

WHEEL APPLICATION CHART

After you have determined what series, wheel diameter and fastener to use, you need to find the correct wheel material for your application. A general rule is to use a hard tread wheel on a soft surface and a soft tread wheel on a hard surface. If ergonomics is what you after, then use a hard wheel on a hard surface with a precision bearing for maximum roll ability. Durometer measures hardness so the higher the number the harder it is, the lower the number the softer it is.

Shore A = Softer, Shore D = Harder, Brinell = Hardest. (An "X" means this material is recommended for that type of flooring)

FLOOR MATERIAL	WHEEL TREAD TYPES									
	HARD RUBBER Durometer 75 Shore D	PHENOLIC Durometer 75-85 Shore D	POLYOLEFIN Durometer 60-70 Shore D	POLYURETHANE Durometer 95 Shore A	PNEUMATIC Durometer 60-70 Shore A	RUBBER ON CAST IRON Durometer 60-80 Shore A	SEMI- PNEUMATIC Durometer 70-80 Shore A	SOFT RUBBER Durometer 70-80 Shore A	STEEL Durometer 130-150 Brinell	THERMO PLASTIC RUBBER Durometer 55-65-Shore A
ASPHALT	X	X	X	X	X	X	X	X		X
CARPET	X	X	X	X						
CONCRETE	X	X	X	X	X	X	X	X	X	X
DIRT					X	X	X	X		X
GRAVEL					X					
LINOLEUM		X	X	X	X		X			X
TURF					X		X			
SAND					X					
STEEL	X	X	X	X	X	X	X	X	X	X
WOOD				X	X		X			X
ENVIRONMENT CONDITIONS	HARD RUBBER	PHENOLIC	POLYOLEFIN	POLYURETHANE	PNEUMATIC	RUBBER ON CAST IRON	SEMI-PNEUMATIC	SOFT RUBBER	STEEL	THERMO PLASTIC RUBBER
HEAT (DRY)		X							X	
CHEMICALS			X	X						
SALT SPRAY	X		X	X				X		X
STEAM			X	X						X
WASH DOWN	X		X	X				X		X

The chart below shows each tread type and compares them in some common applications. They are rated with a number from 0-5. (0 meaning "Not to be used" and 5 being "Excellent".)

COMMON APPLICATIONS	WHEEL TREAD TYPES									
	HARD RUBBER	PHENOLIC	POLYOLEFIN	POLYURETHANE	PNEUMATIC	RUBBER ON CAST IRON	SEMI-PNEUMATIC	SOFT RUBBER	STEEL	THERMO PLASTIC RUBBER
BAKERY OVEN	0	4	0	0	0	0	0	0	3	0
FOOD SERVICE	5	3	5	5	3	1	3	4	0	5
GROCERY	3	5	5	5	3	3	3	3	0	5
HOME	4	2	5	5	4	4	4	4	1	5
HOSPITAL	1	1	3	5	4	1	1	1	0	5
MANUALLY PUSHED	4	5	4	4	2	3	3	3	5	4
MECHANICALLY PUSHED	1	4	1	4	1	1	1	1	2	3
OUTDOOR	1	1	4	4	5	3	4	1	1	4
WAREHOUSE	4	5	5	5	4	5	4	4	4	5