INDUSTRY GUIDE

MACHINERY & EQUIPMENT

ANSELL PROTECTION SOLUTIONS FOR INDUSTRY PROCESSES

Ansell is dedicated to worker safety: we provide a comprehensive range of hand, arm and body protection solutions to cover needs across many industries. Before selecting a product, ensure a risk assessment of the hazards has been conducted to determine that the product will provide an appropriate level of protection. Ansell Guardian® Chemical can be consulted to provide an assessment of the level of chemical protection offered by our products and may assist in the risk assessment. The determination of suitability of Ansell hand, arm and body protection solutions is the final responsibility of the user.

EN 388 – Mechanical protection
This standard applies to all kinds of protective gloves in respect of physical and mechanical aggressions caused by abrasion, blade cut, puncture and tearing.

Performance level rating		1	2	3	4	5
EN 388:2003 abcd	**a** Abrasion Resistance *(Cycles)*	100	500	2000	8000	–
	b Blade Cut Resistance *(Coupe Test/Index)*	1.2	2.5	5.0	10.0	20.0
	c Tear Resistance *(Newtons)*	10	25	50	75	–
	d Puncture Resistance *(Newtons)*	20	60	100	150	–

Expanded performance level rating according to EN 388:2016 (a–f)		A	B	C	D	E	F
EN 388:2016 abcdef	**e** EN ISO Cut Resistance *(Newtons)*	2	5	10	15	22	30
	f EN Impact Protection	PASS or FAIL					

Note: Level X can also be applied for a through e above, which means "not tested" or "not applicable"

EN 388:2016: main changes from the previous EN 388:2003 standard

1. ABRASION

New abrasion paper used in testing.

2. CUT

New procedure for Coupe Test which also determines if dulling occurs. If dulling occurs, the new EN ISO 13977 test method becomes the reference whilst the Coupe Test would only be indicative.

3. IMPACT

Test method for areas claiming impact protection. "P" for pass whilst no code will apply in case of fail.

EN ISO 374 – Chemical protection and/or protection against micro-organisms
This standard specifies the capability of gloves to protect the user against chemicals and/or micro-organisms.

Micro-organisms

Performance levels	1	2	3
EN 374:2003 **EN level ≥ 2** / EN ISO 374-5:2016 VIRUS **Old:** AQL (Acceptable Quality Level) for liquid penetration. A high index number is poor and a low index number is good. Gloves need to pass water and air leak test, and this test method remains unchanged as per the new EN ISO 374 standard. **New:** in addition to testing for protection from bacteria and fungi, each glove can be tested for its protection against viruses with a new viral penetration test.	4.0	1.5	0.65

Chemical protection

EN 374:2003 XYZ

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

A. Methanol
B. Acetone
C. Acetonitrile
D. Dichloromethane
E. Carbon disulphide
F. Toluene
G. Diethylamine
H. Tetrahydrofurane
I. Ethyl acetate
J. n-Heptane
K. Sodium hydroxide 40%
L. Sulphuric acid 96%

Additional chemicals
M. Nitric acid 65%
N. Acetic acid 99%
O. Ammonium hydroxide 25%
P. Hydrogen peroxide 30%
S. Hydrofluoric acid 40 %
T. Formaldehyde 37%

EN ISO 374-1:2016 Type C XYZ

New:
Type C At least Level 1 performance (more than 10 minutes) against at least one chemical on the list – cuffs are also tested.*

EN ISO 374-1:2016 Type B XYZ

Type B At least Level 2 performance (more than 30 minutes) against at least three chemicals on the list – cuffs are also tested.*

EN ISO 374-1:2016 Type A UVWXYZ

Type A At least Level 2 performance (more than 30 minutes) against at least six chemicals on the list – cuffs are also tested.*

Performance level	0	1	2	3	4	5	6
Minutes	< 10	10	30	60	120	240	> 480

The beaker icon (low chemical resistance/waterproof) has been eliminated.

* Only if the glove is >= 40 cm

MACHINERY & EQUIPMENT INDUSTRY PROCESSES

1. PRESS SHOP

Applications:
- Seizing structural and body parts
- Inspection
- Feed the press and remove spare parts from it

User needs:
- High abrasion resistance
- Medium to high cut protection
- Dry or oil grip


HyFlex® 11-937


HyFlex® 11-735


HyFlex® 11-927

2. BODY SHOP

Applications:
- Seizing structural and body parts
- Assembling big parts together by welding
- Riveting

User needs:
- Medium to high cut protection
- Dry or oil grip
- Medium to high dexterity


HyFlex® 11-435


HyFlex® 11-927


ActivArmr® 43-216

3. MACHINING

Applications:
- Seizing rough blocks and cylinders
- Assembling and mounting components
- Inspection in each circumstance

User needs:
- Medium to high cut resistance
- Dry or oil grip
- Oil repellence


HyFlex® 11-724


MICROGARD® 1600 PLUS

4. MOLDING

Applications:
- Seizing and finishing structual parts
- Inspection in each circumstance

User needs:
- High abrasion resistance
- High cut resistance
- Contact heat resistance (80 to 100°C)


ActivArmr® 80-813


HyFlex® 70-225*

5. PAINT SHOP

Applications:
- Body surface checking, marking and touching up
- Applying sealer on body
- Painting or cleaning tools or robots

User needs:
- Paint-compatible gloves
- Ability to feel surface for abrasion
- Chemical resistance (painting/ cleaning)


