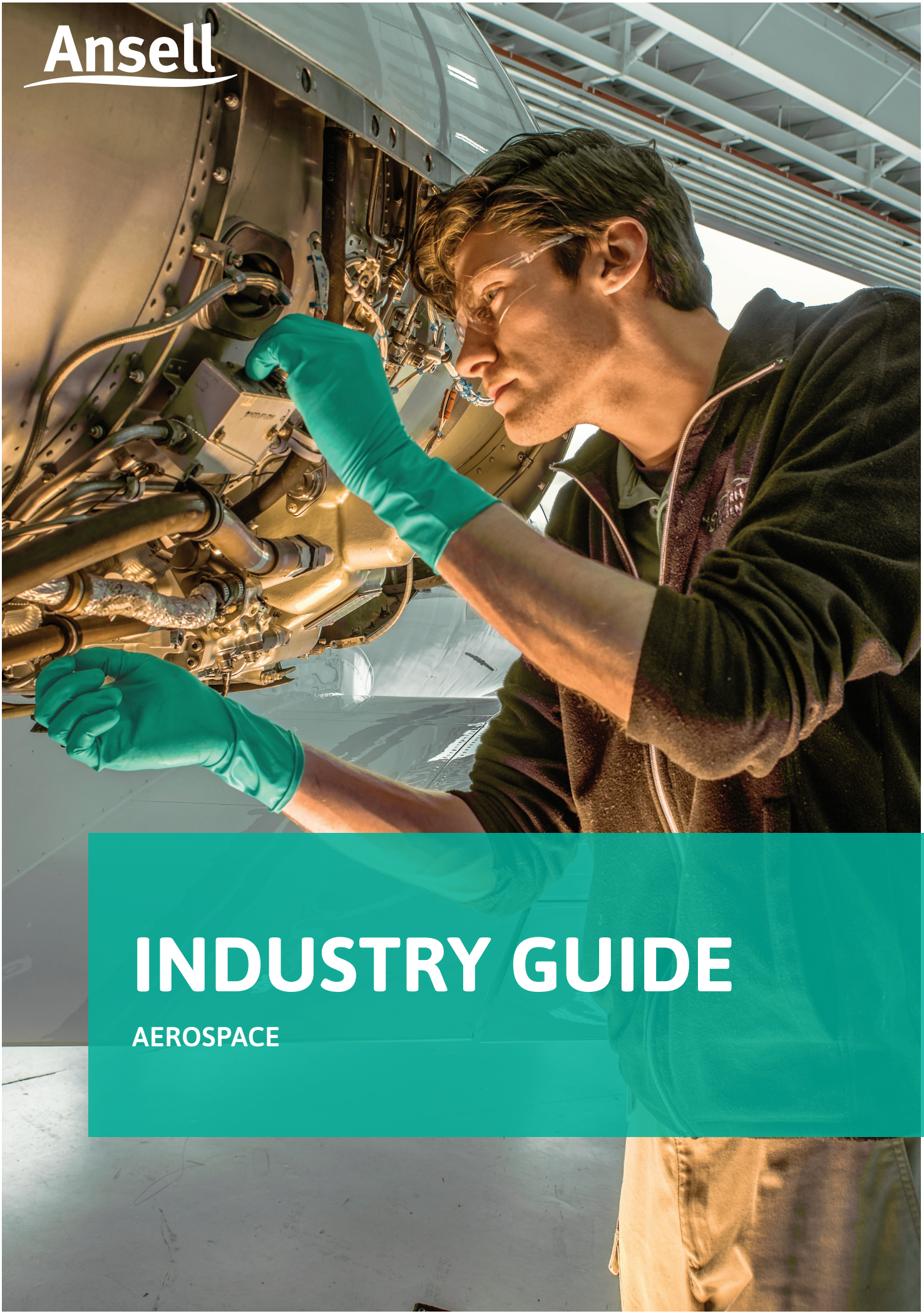


Ansell

INDUSTRY GUIDE

AEROSPACE

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

AEROSPACE INDUSTRY PROCESSES

1. PRESS SHOP

Applications:
- Feeding press machines
- Arranging parts after press
- Handling scrap parts

