

## **O-Ring Material Shelf Life**

The Chart below provides the recommended shelf life for various materials of elastomer (rubber) seals. However, it is not a binding Specification. This information is to be used simply as a basis which companies can form their own shelf life requirements.

<b>Elastomer Family</b>	<b>ASTM</b>	<b>Shelf Life</b>
Aflas®		Unlimited
Butyl Rubber, Isobutylene Isoprene	IIR	Unlimited
Chloroprene (Neoprene®)	CR	15 Years
Epichlorohydrin (Hydrin®)	ECO	NA
Ethylene Acrylic (Vamac®)	AEM	15 Years
Ethylene Propylene, EPDM or EP	EP	Unlimited
Fluorocarbon (Viton®)	FKM	Unlimited
Fluorosilicone	FVMQ	Unlimited
Hydrogenated Nitrile, HNBR or HSN	HNBR	15 Years
Nitrile (Buna-N or NBR)	NBR	15 Years
Perfluorelastomer	FFKM	Unlimited
Polytetrafluoroethylene (Teflon®)	PTFE	N/A
Polyacrylate	ACM	15 Years
Polyurethane (Polyester or Polyether)	AU / EU	5 Years
Silicone	VMQ	Unlimited
Styrene Butadiene (Buna-S)	SBR	3 Years

These limits are based on examination and testing of rubber seals with extensive shelf age, in some cases more than 30 years. In addition to practical experience, these recommendations also conform to theoretical expectations: those materials with unlimited shelf lives show no chemical potential for degradation due to atmospheric exposure and are chemically and physically stable.