SOLID ELASTOMER

(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 towline 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 º F.

Options

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

Applications

- Food Processing
- Dairies
- Meat Processing
- Bakeries
- Fisheries
- 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	**SENP042008**
5	2	1800	2-3/16	1/2	4	**SENP052008**
6	2	2100	2-3/16	1/2	5	**SENP062008**
8	2	2600	2-3/16	1/2	6	**SENP082012**
8	3	3000	3-1/4	3/4	7	**SENP083008**
10	3	3200	3-1/4	3/4	8	**SENP103012**

***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

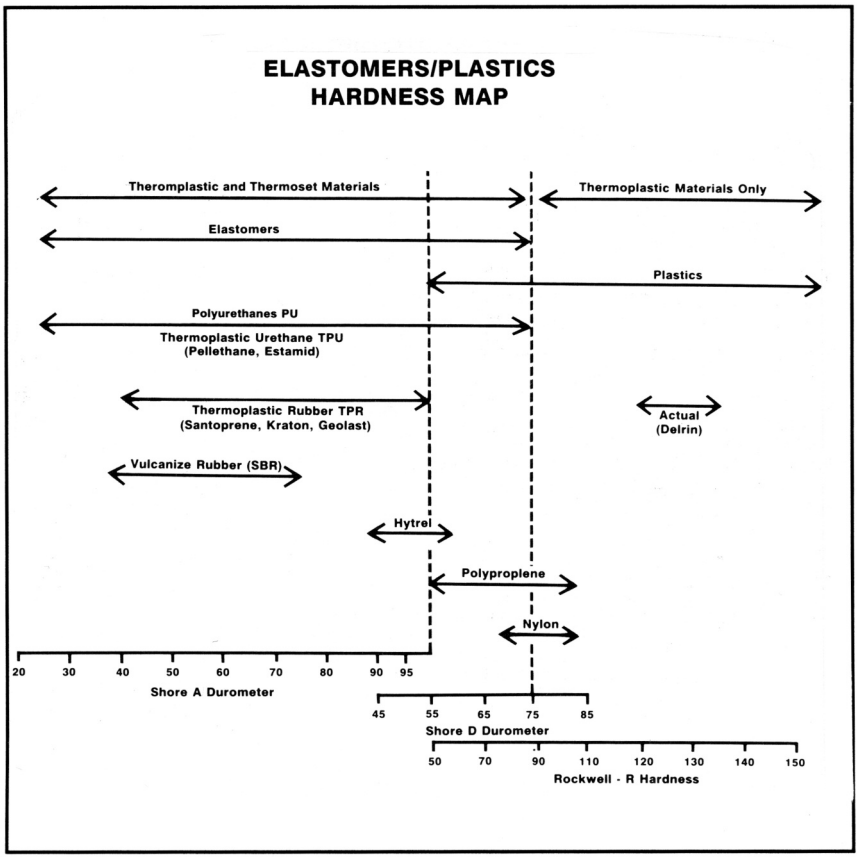
This table lists a broad range of fluids and chemicals which are considered compatible with SEN/SS wheels. Ratings are at 72º F unless specified otherwise. Concentrations of aqueous solutions are saturated, except where noted. Note especially that this data is based on laboratory tests and may vary in 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%
Acetic acid, 30%
Acetic acid, glacial
Acetylene
Ammonium chloride solutions
Ammonium sulfate solutions
Amyl acetate
ASTM oil 1 (300ºF)
ASTM oil 3 (300ºF)
ASTM reference fuel A (158ºF)
ASTM reference fuel B (158ºF)
ASTM reference fuel C (158ºF)
Beer
Borax solutions
Boric acid solutions
Butane
FREON-11
FREON-12
FREON-113
FREON-113 (130ºF)
FREON-114
Gasoline
Glue
Glycerin
N-Hexane
Hydrogen
Hydrogen sulfide
Iso-Octane
Calcium chloride solutions
Calcium hypochlorite, 5%
Carbon dioxide
Carbon monoxide
Citric acid solutions
Copper chloride solutions
Copper sulfate solutions
Cyclohexane
Dibutyl phthalate
Diethyl sebacate
Dioctyl phthalate
Ethyl alcohol
Ethylene glycol
Ethylene oxide
Isopropyl alcohol
JP-4 (100ºF)
Lubricating oils
Mercury
Methyl alcohol
Methyl ethyl ketone
Mineral oil
Naphtha
Oleic acid
Palmitic acid
Potassium hydroxide, dil. solutions
Pydraul 312C
SAE #10 oil
Sea water
Silicone grease
SKYDROL 500
Soap solutions
Sodium chloride solutions
Sodium hydroxide, 20%
Sodium hypochlorite, 5%
Sulfuric acid, up to 5%
Tannic acid, 10%
Trisodium phosphate solutions
Water (158ºF)
Xylene
Zinc chloride solutions

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 (styrenebuladiene 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.