

Sheet Rubber Training

| Common Name | ASTM Designation (D1418-93) | Series Number | General Properties | Common Applications |
|---|-----------------------------|-------------------------|--|--|
| Ethylene-propylene rubber | EPDM | E60, E80 | Good general purpose polymer. Excellent heat, ozone and weather resistance. Not oil resistant. | Chemical and/or high heat applications. |
| Buna-N or Nitrile | NBR | B60, B70 | Excellent oil resistance. Good physical properties. | Oil and fuel applications. |
| Buna-N or Nitrile (Food Grade) | NBR | W60 | Excellent oil resistance. Good physical properties. | Food, cosmetic and pharmaceutical gaskets. Table covers for meat cutting and medicine handling. |
| Neoprene | CR | N40, N50, N60, N70, N80 | Moderate oil resistance. The most popular sheet rubber as it has the best all-around properties. Comes in five different hardnesses from softer 40 durometer to harder 80 durometer. | Automotive and water pump seals and sewage truck packings between pumps. |
| Nylon-reinforced Neoprene (Cloth inserted or diaphragm) | CR | NCI, NDIA | Moderate oil resistance. Good physical properties. Higher tensile strength than standard neoprene. | Aircraft swinging hangar doors, low pressure air and water meter gaskets and weather stripping. |
| Natural or Gum | NR | RG45, GF40 | Highest abrasion resistance. Excellent physical properties. Not oil resistant. | Sandblasting curtains and cement chutes. |
| Styrene-Butadiene | SBR | BL60, R75, RF75 | Good abrasion resistance. Good physical properties. | Plumbing and heating gaskets, such as the ones used in garden hose, also sealing applications. |
| Nylon-reinforced Styrene-Butadiene (Cloth inserted) | SBR | CI | Good abrasion resistance. Good physical properties. Higher tensile strength than standard SBR. | Aircraft hangar doors, low pressure air and water meter gaskets and stripping. |
| Viton | FKM | VI70 | Excellent resistance to high heat and many concentrated acids. | Chemical or high heat applications such as industrial laundry dryers and high heat door seals on ovens. |
| Silicone | FE | SILFG | Good performance in extreme hot and cold temperatures. | Chemical or high heat applications such as industrial laundry dryers and high heat door seals. |
| Chlorosulphonated Polyethylene | CSM | HY60 | Excellent UV and ozone resistance. Good resistance to acids, oils and greases. | Formerly referred to by the trade name Hypalon, used for seals and equipment protection in chemical and automotive applications. |



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Q: What is sheet rubber?

A: Sheet rubber consists of rolled up, vulcanized, rubber sheets, used primarily for cutting gaskets, but also used to make seals, protective stripping and coverings, and vibration dampeners around machinery.

Q: What sizes does it come in?

A: Sheet rubber is traditionally offered in thickness of 1/32" to 2". Kuriyama currently offers sheet rubber from 1/32" up to 1" thick, and in widths of 36" and 48".

Q: Which types of sheet rubber are the most popular?

A: Kuriyama offers a wide variety of sheet rubber types, but the most popular are SBR, EPDM, Nitrile, Neoprene and Natural (Gum) Rubber.

Q: Does the color of the sheet rubber make any difference?

A: While both are extremely abrasion resistant, the red sheet rubber is even more abrasion resistant than the tan, for highly demanding applications. The performance characteristics of the white and black nitrile are similar; however, the white color is preferred in food grade applications.

Q: What do “cloth-inserted” and “diaphragm” refer to?

A: These terms refer to our neoprene and SBR sheet rubbers with nylon fabric reinforcement for added strength. These materials are used in applications where the material will be under additional stress. The Diaphragm uses a thicker fabric for even more strength than the cloth inserted material.

Q: Does sheet rubber meet any type of standard?

A: Yes, at minimum all sheet rubber must meet the ASTM D2000 M1 specifications for vulcanized rubber. This standard tests the material's hardness (called durometer), tensile strength (its resistance to tearing) and elongation (the percent it can stretch before breaking).

Q: Is all sheet rubber basically the same quality?

A: Not all sheet rubber is created equal. All commercial grade sheet rubber contains fillers, which are added to lower the material's cost, however these fillers negatively impact the performance of the material. The lower the percentage of fillers, the better the material will perform. Kuriyama Sheet Rubber has amongst the lowest percentage of fillers on the market.

Q: How can I be assured of the superior quality of Kuriyama sheet rubber?

A: It goes back to the ASTM D2000 spec. While most sheet rubber meets the “M1” level previously mentioned, most Kuriyama Sheet Rubber meets higher tiers of the ASTM D2000 spec, referred to as “M2” (or higher). This means the material has been tested to additional performance characteristics, such as oil resistance, heat resistance and cold weather resistance, that the M1 material has not. Materials with higher percentages of fillers will fail to meet the M2 specifications. These material testing results are listed on the individual product Certificates of Conformance and available upon request by emailing customerservice@kuriyama.com.

