1/2-13" | 27.94 | 3.05 | B |
| P2754.40A80NI | Nitrile | 80 | 101,6 (4,0") | 23.37 | 1/2-13" | 27.94 | 3.05 | B |
| P2754.40B20NP | Nitrile | 20 | 101,6 (4,0") | 49.28 | 1/2-13" | 35.56 | 6.35 | C |
| P2754.40B60NI | Nitrile | 60 | 101,6 (4,0") | 49.28 | 1/2-13" | 35.56 | 6.35 | C |
| P2754.40B80NI | Nitrile | 60 | 101,6 (4,0") | 49.28 | 1/2-13" | 35.56 | 6.35 | C |
| P2754.15A80UR | Urethane | 80 | 38,1 (1,5") | 31.80 | 5/16-18" | 16.00 | 3.05 | A |
| P2754.20A35UR | Urethane | 35 | 50,8 (2,0") | 23.37 | 1/2-13" | 27.94 | 3.05 | B |
| P2754.20A60UR | Urethane | 60 | 50,8 (2,0") | 23.37 | 1/2-13" | 27.94 | 3.05 | B |
| P2754.20A80UR | Urethane | 80 | 50,8 (2,0") | 23.37 | 1/2-13" | 27.94 | 3.05 | B |
| P2754.20B35UR | Urethane | 35 | 50,8 (2,0") | 49.28 | 1/2-13" | 35.81 | 6.35 | C |
| P2754.20B60UR | Urethane | 60 | 50,8 (2,0") | 49.28 | 1/2-13" | 35.81 | 6.35 | C |
| P2754.20B80UR | Urethane | 80 | 50,8 (2,0") | 49.28 | 1/2-13" | 35.81 | 6.35 | C |
| P2754.25A35UR | Urethane | 35 | 63,5 (2,5") | 23.37 | 1/2-13" | 27.94 | 3.05 | B |
| P2754.25A60UR | Urethane | 60 | 63,5 (2,5") | 23.37 | 1/2-13" | 27.94 | 3.05 | B |
| P2754.25A80UR | Urethane | 80 | 63,5 (2,5") | 23.37 | 1/2-13" | 27.94 | 3.05 | B |
| P2754.25B35UR | Urethane | 35 | 63,5 (2,5") | 49.28 | 1/2-13" | 35.81 | 6.35 | C |



