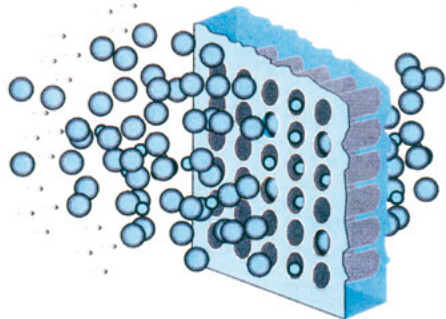


A LITTLE BIT OF THEORY!

PENETRATION

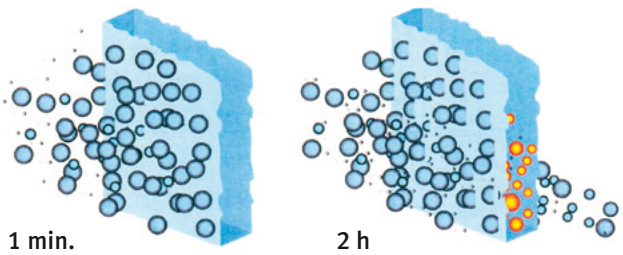
What is meant with penetration, is the leaking of chemicals through a glove be means of holes in the glove material. Even microscopic holes allow chemicals to travel through a glove. KCL gloves undergo a 100% inspection therefore providing you, the glove user, with maximum safety.



Penetration: chemicals travelling through holes in a glove

PERMEATION

By permeation, chemicals diffuse and permeate unnoticed through gloves surfaces. Even without obvious damage, a glove could be useless long before it is discarded.



Permeation: different chemical substances travel through a glove and it's undamaged material in different lengths of time

5 QUESTIONS AND ANSWERS

Why shouldn't I wear leather gloves?

Leather gloves very frequently have a poor fit, uncomfortable seams, allow moisture and chemicals to be absorbed and permeate and often contain Chrome VI (carcinogenic) as well as PCB's from the tanning process used in manufacturing leather hides. Nitrile gloves are more durable than leather gloves, available in several sizes and last longer, while giving better protection. Nitrile gloves are also water resistant, washable and free of hazardous substances (Oko-tex standard 100).

Are the effects of chemicals immediately noticeable on the skin?

There are numbers of cancer causing and genetically harmful chemicals that you cannot taste or smell, but which are absorbed into the body. Frequently symptoms appear years or even decades later. See the example under point 3 (Category III).

Why are PVC gloves not appropriate for use with chemicals?

PVC gloves contain softeners, which can cause skin irritation. These softeners can also be rinsed out of a glove when working with chemicals, which can cause microscopic holes. PVC gloves also are frequently produced in third world countries under poor quality management conditions. Also due to the manufacturing process, chemicals can wick through to the inner surface of the glove though the hairs of the cotton liner base, if exposed.

How do I as a glove user know, that I am using the right quality glove?

Look into your KCL glove plan or ask your safety officer. To be on the safe side check the labelling on your glove and when working with chemicals do not use your gloves longer than the maximum usage time as determined by the KCL laboratory. When in doubt, talk to your safety advisor or call the KCL Hotline at +49 6659 87 300.

If I use my gloves 5 minutes today and 5 minutes tomorrow with chemicals, can I add the time together?

No! Permeation begins as soon as chemical contact has taken place and continues even when you finished working.

When should gloves be changed?

- For hygienic reasons at least every five days.
- For mechanical (Cat. II) gloves, after a glove has been damaged, or when heavily soiled (without chemical contact) and washing no longer improves the condition of the gloves. Many of KCL's high quality gloves can be washed, particularly our Para-aramide cut resistant gloves.
- Chemical gloves should be disposed of immediately when damaged, after chemical contact when used as splash protection, or by full contact when the KCL recommended usage time has been reached.

6 NOTES ON USE AND CARE

5 STEPS TO USING YOUR PROTECTIVE GLOVES PROPERLY

We have developed a pocket guide to demonstrate the proper use of your KCL gloves for you to keep near you in your work place. All the important tips for using protective gloves are highlighted here.



If our information leaflet „5 steps...“ is no longer attached, please request a further copy by calling our hotline +49 6659 87-300.

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by Honeywell

WHAT YOU SHOULD KNOW ABOUT PROTECTING YOUR HANDS



by Honeywell

HABEKOST, V1106, 5.000

RISK OF INJURIES BY IMPROPER USE OF PROTECTIVE GLOVES

WE TAKE CARE OF YOUR HANDS!

There are good reasons why protective gloves and chemical gloves should be worn wherever they are required. There are many injuries that can occur from improper or complete lack of use of protective gloves. These can be cuts, punctures, abrasions, dermatitis, allergies or burns (chemical & thermal), even long term systemic effects can result from regular contact with chemicals. The long term effects of increased levels of harmful chemicals carried in blood and internal organs can lead to severe consequences for your health.

PROFESSIONAL HAND PROTECTION WITH CERTIFIED SAFETY

The gloves offered by KCL for almost every need can provide reliable protection against such risks. KCL's own in house laboratory is constantly testing the mechanical and chemical resistance of KCL gloves according to DIN ISO 9001. Plant tours are conducted in close cooperation with end user companies, and the resulting risk hazard assessments used to develop glove plans, which define recommended gloves and usage times for each work place. Afterwards, the glove users and safety offices are then trained on hand protection. The work places and the defined gloves are then reviewed on an annual basis.



DETERMINING THE RIGHT GLOVE AND IT'S PROPER USE

Together with your safety officer KCL will help you, find the right gloves for your site specific tasks. A unique KCL glove plan is then made specifically for your company and each individual work place.

