

Peroxide-cured EPDM is a highly stable elastomer with advantages including excellent resistance to high temperatures, aging, and ozone, making it ideal for clean applications like food contact and drinking water systems.

However, a key disadvantage is its poor resistance to petroleum-based oils, fuels, and hydrocarbon solvents, which can cause degradation.

Advantages

- **Superior Heat Resistance:** Peroxide-cured EPDM can withstand high temperatures, with some grades reaching up to 150°C (302°F).
- **Excellent Aging and Ozone Resistance:** The saturated chemical structure of peroxide-cured EPDM provides inherent stability, leading to a longer service life and superior performance in environments with ozone exposure.
- **Good Chemical Resistance:** It offers excellent resistance to hot water, steam, alcohols, ketones, and various organic and inorganic acids.
- **High Purity:** The absence of sulfur in the curing process makes it suitable for applications requiring high levels of cleanliness and hygiene, such as those involving food, beverages, and drinking water.
- **No Sulfidation Corrosion:** Peroxide-cured EPDM does not contain sulfur, preventing sulfidation corrosion in water-glycol systems and protecting metal parts.
- **Good Electrical Insulation:** EPDM boasts good electrical insulation properties, making it useful in electrical components and data centers.

Disadvantages

- **Poor Resistance to Oils and Fuels:** Peroxide-cured EPDM is not suitable for applications in contact with petroleum-based oils, mineral oils, fuels, and hydrocarbon solvents, which can degrade the material.
- **Limited Resistance to Some Other Chemicals:** It is also not recommended for use with aliphatic hydrocarbons, chlorinated hydrocarbons, or aromatic hydrocarbons.
- **Not for Phosphate-Based Fluids:** The material is incompatible with phosphate-based hydraulic fluids.

For assistance in identifying the appropriate polymer or material, or to develop and formulate a polyacrylate / acrylic rubber compound to meet your specific application and performance requirements, please contact ILGA S.R.L at e-mail: ilga@ilgagomma.com or phone: +39 0456336521 / 0456336514.

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