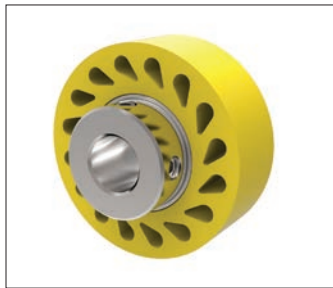
| Order No. | Material | Durometer | d ₁ | l ₁ | d ₂ | l ₂ | l ₃ | Bearing type |
|---------------|----------|-----------|----------------|----------------|----------------|----------------|----------------|--------------|
| P2754.25B60UR | Urethane | 60 | 63,5 (2,5") | 49.28 | 1/2-13" | 35.81 | 6.35 | C |
| P2754.25B80UR | Urethane | 80 | 63,5 (2,5") | 49.28 | 1/2-13" | 35.81 | 6.35 | C |
| P2754.40A35UR | Urethane | 35 | 101,6 (4,0") | 23.37 | 1/2-13" | 27.94 | 3.05 | B |
| P2754.40A60UR | Urethane | 60 | 101,6 (4,0") | 23.37 | 1/2-13" | 27.94 | 3.05 | B |
| P2754.40A80UR | Urethane | 80 | 101,6 (4,0") | 23.37 | 1/2-13" | 27.94 | 3.05 | B |
| P2754.40B35UR | Urethane | 35 | 101,6 (4,0") | 49.28 | 1/2-13" | 35.56 | 6.35 | C |
| P2754.40B60UR | Urethane | 60 | 101,6 (4,0") | 49.28 | 1/2-13" | 35.56 | 6.35 | C |
| P2754.40B80UR | Urethane | 60 | 101,6 (4,0") | 49.28 | 1/2-13" | 35.56 | 6.35 | C |
| P2754.50A35UR | Urethane | 35 | 127,0 (5,0") | 49.28 | 1/2-13" | 35.56 | 6.35 | C |
| P2754.50A60UR | Urethane | 60 | 127,0 (5,0") | 49.28 | 1/2-13" | 35.56 | 6.35 | C |
| P2754.50A80UR | Urethane | 80 | 127,0 (5,0") | 49.28 | 1/2-13" | 35.56 | 6.35 | C |
| P2754.60A35UR | Urethane | 35 | 152,4 (6,0") | 49.28 | 1/2-13" | 35.56 | 6.35 | C |
| P2754.60A60UR | Urethane | 60 | 152,4 (6,0") | 49.28 | 1/2-13" | 35.56 | 6.35 | C |
| P2754.60A80UR | Urethane | 80 | 152,4 (6,0") | 49.28 | 1/2-13" | 35.56 | 6.35 | C |
| P2754.20A20NP | Neoprene | 20 | 50,8 (2,0") | 23.37 | 1/2-13" | 27.94 | 3.05 | B |
| P2754.20A35NP | Neoprene | 35 | 50,8 (2,0") | 23.37 | 1/2-13" | 27.94 | 3.05 | B |
| P2754.20B20NP | Neoprene | 20 | 50,8 (2,0") | 49.28 | 1/2-13" | 35.81 | 6.35 | C |
| P2754.20B35NP | Neoprene | 35 | 50,8 (2,0") | 49.28 | 1/2-13" | 35.81 | 6.35 | C |
| P2754.20B60NP | Neoprene | 60 | 50,8 (2,0") | 49.28 | 1/2-13" | 35.81 | 6.35 | C |
| P2754.20B80NP | Neoprene | 80 | 50,8 (2,0") | 49.28 | 1/2-13" | 35.81 | 6.35 | C |
| P2754.25A20NP | Neoprene | 20 | 63,5 (2,5") | 23.37 | 1/2-13" | 27.94 | 3.05 | B |
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| P2754.25B20NP | Neoprene | 20 | 63,5 (2,5") | 49.28 | 1/2-13" | 35.81 | 6.35 | C |
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| P2754.25B60NP | Neoprene | 60 | 63,5 (2,5") | 49.28 | 1/2-13" | 35.81 | 6.35 | C |
| P2754.25B80NP | Neoprene | 80 | 63,5 (2,5") | 49.28 | 1/2-13" | 35.81 | 6.35 | C |
| P2754.40A20NI | Neoprene | 20 | 101,6 (4,0") | 23.37 | 1/2-13" | 27.94 | 3.05 | B |
| P2754.40A35NI | Neoprene | 35 | 101,6 (4,0") | 23.37 | 1/2-13" | 27.94 | 3.05 | B |
| P2754.40A60NP | Neoprene | 60 | 101,6 (4,0") | 23.37 | 1/2-13" | 27.94 | 3.05 | B |
| P2754.40A80NP | Neoprene | 80 | 101,6 (4,0") | 23.37 | 1/2-13" | 27.94 | 3.05 | B |
| P2754.40B20NI | Neoprene | 20 | 101,6 (4,0") | 49.28 | 1/2-13" | 35.56 | 6.35 | C |
| P2754.40B35NI | Neoprene | 35 | 101,6 (4,0") | 49.28 | 1/2-13" | 35.56 | 6.35 | C |
| P2754.40B60NP | Neoprene | 60 | 101,6 (4,0") | 49.28 | 1/2-13" | 35.56 | 6.35 | C |
| P2754.40B80NP | Neoprene | 60 | 101,6 (4,0") | 49.28 | 1/2-13" | 35.56 | 6.35 | C |



Product overview



Solid rollers - have a smooth surface and a solid body



Durossoft rollers - have a smooth contact surface with teardrop holes to allow greater roller compression under load.



Finned rollers - are grooved and provide self-cleaning as dirt, debris and liquid pass under the contact surface of the roller.

