

At a Glance.

EN ISO 374-1: Modification of the Standard for Protective Gloves against Dangerous Chemicals.

With the publication of the updated standard EN ISO 374-1:2016 in the Official Journal of the European Union, starting June 1, 2017, all protective gloves against dangerous chemicals and microorganisms must comply with the requirements of the new standard in order to be placed on the market. The previous standard is no longer valid.

The updated standard contains a number of fundamental changes compared to the previous version EN 374-1:2003. The new standard requires testing of protective gloves against dangerous chemicals for permeation, penetration and degradation.

PERMEATION (EN ISO 374-1:2016 AND EN 16523-1:2015)

Permeation is the process by which a chemical moves through a protective glove material on a molecular level without any visible damage to the material. Permeation is determined according to standard EN 16523-1:2015 (which replaces EN 374-3). Depending on their permeation performance, protective gloves against dangerous chemicals are classified into three types (type A, B, C). The measured breakthrough time of the chemical through the glove is used to assign the glove to a performance level. The test chemical(s) that must be used can be found in Table 2 of EN ISO 374-1:2016. This list of chemicals to be tested for permeation was expanded from 12 to 18 chemicals.

PENETRATION (EN 374-2:2014)

Penetration as specified in EN 374-2 is the movement of air or water through seams, pinholes or other imperfections in a protective glove material. The „test beaker“ pictogram for low protection against chemical hazards from the previous version of the standard is no longer being used. Testing according to AQL is no longer required and is now the responsibility of the manufacturer.

EN 374-3:2003: PROTECTIVE GLOVES AGAINST CHEMICALS AND MICROORGANISMS – PART 3

This standard was retracted and replaced by EN 16523-1:2015 (see Permeation).

DEGRADATION (EN 374-4:2013)

Degradation is the deleterious change in the physical properties of a protective glove material due to contact with a chemical. Puncture tests will be performed on new, unexposed specimen and on specimen that have been exposed to the test chemical. Indications of degradation may include flaking, disintegration, embrittlement, color change, dimensional change, change of appearance, hardening, softening, etc.

MICROORGANISMS (EN ISO 374-5:2016)

In order to protect against bacteria and fungi, a protective glove must pass the penetration test according to standard EN 374-2:2014 (air leak test and water leak test). For the pictogram with the addition „virus“, testing must be performed according to ISO 16604 Procedure B.

LABELING & INFORMATION FROM MANUFACTURER

The pictograms, performance levels, results and relevant warnings required by the standards must be indicated in the labels and in the information by the manufacturer.

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