



# Technical Information

## Brake spare parts with rubber components Note on storage

### General information

Rubber is a versatile, elastic, and relatively durable material. However, rubber cannot be stored indefinitely in adverse conditions. Rubber parts are fitted to various components such as brake and clutch hoses, brake master cylinders, and wheel brake cylinders.

### Storage period and shelf life

The storage period of rubber parts is between 2 and 15 years, depending on the application.

As the allocation to a material group cannot be guaranteed in every case, HELLA PAGID recommends you inspect rubber parts for the first time following an initial storage period of five years. The storage period can then be extended by two years. The storage period can only be extended by the maximum amount if the optimum storage conditions exist and if the parts have been inspected accordingly.

Recommended storage temperature: 25°C

Maximum shelf life under optimal conditions according to ISO2230 (table)

Material group	Initial storage period	Extension
Group A: SBR	5 years	2 years
Group B: NBR	7 years	3 years
Group C: EPDM	10 years	5 years

SBR = styrene butadiene rubber

NBR = nitrile butadiene rubber

EPDM = ethylene propylene diene monomer



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## Storage conditions

HELLA PAGID recommends the following storage conditions for the above products:

- Storage in cool, dry, low-dust, and moderately ventilated rooms
- Storage outdoors is not permitted, even when protected against the weather
- Storage not below  $-10^{\circ}\text{C}$  and not above  $35^{\circ}\text{C}$
- Rubber and natural rubber products must be shielded from heat sources in heated rooms
- No direct insolation or strong artificial light with high ultraviolet content
- As ozone is particularly harmful, storage rooms must not contain any ozone-producing equipment whatsoever, e.g. electric motors or other equipment that could generate sparks or other forms of electrical discharge
- Store in sealed original packaging
- Make sure that rubber parts are stored free of stress, i.e. without tension, compression, or other deformation, as stress creates the ideal conditions for permanent deformation and cracking