Durability levels



20 durometer:
Stiff foam rubber



35 durometer:
Pencil rubber top



60 durometer:
Car tyre

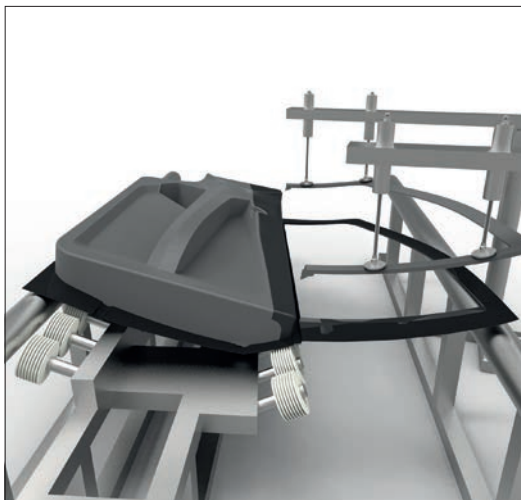


80 durometer:
Skateboard wheel



90 durometer:
Hockey puck

Applications



Rollers are used in car manufacturing to guide and align doors during bonding and curing applications



Bumpers have found their way into commercial exercise equipment to provide protection and stability during use.



Materials colour guide and properties

Nitrile and neoprene



Nitrile - one colour



Neoprene - one colour

Urethane



35 Durometer (Yellow)



60 Durometer (Blue)



80 Durometer (Red)



95 Durometer (Orange)

Material properties

| Base Elastomer | Chemical Name | Advantages | Disadvantages | Max. Temp | Min. Temp |
|----------------|----------------------------|---|--|---------------------------------------|-----------|
| Nitrile | Nitrile Butadiene | Resistant to petroleum, oil, alcohol & abrasion. | Affected by degreaser solvents. | Continuous 79°C Intermittent 107°C | -51°C |
| Neoprene | Chloroprene | Flame and weather resistant. Resistant to Petroleum, oil, ozone & high temp. | Affected by phosphate hydraulic fluids, aromatic hydrocarbons. | Continuous 93°C Intermittent 121°C | -40°C |
| Urethane | Di-Isocyanate Polyurethane | Highest abrasion resistance, strength & load bearing. High elongation, hardness. Resistance to Ozone & Oxygen. | Affected by ether, esters, acid, aromatics, alkalis. | Continuous 93°C Intermittent 121°C | -54°C |

| Property: | Nitrile | Neoprene | Urethane | |
|---------------------|---------|------------|----------|--------|
| Tensile Strength | ✓ ✓ | ✓ ✓ ✓ | ✓ ✓ ✓ ✓ | |
| Ozone Resistance | ✓ | ✓ ✓ | ✓ ✓ ✓ ✓ | |
| Cut Resistance | ✓ ✓ | ✓ ✓ ✓ | ✓ ✓ ✓ ✓ | |
| Abrasion Resistance | ✓ ✓ | ✓ ✓ ✓ | ✓ ✓ ✓ ✓ | |
| Resistance To: | Nitrile | Neoprene | Urethane | |
| Compression Set | ✓ ✓ | ✓ ✓ ✓ | ✓ ✓ ✓ | |
| ASTM #1 Oil | ✓ ✓ ✓ ✓ | ✓ ✓ | ✓ ✓ ✓ ✓ | |
| ASTM #2 Oil | ✓ ✓ ✓ ✓ | ✓ ✓ | ✓ ✓ ✓ ✓ | |
| Reference Fuel B | ✓ ✓ ✓ | ✓ ✓ | ✓ ✓ ✓ ✓ | |
| Ketones: MEK | ✓ | ✓ ✓ | ✓ | |
| Aromatics: Toluene | ✓ ✓ ✓ | ✓ | ✓ ✓ ✓ ✓ | |
| Aliphatics: Hexane | ✓ ✓ ✓ ✓ | ✓ ✓ ✓ | ✓ ✓ ✓ ✓ | |
| Ethyl Acetate | ✓ | ✓ ✓ ✓ | ✓ | |
| Cellosolve | ✓ ✓ | ✓ ✓ ✓ ✓ | ✓ | |
| Methylene Chloride | ✓ | ✓ | ✓ ✓ ✓ ✓ | |
| Trichloroethylene | ✓ | ✓ | ✓ ✓ ✓ ✓ | |
| Diethylene Glycol | ✓ ✓ ✓ ✓ | ✓ ✓ ✓ ✓ | ✓ ✓ ✓ | |
| Isopropyl Alcohol | ✓ ✓ ✓ | ✓ ✓ ✓ | ✓ ✓ ✓ | |
| Caustics: 10% NaOH | ✓ ✓ ✓ | ✓ ✓ ✓ | ✓ | |
| Acids: H2SO4 | ✓ ✓ | ✓ ✓ ✓ | ✓ | |
| Excellent | ✓ ✓ ✓ ✓ | Good ✓ ✓ ✓ | Fair ✓ ✓ | Poor ✓ |



