HAND PROTECTION

CHEMICAL RISKS

AS/NZS 2161 is the standard for hand protection and mirrors the European Standards EN388, EN374 and other elements.

AS/NZS 2161.10.3:2005 and EN374.1:2016 apply to gloves that protect against chemicals and micro-organisms. The pictograms below signify that gloves so marked indicate:

TYPE 'C'

X - LOW CHEMICAL

Level 1 (>10mins) performance against at least 1 chemical

TYPE 'B'

X X X

Level 2 (>30mins) performance against at least 3 chemicals

TYPE 'A'

X X X X X X

Level 2 (>30mins) performance against at least 6 chemicals

A	METHANOL	J	N-HEPTANE
B	ACETONE	K	SODIUM HYDROXIDE 40%
C	ACETONITRILE	L	SULPHURIC ACID 96%
D	DICHLOROMETHANE	M	NITRIC ACID 65%
E	CARBON DISULPHIDE	N	ACETIC ACID 99%
F	TOLUENE	O	AMMONIA HYDROXIDE 25%
G	DIETHYLAMINE	P	HYDROGEN PEROXIDE 30%
H	TETRAHYDROFURANE	S	HYDROFLUORIC ACID 40%
I	ETHYL ACETATE	T	FORMALDEHYDE 37%

When dealing with glove performance against chemicals it is important to reference supplier glove compatibility charts for suitability and permeation & degradation time frames.

MECHANICAL RISKS - The new EN388:2016 explained

AS/NZS 2161.3/EN388 applies to gloves that protect against physical and mechanical hazards. Glove performance is indicated by the numbers below the pictogram for Abrasion, Cut - Coup, Tear, Puncture, Cut ISO13997 and Impact EN13594:2015.

EN 388

XXXXXX

X	X	X	X	X	X
ABRASION	**CUT - COUP**	**TEAR**	**PUNCTURE**	**CUT - ISO13997**	**IMPACT EN13594:2015**
Number of cycles a glove can withstand to abrade through the material. A pre-defined sandpaper grit will be used as abradant to conduct the test providing more consistent results.	Number of cycles to cut through a glove material at a constant speed and pressure when compared to a cotton reference. Blade is tested for any blunting after 60 cycles.	Force a glove's material can withstand before it is torn apart.	Force a glove's material can withstand before it is perforated using a standard needle size.	Amount of pressure required to make an incision over a 20mm travel distance using a razor sharp blade.	Resistance to a 2.5kg weight impacting with an energy of 5J (Joules) onto the glove. The material may not fracture or split and is measured in accordance with EN13594:2015 as either Pass or Fail.
CUT INDEX / LEVEL	CUT INDEX / LEVEL	NEWTON / LEVEL	NEWTON / LEVEL	CUT INDEX / LEVEL / WEIGHT	KN / LEVEL
≥ 8000 4	≥ 20 5	≥ 75 4	≥ 150 4	≥ 30 F 3.0kg	≥ 9 P
≥ 2000 3	≥ 10 4	≥ 50 3	≥ 100 3	≥ 22 E 2.2kg	
≥ 500 2	≥ 5 3	≥ 25 2	≥ 60 2	≥ 15 D 1.5kg	
≥ 100 1	≥ 2,5 2	≥ 10 1	≥ 20 1	≥ 10 C 1.0kg	
< 100 0	≥ 2,5 1	≥ 10 0	≥ 20 0	≥ 5 B 500gms	
	< 1,2 0			< 2 A 200gms	

(Table by Paramount - ProChoice gloves)

USEFUL REFERENCES:

AS/NZS 2161 Set: 2008 Occupational Protective Gloves Set.