AlphaTec® 58-735


AlphaTec® 1800 COMFORT*


MICROFLEX® 93-260

6. FINAL ASSEMBLY

Applications:
- Seizing structural parts
- Adjusting systems and screwing using wrenches
- Fixing, clipping parts and wire harnesses

User needs:
- High abrasion
- Low to medium cut protection
- Medium range dry and oil grip


HyFlex® 11-518


HyFlex® 11-816


HyFlex® 11-840

7. LOGISTICS

Applications:
- Loading and unloading rough parts or boxes
- Cutting cardboard, picking parts and accessories
- Driving vehicles

User needs:
- Dry, wet or oily grip
- High dexterity
- Cold weather protection


HyFlex® 11-518


HyFlex® 11-840


ActivArmr® 97-012

8. MAINTENANCE

Applications:
- Mounting and dismantling
- Changing tools and dies
- Welding

User needs:
- Mechanical, chemical, thermal and electrical protection
- High dexterity and tactility


HyFlex® 11-840


E013Y Class 00 11" Yellow


HyFlex® 11-939


HyFlex® 11-816

*There will be a transitional period where there will be a mix of old and newly branded products in the market. Functionality and performance of the products will remain unchanged, the current products and the new ones have the same quality and same protection.

GET MORE PRODUCT INFORMATION ONLINE

Our websites provide you with easy access to our product search tools along with data/product sheets and certificates.

Hand and arm protection

http://industrialcatalogue.ansell.eu

Select the right glove or sleeve that best fits your industry and application.

Body protection

www.microgard.com

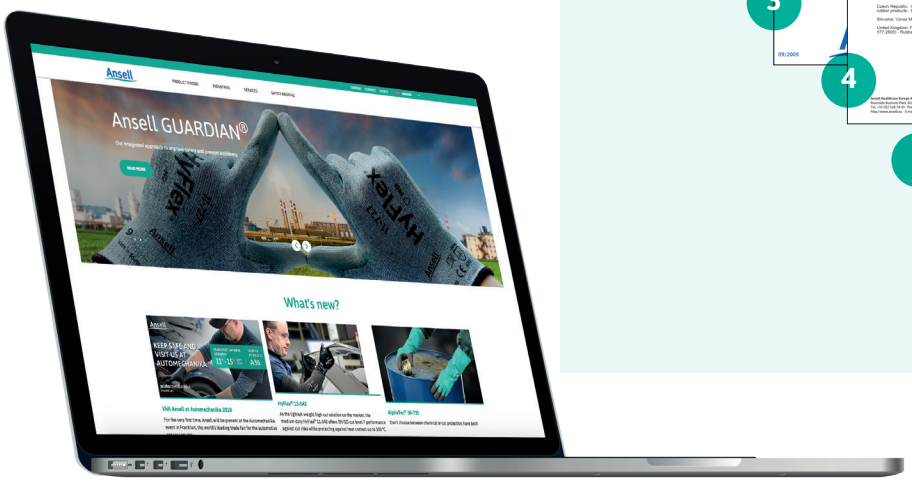
Find more information on our MICROGARD®, MICROCHEM® and AlphaTec® chemical protective clothing products.

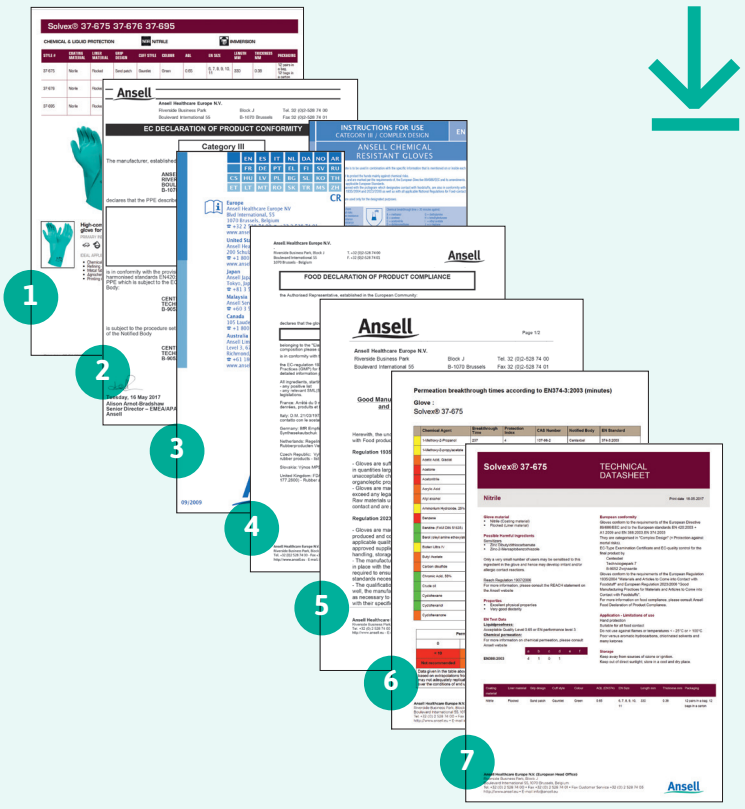
http://protective.ansell.com

Find more information on our VIKING™, TRELLCHEM®, TRETIGHT™, TRELLTENT™ and AlphaTec® products.

Your search options also include various downloadable data sheets:

1. Product sheets
2. EU declaration of conformity
3. Instructions for use
4. Food declarations of product conformity
5. GMP food declaration
6. Chemical recommendation guides
7. Technical data sheets





FOR FURTHER INFORMATION OR TO REQUEST A SAMPLE, CONTACT YOUR SALES REPRESENTATIVE.