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Rubber Material Storage Guidelines

The physical properties and therefore the performance of rubber articles can deteriorate during long periods of storage. This can lead to the rubber component becoming unsuitable for service because of excessive hardening, softening, cracking, crazing or other surface degradation. These changes may be the result of one factor or a combination of factors, for example the action of oxygen, ozone, light, heat and humidity.

Recommendations

Temperature

Storage temperature should be below 25ºC. At higher temperatures certain forms of deterioration may occur sufficiently to affect the ultimate service life.

The effects of low temperature are not permanently damaging but articles may become stiffer so care should be taken to avoid distortion.

Humidity

Storage conditions should be such that condensation does not occur, store in a dry environment.

Light

Vulcanised rubber should be protected from light, in particular direct sunlight and strong artificial light with a high ultra-violet content. Unless the materials are wrapped in opaque protective material it is advisable to cover windows of storage rooms with a material designed to reduce UV rays.

Oxygen and Ozone

Where possible cured or vulcanised rubber should be protected from circulating air by wrapping or storage in air-tight containers. This particularly applies to product with large surface areas.

Ozone is very aggressive to rubber and storage rooms should not contain any equipment capable of generating ozone.

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Deformation

Vulcanised rubber where possible should be stored in a relaxed condition free from tension, compression or other deformation.

Contact with Liquid or Semi-Solid Materials

Rubber should not be allowed to come into contact with liquid or semi solid materials, in particular solvents oils and greases, at any time during storage.

Contact with Metals

Certain metals, in particular copper, manganese and iron are known to have a damaging effect on rubber. Protection should be given by wrapping or separation with paper or polythene.

Rotation of Stocks

Vulcanised or cured rubber should remain in store for as short a time as possible. Therefore, articles should be issued from stores in strict rotation.

Cleaning

Care must be taken in cleaning vulcanised rubber. Cleaning with soap and water is least harmful. Organic solvents such as trichloroethylene, carbon tetrachloride, or petroleum spirit, must not be used.