KCL-Glove-Plan	Green	Blue	Yellow	Brown	White
Product	Camatril® chemical protection cuff	Dermatril® chemical protection disposable	Salhara® mechanical protection knitterist	Worktril® W cold protection cuff	Camapur® Comfort mechanical protection knitterist
Product Code	730	740	100	315	616
Sizes	7, 8, 9, 10, 11	6, 7, 8, 9, 10, 11	7, 8, 9, 10	6, 9, 10, 11	6, 7, 8, 9, 10, 11
Labelling					
Category	III	III	II	II	II
Legth in mm	310	250	250	270	240
Department	CNC Hobeling CNC Drilling Part Cleaning Sanding (level bench) warehouse	CNC Hobeling CNC Drilling Part Cleaning Sanding (level bench) warehouse	Sanding Mat. warehouse	Outdoor Work	Manufacturing Assembly
Cleaning					
Chemicals	Fina System cleaner D 8059 Sanding oil MB-30 Compound FC 321 Compound FC 110 Molores Swisscool 7755 Aero Fina Rusan 20 Fina Rusan DWF4 Spezial benzine 40/80	480 minutes 480 minutes 480 minutes 480 minutes 480 minutes 480 minutes 480 minutes 120 minutes	480 minutes 10 minutes 480 minutes 480 minutes 10 minutes 10 minutes 10 minutes 10 minutes	Penetration: all chem. Prot. Gloves: Level 3 Please ask about chemicals not listed KCL GmbH Am Kreuzacker 9 31224 Eichenzell +49 66 59 87-300 Germany by Honeywell	

Example of a glove plan created by a customer with KCL - the categorisation and allocation to specific tasks can be seen in the glove plan as well as the level of protection for chemical protective gloves for tested chemicals.

The right glove for your work place can be seen in the glove plan. If this not the case or if questions arise, then speak to your safety officer who will inform you, which glove is the right glove to use. Your health is important to us. Should you have any questions on the topic of hand protection, please do not hesitate to contact our Hotline at +49 6659 87-300.

THE THREE HAZARD CATEGORIES, LABELLING OF PROTECTIVE GLOVES AND EVERY DAY EXAMPLES

HAZARD CATEGORIES

A quick glance at the labelling of a KCL glove tells you many important things. One of these being the hazard category for the gloves intended use.

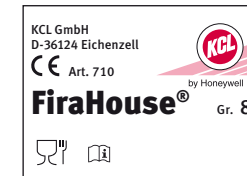


Labelled KCL glove

Category I

Minimal risk / low protective requirements
For example a simple latex glove used for cleaning tasks without chemical contact or mechanical stress, providing protection only against moisture and dirt.

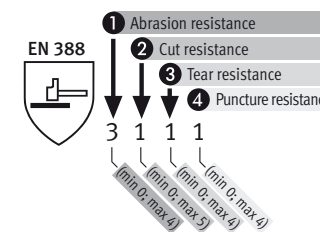
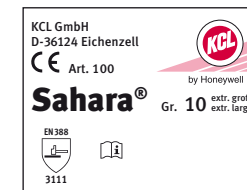
Labelling:
Category I marking
CE-symbol, Product code, size, product name, address of manufacturer



Category II

Intermediate risks/i.e. protection against mechanical hazards
For example small cuts, which can be treated with first aid, which could occur when working with sheet metal using unsuitable gloves. Deep cut wounds requiring stitches can also occur, which could also result in several weeks of lost work time.

Labelling:
Category II marking
CE-symbol, Product code, size, product name, pictograms, address of manufacturer



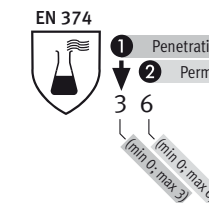
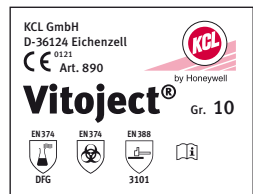
The EN-388 (hammer symbol) and resistance levels are depicted from category II on. With this information you can make your own judgement of the protection provided by a glove.

Category III

High risk/protection against mortal risks and irreversible damage such as chemical injuries
Example 1: Painful burns could be the consequence for your hands when working with acids and wrongly using an absorbent leather glove instead of a Nitrile chemical protective glove.
Example 2: The maximum recommended usage time as determined by the KCL laboratory is significantly exceeded when working with a highly toxic chemical. As a result the chemical permeates through the glove unnoticed and is absorbed into the blood stream by means of the skin. A blood test later indicates a severe high level of carcinogens.

Note: every glove, even KCL protective gloves, despite their high level of quality, provide protection only for a limited time, the maximum recommended usage time as indicated in our chemical recommendations. There are no gloves, which are suitable for every type of risk or for every chemical. For this reason we examine the hazards together with your safety officers to determine suitable gloves to protect you and your health.

Labelling:
Category III marking
CE-symbol, Number of Observation Institute, Product code, size, product name, pictograms, address of manufacturer



Protection level for permeation values acc. to EN 374	Result acc. to EN 374 for the chemicals:
Level 1 ≥ 10 min	Carbolineum = 6
Level 2 ≥ 30 min	Cold cleaner = 6
Level 3 ≥ 60 min	Hydrochloric acid 32 % = 6
Level 4 ≥ 120 min	Heating oil = 6
Level 5 ≥ 240 min	Motor oil = 6
Level 6 ≥ 480 min	Super unleaded = 6

CE 0121 = Institute for Occupational Safety and Health of the German Social Accident Insurance (IFA), Sankt Augustin, Germany

These examples make clear that only a properly and carefully selected glove will provide protection, and only then when it is properly used. Due to KCL's in house laboratory facility, we are able, given that the gloves are properly used, to indicate the exact usage time for a selected glove against chemicals used in your work place.