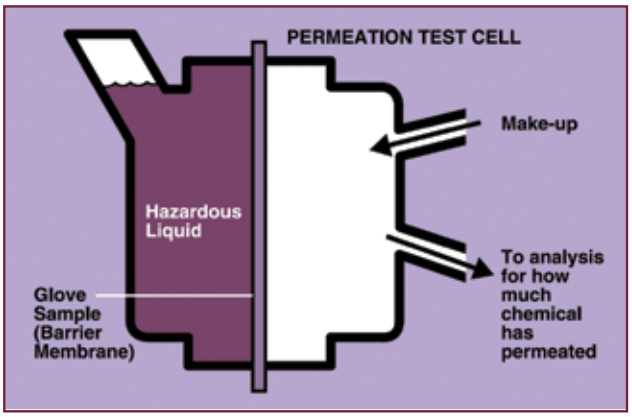
Factors in Glove Selection: Chemical Protection

A Chemical Glove Program is an important part of managing safety in your operation. Workers face a wide range of risks when they are exposed to chemicals as part of their daily tasks. They need to feel equipped against exposure to harmful chemicals, as well as incidental cuts and abrasions, by using the right hand and body protection equipment. This guide serves as an overview of factors in the selection of the right glove in various chemical environments.

Factors in Chemical Glove Selection

Permeation *can be impacted by the working temperature of the surroundings and/or chemical. The higher the working temperature, the lower the breakthrough time and vice-versa. Times noted per the standard are based on working at room temperature.*



Ansell *puts all of our chemical gloves through stringent, industry-standard performance testing (including EN374 Chemical Breakthrough Time evaluations) before making them available to our customers.*

EN 374

XYZ

Chemical Protection

Breakthrough time > 30 min. for at least three chemicals from this list (XYZ represent the code letters for three of these chemicals for which the glove obtained > 30 min. breakthrough time):

A. Methanol
B. Acetone
C. Acetonitrile
D. Dichlonomethane
E. Carbon Disulphide
F. Toluene
G. Diethylamine
H. Tetrahydro
I. Ethyl Acetate
J. n-Heptane
K. Sodium Hydroxide 40%
L. Sulphuric acid 96%

Performance Levels	0	1	2	3	4	5	6
Breakthrough Time	<10	>10	>30	>60	>120	>240	>480

EN 374

Low Chemical Resistance

This icon can be used for gloves that do not meet the above requirement and have an AQL of 1.5 or lower.

EN 374

Micro-Organisms

A glove shall not leak when tested to an air and/or water leak test, and shall be tested and inspected in compliance with the Acceptable Quality Level.

Only applies if the AQL is equal to or below 1.5

Performance Levels	1	2	3
AQL	4.0	1.5	0.65

Change in ANSI/ISEA classification levels for cut resistance

CURRENT: ISEA 105-2011		NEW: ANSI/ISEA 2016		EUROPE: EN388-2016	
ASTM F1790-2014 (CPPT)*		ASTM F2992-15 (TDM)		ISO 13997 (TDM)	
CPPT or TDM		TDM ONLY		TDM ONLY	
LEVEL	GRAMS	LEVEL	GRAMS	LEVEL	NEWTONS*
1	≥ 200	A1	≥ 200	A	2
2	≥ 500	A2	≥ 500	B	5
3	≥ 1000	A3	≥ 1000	C	10
		A4	≥ 1500	D	15
4	≥ 1500	A5	≥ 2200	E	22
		A6	≥ 3000	F	30
5	≥ 3500	A7	≥ 4000		
		A8	≥ 5000		
		A9	≥ 6000		

*NOTE: 1 Newton is equal to 102 grams of force. This means the new ANSI cut level in North America will correlate to the EN388 cut level in Canada and Europe.

New Icons

Going forward, cut protection gloves and sleeves and marketing collateral will communicate 2016 ANSI cut levels in new graphic icons, as shown on the glove example below.

ANSI A#

CUT

EN 388

abcdef