



SOLID POLYURETHANE WHEELS



KRYPTONIC™



SOLID ELASTOMER/NYLON CORE

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SOLID POLYETHER POLYURETHANE KRYPTONIC™ - KR, KR/HT

An excellent problem solver to prevent tire separation in washdown environments where food, dirt and/or other particles can create unsanitary and unsatisfactory conditions and steam cleaning and cleanliness is a must. Meets FDA requirements and stands up to refrigeration and steam cleaning.

KR/HT = Kryptonitic™ High Temp (Gray Wheels)

Features

- **Capacity:** Polyether Polyurethane has excellent carrying capacity - loads to 1500 lbs.
- **Noise Level:** Crown shape affords an easy-rolling, quiet operation. Quieter than phenolics, polyolefin, nylon and other polyurethanes.
- **Floor Protective:** Non-marking tread with no separation problems.
- **Resiliency:** The Polyether Polyurethane tread cushions the load and rolls over obstructions easier. Rebounds up to 80% compared to 35% for typical polyester polyurethane. No flat spotting under suggested load and temperature conditions.
- **Abrasion Resistance:** Greater service life and resistance to chunking, cutting and abrasive wear. Tests indicate that 10 months on rough concrete will wear less than 0.050" compared to 1.0" for macerated canvas phenolic.
- **Chemical Resistance:** Polyether Polyurethane is completely washable (Steam Cleanable) and resistant to most chemicals. Suitable for use in all environments with the exception of continuous exposure to strong acids, strong bases, aromatic hydrocarbons and chlorinated solvents.
- **Concentrated Load:** 4000 lbs applied on the running surface with a 1" dia. indenter to simulate a round obstacle on a work floor produced no permanent deformation.

For Wet Applications:

Stainless steel sealed precision bearings are recommended along with stainless steel rigs.

- Solid one-piece design
- Unbreakable & Steam Cleanable
- Ratings to 800 lbs.



**(KR) Blue Kryptonitic™
Wheel w/ Precision
Ball Bearing**



**(KR/HT) Gray Kryptonitic™
Wheel w/ Precision
Ball Bearing
available in 5-1/4" size only**

Dia. (inch)	Width (inch)	Capacity (lbs)	Hub Length (inch)	Bearing ID (in)	Wt. (lbs)	Part Number*
3	1-1/4	300	1-9/16	1/2	1	KR0312P08
4	1-1/4	300	1-9/16	1/2	1-1/2	KR0412P08
5	1-1/4	300	1-9/16	1/2	2	KR0512P08
4	2	500	2-7/16	1/2	2	KR0420P08
5	2	600	2-7/16	1/2	2-1/2	KR0520P08
6	2	700	2-7/16	1/2	3	KR0620P08
8	2	800	2-7/16	1/2	4	KR0820P08

*P = Precision Ball Bearing (Available in Stainless Steel)

*R = Roller Bearing (Available in Stainless Steel)

For Kryptonitic™ High Temp, change "KR" to "KR/HT" in the part number.

For Kryptonitic™ Ultra High Temp, change "KR" to "KR/UL/HT" in the part number.

END CAPS ARE PROVIDED WITH EACH WHEEL TO FIT AXLE SIZE.

(KR) (BLUE) KRYPTONIC™ WHEEL

- **Average Hardness:** 58 SHORE D Durometer
- **Tensile Strength:** 4000 psi
- **Temperature Range:** Up to 250° F (1/2 hour)
- **Tread Coloration:** (KR) Blue Wheels

(KR/HT) HIGH TEMP (GRAY) KRYPTONIC™ WHEEL

- **Average Hardness:** 60 SHORE D Durometer
- **Tensile Strength:** 4145 psi
- **Temperature Range:** Up to 250° F (5-6 hours)
- **Tread Coloration:** (KR/HT) Gray Wheels
Available in 5" size only

Applications

Canneries, Cheese Factories, Meat Packing Plants, Food Processing, Slaughter Houses, Fish Plants, Laboratory Research



(SEN) Solid Elastomer Wheel
with pre-loaded sealed
precision ball bearings

SEN Solid Elastomer Wheels have super strength solid cast polyurethane elastomer one piece design with mechanically locked glass filled nylon bearing core, offers the best durability and performance of any elastomer type wheel on the market.

Features

- Precision and tapered bearings for topline use.
- 100% washable, steam cleanable, chemical resistant.
- Extreme impact strength, abrasion and compression resistance, will not flat spot when used within capacity rating.
- Meets FDA requirements.
- Offers a smooth ergonomic ride; easy start up.
- Bearing collar disperses heat away from elastomer wheel.
- **Color:** Gray with black core/bearing collar.
- **Hardness:** 68 Shore D (+/-5).
- **Temperature range:** - 50 to +180 ° F.

Options

- **Green or Yellow** Anti-static wheels,
change SEN to SEN/AS/GR (Green) or SEN/AS/YE (Yellow).

