

Chemical protective gloves: glossary

Absorption

Absorption refers to the phenomenon of one substance being taken up by another. In purely physical terms, an atom, molecule or ion is dissolved in a different phase. Chemical protective gloves may therefore absorb substances against which they are intended to provide protection by the incorporation of these materials into the glove material.

Adsorption

Adsorption is the adhesion of a liquid or gaseous substance to a solid surface.

Desorption

Desorption is the reverse process of adsorption: the release of a liquid or gaseous substance from a solid surface.

Diffusion

Diffusion is the mixing of phases in contact with each other, caused by the relative movements of atoms, molecules or ions. The forces driving this phenomenon may be differences in concentration (ordinary diffusion), temperature (thermal diffusion) or pressure (pressure diffusion), or external field forces.

EC type examination

EC type examination is the testing of a product by a notified body. This examination is a statutory requirement for certain products before they may be placed on the market within the European Single Market. Such products include all products classified as Category II and III in accordance with the PPE Directive, 89/686/EEC.

Maximum wear duration

The *maximum wear duration* of a chemical protective glove is the period of time for which the glove provides reliable protection when properly used.

Membrane

A *membrane* is a thin skin acting as a barrier.

Penetration

When referring to chemical protective gloves, *penetration* is the passing of a substance through the glove material. In this case, gaps or holes in the membrane constitute the penetration path. The practical test of this property is performed in accordance with DIN EN 374 by means of water and air-leak tests during the approval process.

Permeation

Permeation is the passing of a substance through a membrane (thin skin or barrier). This process occurs at molecular level; the migrating particles are molecules, atoms or ions.

Permeation cell

A *permeation cell* consists of a vessel, generally of glass, that can be taken apart and into which a sample can be clamped. The result is two volumes within the cell which are separated by the sample. For measurement of the permeation time, the test substance is introduced into one side of the cell and a suitable method used on the other side to measure when permeation has occurred.