EPDM

EPDM is a type of synthetic rubber commonly used in various industrial applications due to its excellent resistance to weathering, UV radiation, ozone, and heat. The acronym stands for Ethylene Propylene Diene Monomer, which refers to the chemical composition of the material. EPDM is produced by the polymerization of ethylene, propylene, and a diene monomer, which gives it its unique properties. EPDM is commonly used in roofing, automotive, construction, and other industries for its durability, flexibility, and resistance to harsh environmental conditions. It is also used in sealing applications, such as gaskets and O-rings, due to its excellent sealing properties.

EPDM synthetic rubber possesses several specifications and characteristics that make it suitable for various applications. Some of the key specifications and characteristics of EPDM rubber include:

1. Weather Resistance: EPDM exhibits excellent resistance to weathering, UV radiation, ozone, and extreme temperatures, making it suitable for outdoor applications.
2. Heat Resistance: EPDM can withstand high temperatures without significant degradation, making it suitable for use in both hot and cold environments.
3. Chemical Resistance: EPDM has good resistance to many chemicals, acids, and alkalis, making it suitable for applications where exposure to various chemicals is a concern.
4. Electrical Insulation: EPDM has good electrical insulation properties, making it suitable for use in electrical insulation applications.
5. Flexibility: EPDM rubber is highly flexible, allowing it to conform to irregular shapes and withstand deformation without losing its properties.
6. Low Electrical Conductivity: EPDM rubber has low electrical conductivity, making it suitable for electrical insulation applications where preventing electrical current flow is necessary.
7. Water Resistance: EPDM exhibits excellent resistance to water and moisture, making it suitable for use in sealing applications where water ingress needs to be prevented.
8. Tear Resistance: EPDM rubber has good tear resistance, which helps it maintain its integrity under mechanical stress.
9. Aging Resistance: EPDM has excellent resistance to aging, which allows it to maintain its properties over an extended period, even under harsh environmental conditions.
10. Low Compression Set: EPDM rubber has low compression set, meaning it can recover its original shape after compression, making it suitable for sealing applications where compression and rebound properties are essential.

These specifications and characteristics make EPDM synthetic rubber a versatile material used in various industries, including automotive, construction, roofing, electrical, and sealing applications.

EPDM (Ethylene Propylene Diene Monomer) gasket material is a popular choice for various applications due to its excellent resistance to weathering, ozone, UV exposure, and general environmental factors. Here's a concise overview of its specifications:

Physical Properties:

- Density: Typically ranges from 0.85 to 1.3 g/cm^3.
- Hardness (Durometer): Generally measures between 40 to 90 Shore A.
- Tensile Strength: Around 7 to 21 MPa.
- Elongation: Approximately 100% to 700%.
- Pressure Rating: Depending on thickness and design, can withstand pressures ranging from vacuum to moderate levels.
- Temperature Range: -40°C to 120°C (-40°F to 248°F).
- Operating Temperature: Typically suitable for continuous use within -40°C to 120°C (-40°F to 248°F).
- Short-Term Exposure: May withstand higher temperatures for short periods, possibly up to 150°C (302°F) for brief durations.

Applications:

- Chemical Processing: Resistant to various chemicals, making it suitable for seals and gaskets in chemical processing equipment.
- Food and Pharmaceutical: Often used in food and pharmaceutical industries due to its FDA compliance and resistance to animal and vegetable oils.
- Electronics: Used as insulating gaskets due to its electrical insulating properties and resistance to ozone and weathering.
- High Purity Applications: Suitable for applications requiring high purity and cleanliness standards, such as in the semiconductor industry.

Compatibility:

- Compatible with: Water, steam, diluted acids and alkalis, ketones, alcohols, and glycols.
- Not Compatible with: Concentrated acids, mineral oils, greases, and fuels.

Shelf Life and Storage:

- Shelf Life: Typically ranges from 5 to 10 years, depending on storage conditions and manufacturer specifications.
- Storage Conditions: Store in a cool, dry place away from direct sunlight and sources of ozone and UV radiation. Avoid exposure to heat, humidity, and incompatible substances.