Applications

- Food Processing
- Bakeries
- Dairies
- Fisheries
- Meat Processing
- Pharmaceutical

Wheel Dia. (inch)	Tread Width (inch)	Load Capacity (lbs)**	Hub Length (inch)	Bearing ID (inch)	Approx. Weight (lbs)	Part Number*
4	2	1500	2-3/16	1/2	3	SEN042008
5	2	1800	2-3/16	1/2	4	SEN052008
6	2	2100	2-3/16	1/2	5	SEN062008
8	2	2600	2-3/16	1/2	6	SEN082012
8	3	3000	3-1/4	3/4	7	SEN083008
10	3	3200	3-1/4	3/4	8	SEN103012

*P = PRECISION BALL BEARINGS WITH END CAPS
(AVAILABLE WITH STAINLESS STEEL PRECISION BEARINGS AND STAINLESS STEEL END CAPS)

** = MANUAL LOAD RATINGS

SOLID ELASTOMER CHEMICAL RESISTANCE GUIDE

This table lists a broad range of fluids and chemicals which are considered compatible with SEN/SS wheels. Ratings are at 72° F unless specified otherwise. Concentrations of aqueous solutions are saturated, except where noted. Note especially that this data is based on laboratory tests and may vary in practice. Field testing is recommended to confirm these recommendations. Only those chemicals that have little or no effect on the SEN wheel are listed here. Other fluids may have a very minor or major effect. For information on the compatibility of other fluids, contact Acorn™ engineering.

Acetic acid, 20%	Glycerin	Methyl alcohol
Acetic acid, 30%	N-Hexane	Methyl ethyl ketone
Acetic acid, glacial	Hydrogen	Mineral oil
Acetylene	Hydrogen sulfide	Naphtha
Ammonium chloride solutions	Iso-Octane	Oleic acid
Ammonium sulfate solutions	Calcium chloride solutions	Palmitic acid
Amyl acetate	Calcium hypochlorite, 5%	Potassium hydroxide, dil. solutions
ASTM oil 1 (300°F)	Carbon dioxide	Pydraul 312C
ASTM oil 3 (300°F)	Carbon monoxide	SAE #10 oil
ASTM reference fuel A (158°F)	Citric acid solutions	Sea water
ASTM reference fuel B (158°F)	Copper chloride solutions	Silicone grease
ASTM reference fuel C (158°F)	Copper sulfate solutions	SKYDROL 500
Beer	Cyclohexane	Soap solutions
Borax solutions	Dibutyl phthalate	Sodium chloride solutions
Boric acid solutions	Diethyl sebacate	Sodium hydroxide, 20%
Butane	Dioctyl phthalate	Sodium hypochlorite, 5%
FREON-11	Ethyl alcohol	Sulfuric acid, up to 5%
FREON-12	Ethylene glycol	Tannic acid, 10%
FREON-113	Ethylene oxide	Trisodium phosphate solutions
FREON-113 (130°F)	Isopropyl alcohol	Water (158°F)
FREON-114	JP-4 (100°F)	Xylene
Gasoline	Lubricating oils	Zinc chloride solutions
Glue	Mercury	

PLASTICS

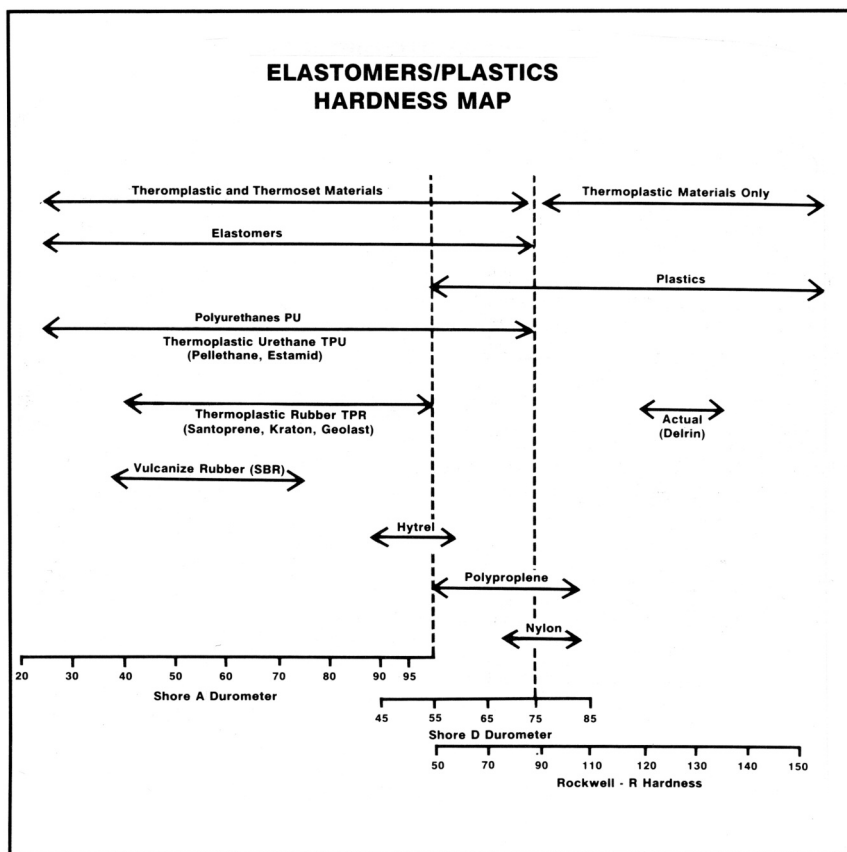
The world of elastomers and plastics has become a very interesting topic with new terms appearing every day. The information in this article is intended to assist in the development of a common language and understanding associated with this topic. Although this information is elementary, we believe you will find it to be useful. In addition, this material will serve as the beginning of a series of articles in this topic area.

