

Rubber Products Shelf Life Limits



The International Organization of Standardization is a worldwide federation of national standards bodies. ISO 2230 specifies guidelines for storage of rubber products. This International Standard give guidelines for the inspection, recording procedures, packaging and storage of products, assemblies and components made from vulcanized or thermoplastic rubber prior to being put into circulation.

Rubber Shelf Life is also governed by the ARP5316 military standard, however Ceetak Ltd has adopted the British Standard BS ISO 2230 standard – Guidelines for Storage for its internal use.

The initial and extension storage periods for unassembled components of the material groups are as per listed below:

	ASTM	Material Type	Initial Storage	Extended Storage
GROUP A	NR	Natural Rubber	5 years	2 years
	AU / EU	Polyurethane		
	SBR	Styrene-butadlene rubber		
	BR	Polybutadiene		
GROUP B	CR	Chloroprene (Neoprene)	7 years	3 years
	HNBR	Hydrogenated Nitrile		
	IIR	Butyl		
	ACM	Polyacrylate		
	AEM	Ethylene Acrylic		
	NBR	Nitrile		
GROUP C	FKM	Fluorocarbon	10 years	5 years
	EPDM	Ethylene Propylene Rubber		
	VMQ	Silicone		
	FVMQ	Fluorosilicone		
	FFKM	Perfluoroelastomer		

Further extension periods can be extended upon testing and inspection if parts are stored in the correct conditions.



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The amount of property change varies with time, environmental conditions, and mechanical stress.

The environmental conditions include the ambient temperature, the amount of light and the oxygen or ozone to which the materials are exposed to during their time in storage

- **Temperature:** store between 15 -25°C and away from direct heat sources
- **Light:** avoid exposure to direct sunlight, artificial light, and UV
- **Chemical:** Unless otherwise specified, products should be protected /isolated from any other liquids, semi-liquids, vapours, metals / alloys, or powders.
- **Humidity:** below <65% recommended
- **Ozone:** Should be considered as particularly damaging to rubber products; every effort should be taken to protect products from ozone or equipment that produces ozone such as high voltage equipment.
- **Deformation:** Products should be stored in a relaxed, neutral state, allowing the product to form its natural shape, with no external forces upon it (not stacked etc)

The cure date listed on the Ceetak labeling refers to the last day of the quarter of the cure as the time of manufacture.

Under the correct conditions (as listed above), parts can be stored for the period shown in the 'initial storage' column.

Once this period has passed the elastomeric parts must be visually inspected for permanent distortion, mechanical damage, cracks, hardening or tackiness (softening). If any of these are found, the parts will be deemed unsatisfactory and should be discarded.

Providing the parts have not deteriorated after this further inspection, they should be tested mechanically and then be stored for the 'extended storage' period.



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