

RESISTANCE OF GLOVES TO PERMEATION BY CHEMICALS

CHEMICAL	EN ISO 374-1:2016 PERFORMANCE LEVEL	EN 374-4:2019 MEAN DEGRADATION / %
Sodium Hydroxide 40% (K)	6	1.3
Ammonium Hydroxide 25% (O)	1	7.8
Sulphuric Acid 96% (L)	1	Fully disintegrated
Hydrogen Peroxide 30% (P)	6	17.3
Formaldehyde 37% (T)	6	16.0

EN ISO 374-1:2016 - permeation levels are based on breakthrough times as follows:

Performance Level:	1	2	3	4	5	6
Minimum breakthrough time (Min):	>10	>30	>60	>120	>240	>480

Safety gloves to protect against chemicals are classified according to their permeation time (time taken for the chemical to penetrate the glove) and number of chemicals tested:

- Type A - at least 30min each for at least 6 test chemicals
- Type B - at least 30min each for at least 3 test chemicals
- Type C - at least 10min each for at least 1 test chemicals

EN 374-4:2019 - Degradation results indicate the change in puncture resistance of the gloves after exposure to the challenge chemical

EN ISO 374-5:2016 - Resistance to Bacteria and Fungi = Pass, Resistance to Virus = Pass

MANDATORY STATEMENTS EN ISO 374-1:2016

“This information does not reflect the actual duration of protection in the workplace and the differentiation between mixtures and pure chemicals.”

“The chemical resistance has been assessed under laboratory conditions from samples taken from the palm only (except in cases where the glove is equal to or over 400mm - where the cuff is tested also) and relates only to the chemical tested. It can be different if the chemical is used in a mixture.”

“It is recommended to check that the gloves are suitable for the intended use because the conditions at the workplace may differ from the type depending on temperature, abrasion and degradation.”

“When used, protective gloves may provide less resistance to the dangerous chemical due to changes in physical properties. Movements, snagging, rubbing, degradation caused by the chemical contact etc. may reduce the actual use time significantly. For corrosive chemicals, degradation can be the most important factor to consider in selection of chemical resistant gloves.”

“The penetration resistance has been assessed under laboratory conditions and relates to the tested specimen.”