In order to build a foundation, we will cover some important terms. **Elastomers** are highly stretchable materials, like rubber. **Plastics**, on the other hand, tend to be more rigid in construction. There is an overlap area related to the hardness characteristic of these materials. The accompanying chart displays the hardness ranges of these general categories, some more specific categories and some brand names encountered from time to time. The hardness overlap area between elastomers and plastics is in the 55 to 75 Shore D durometer range.

Thermoplastic materials tend to be composed of one element. These materials can be heated and reshaped a number of times.

Thermoset materials, on the other hand, usually involve a combination of components. When these components are mixed, heat is usually generated by the chemical reaction. After the combined materials are shaped, they cannot be reshaped.

Urethanes are elastomers which are available in both thermoset and thermoplastic materials. The term TPU refers to a thermoplastic urethane. There are many brand names in the urethane family, e.g. pellethane, estamid, etc. The term PU refers to a thermosetting polyurethane.



Vulcanized rubber is a thermosetting material as well as a SBR (styrenebutadiene rubber). TPR is a thermoplastic material involving many brand names, e.g. Santoprene, Kraton, Geolast, etc.

Hytrel is a thermoplastic material which, like urethane, is an elastomer. Hytrel is at the harder end of the range of hardness available with elastomers. **Polypropylene** is a thermoplastic material which possesses characteristics of both elastomers and plastics. **Nylon** is a thermoplastic material which has primarily the properties of plastics.

The accompanying chart should help you keep the hardness properties of these materials in focus.

EXTREME SOLID ELASTOMER - EX/SE

Capacity Up to 1000 lbs.



Features

Heavy duty version of XI wheel.

- **Hardness:** 75 Shore D.
- **Wheel Face:** Moderate crown.
- **Finish:** XI Green.
- **Temperature Range:** up to +200°F.
- **For customization & special application options,** please consult Acorn™.

Dia. (inch)	Width (inch)	Cap. (lbs)	Hub Length (inch)	Bore (inch)	Bearing ID (inch)	Wt. (lbs)	Part Number*
4	2	1000	2-3/16	1-3/16	3/4	1-1/2	EX/SE00042012
5	2	1000	2-3/16	1-3/16	3/4	1-1/2	EX/SE00052012
6	2	1000	2-3/16	1-3/16	3/4	1-3/4	EX/SE00062012
8	2	1000	2-3/16	1-3/16	3/4	4	EX/SE00082012

*Available with Stainless Steel Bearings (29SS).

*00 = Bore size only with no Bearing; P = Precision Ball Bearing; R = Roller Bearing

Designed specifically for high capacity manual applications involving chemicals, solvents or water. X-tremely low rolling resistance provides the ergonomic qualities you demand. One-piece construction affords freedom from tread separation with an exceptionally long life. Non-marking, floor protective tread.

EXTREME PLUS SOLID ELASTOMER - XP

Capacity Up to 2800 lbs.



Features

- **Hardness:** 60 Shore D.
- Premier Solid Poly Wheel.
- Excellent for towing applications.
- **Wheel Face:** Moderate crown.
- **Finish:** XP Gray.
- **Temperature Range:** up to +250°F.
- **For customization & special application options,** please consult Acorn™.

Dia. (inch)	Width (inch)	Capacity (lbs)	Hub Length (inch)	Bore (inch)	Bearing ID (inch)	Part Number*
4	2	1400	2-7/16	1-9/16	1/2	XP0422808
5	2	1200	2-7/16	1-9/16	1/2	XP0522808
6	2	1400	2-7/16	1-9/16	1/2	XP0622808
6	3	1700	3-1/2	2-7/16	3/4	XP0652812
8	2	1200	2-7/16	1-9/16	1/2	XP0822808
8	3	2000	3-1/2	2-7/16	3/4	XP0852812
10	3	2500	3-1/2	2-7/16	3/4	XP1052812
12	3	2800	3-1/2	2-7/16	3/4	XP1252812

*Available with Stainless Steel Bearings (29SS).

*00 = Bore size only with no Bearing; P = Precision Ball Bearing; R = Roller Bearing