Shelf Life Estimates* for Common Elastomers

Elastomer	Estimated Shelf Life	Common Applications
Natural Rubber (NR)	3–5 Years	Seals, gaskets, vibration mounts
Styrene Butadiene Rubber (SBR)	3–5 Years	Seals, tires, hoses
Nitrile (NBR, Buna-N)	5–10 Years	Fuel and oil seals, hoses, gaskets
Hydrogenated Nitrile HNBR)	10–15 Years	High-temperature oil seals, automotive applications
Ethylene Propylene Diene Monomer (EPDM)	10–15 Years	Outdoor seals, weatherstripping, coolant hoses
Silicone (VMQ)	20+ Years	Medical, food-grade seals, high-temp applications
Fluorosilicone (FVMQ)	20+ Years	Aerospace, fuel systems, extreme temperatures
Isobutylene Isoprene (CR, Neoprene)	10–15 Years	HVAC seals, gaskets, wetsuits
Fluoroelastomer (FKM, Viton®)	20+ Years	Chemical-resistant seals, O-rings, fuel systems
Perfluoroelastomer (FFKM, Kalrez®)	20+ Years	High-performance chemical and heat applications
Polyurethane (PU, AU, EU)	5–10 Years	Wear-resistant seals, gaskets, rollers

** Guidelines Based on Industry Standards (e.g., ASTM D2000, SAE J200, ARP5316)*

Does Rubber Have an Expiration Date?

As they age, rubber seals and molded products can undergo detrimental changes to their physical properties and become unusable due to excessive hardening, softening, cracking, crazing, or other surface degradations.

The physical properties of a rubber product are particularly sensitive to degradation by environmental factors. Proper storage of elastomers is essential to maintaining their integrity and performance. Below are general recommendations for the shelf life of common elastomers under ideal storage conditions. To maximize the efficacy and shelf life of elastomers, we recommend following these guidelines:

Storage

Temperature Store between 40°F–77°F (5°C–25°C). Avoid extreme heat or cold.

Humidity Keep relative humidity below 75% to prevent degradation.

Light Exposure Avoid direct sunlight and UV radiation. Use opaque or UV-resistant packaging.

Oxygen & Ozone Exposure Store away from electric motors, fluorescent lights, and ozone-generating equipment.

Chemical Exposure Protect components from solvents, oils, and corrosive chemicals.

Handling and Packaging

Original Packaging Keep elastomers in sealed bags or containers to prevent contamination.

Compression and Stress Avoid storing rubber components under tension or compression to prevent deformation.

FIFO (First-In; First-Out) Use older stock first to prevent excessive aging.

By following these guidelines, you can maximize the lifespan and performance of your elastomeric components. The table above shows the estimated shelf life of some commonly-used elastomers.

At Archer Advanced Rubber Components, our materials experts have established rigorous practices to protect both raw materials and finished goods from harmful environmental degradants. We hope you'll find this information helpful.

For more information or specific material recommendations, please contact your Archer Advanced Rubber representative.

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