The tables below show the maximum theoretical radius loads that can be applied to the respective bearings. Refer to individual product tables to identify bearing type supplied with roller.

| Bearing Type | Inside diameter (inches) | Outside diameter (inches) | Width (inches) | Load (Kg) | Speed (rpm) |
|------------------------|--------------------------|---------------------------|----------------|-----------|-------------|
| A - Standard Double | .313/.317 | .870/.875 | .498/.502 | 55 | 50 |
| | | | | 36 | 100 |
| | | | | 24 | 250 |
| | | | | 20 | 500 |
| B - Standard Single | .500/.505 | 1.245/1.250 | .370/.380 | 119 | 50 |
| | | | | 79 | 100 |
| | | | | 51 | 250 |
| | | | | 47 | 500 |
| C - Standard Double | .500/.505 | 1.245/1.250 | .745/.755 | 192 | 50 |
| | | | | 128 | 100 |
| | | | | 83 | 250 |
| | | | | 70 | 500 |

Standard bearings

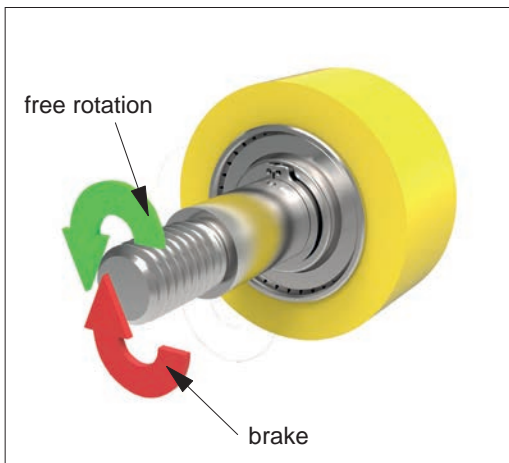
With the calculations above, typical life is approximately 2500 hours.

| Bearing Type | Inside diameter (inches) | Outside diameter (inches) | Width (inches) | Load (Kg) | Speed (rpm) |
|--------------|--------------------------|---------------------------|----------------|-----------|-------------|
| H | .3745/.3750 | .6245/.6255 | .865/.875 | 167 | 33 |
| | | | | 146 | 50 |
| | | | | 116 | 100 |
| | | | | 85 | 250 |
| I | .6245/.6250 | .8745/.8755 | .990/1.000 | 277 | 33 |
| | | | | 242 | 50 |
| | | | | 192 | 100 |
| | | | | 142 | 250 |

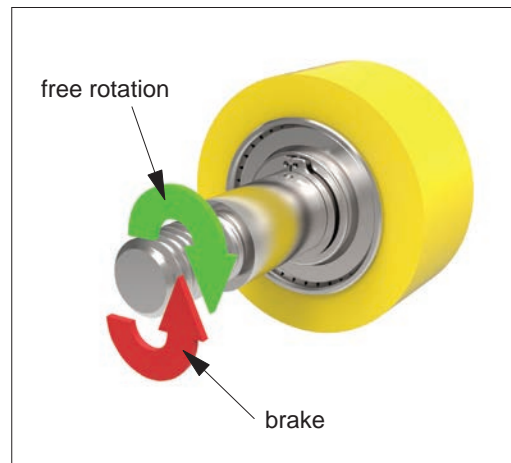
Clutch bearings

With the calculations above, typical life is approximately 1,000,000 revolutions or 500 hours. The bearings are shielded and pre-lubricated for life with grease.

A clutch roller can only be used in one direction, as shown. See data table for clutch direction of particular part.



Left clutch bearing



Right clutch bearing