User needs:
- Dry grip
- Cut resistance
- Abrasion resistance


HyFlex® 11-542


HyFlex® 11-738


HyFlex® 11-735

2. BODY SHOP

Applications:
- Assembling structural parts using chemicals and glues/mounting smaller components
- Inspection

User needs:
- Dry grip
- Cut resistance
- Chemical resistance


HyFlex® 11-531


HyFlex® 11-724


AlphaTec® 58-270

3. MACHINING

Applications:
- Assembling, mounting, screwing and unscrewing components, often using hand tools
- Loading parts into the CNC machine

User needs:
- Light oil grip
- Abrasion resistance
- Vibration protection


ActivArmr® 07-112*


HyFlex® 11-537


HyFlex® 11-937

4. MOLDING

Applications:
- Clean forms
- Preform carbon fibre
- Inspection

User needs:
- Chemical resistance
- Dry and wet grip
- Cut resistance


TouchNTuff® 93-250


AlphaTec® 1800 COMFORT*

5. PAINT SHOP

Applications:
- Body surface checking
- Applying sealant and cleaning products
- Paint spraying

User needs:
- Chemical protection and anti-static
- Silicone- and lint-free
- Dexterity


MICROFLEX® 93-260


AlphaTec® 2000 STANDARD*

6. FINAL ASSEMBLY

Applications:
- Picking components
- Adjusting parts using tools
- Inspection

User needs:
- Cut resistance
- Abrasion resistance
- Dexterity


HyFlex® 11-518


HyFlex® 11-818


HyFlex® 11-931

7. LOGISTICS

Applications:
- Loading and unloading boxes
- Cutting cardboard etc.
- Handling equipment and tools

User needs:
- High abrasion resistance
- High cut protection
- Oil and dry grip


HyFlex® 11-931


HyFlex® 11-735


HyFlex® 11-840

8. MAINTENANCE

Applications:
- Mounting, dismantling
- Repairing equipment
- Cleaning machines

User needs:
- Multi-tasking
- Cut resistance
- Dry and oil grip


HyFlex® 11-537


HyFlex® 11-925


AlphaTec® 58-330

*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

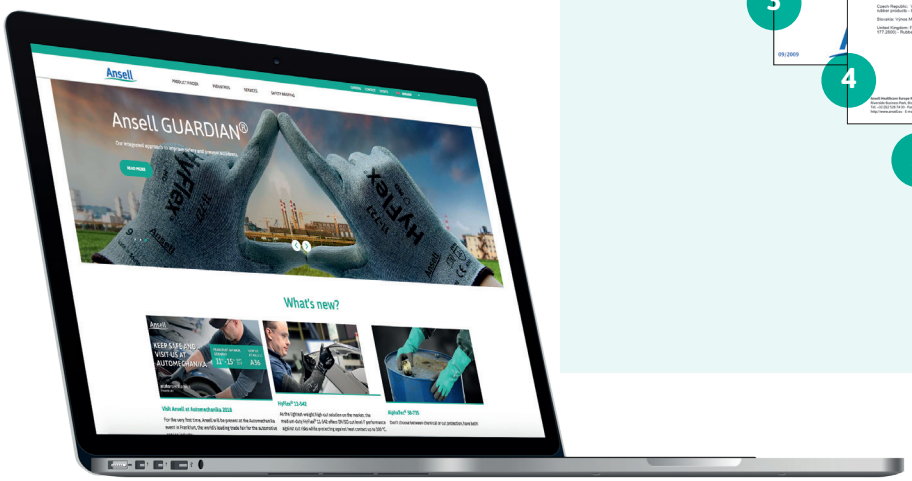
Find more information on our MICROGARD®, MICROCHEM® and AlphaTec® chemical protective clothing products.

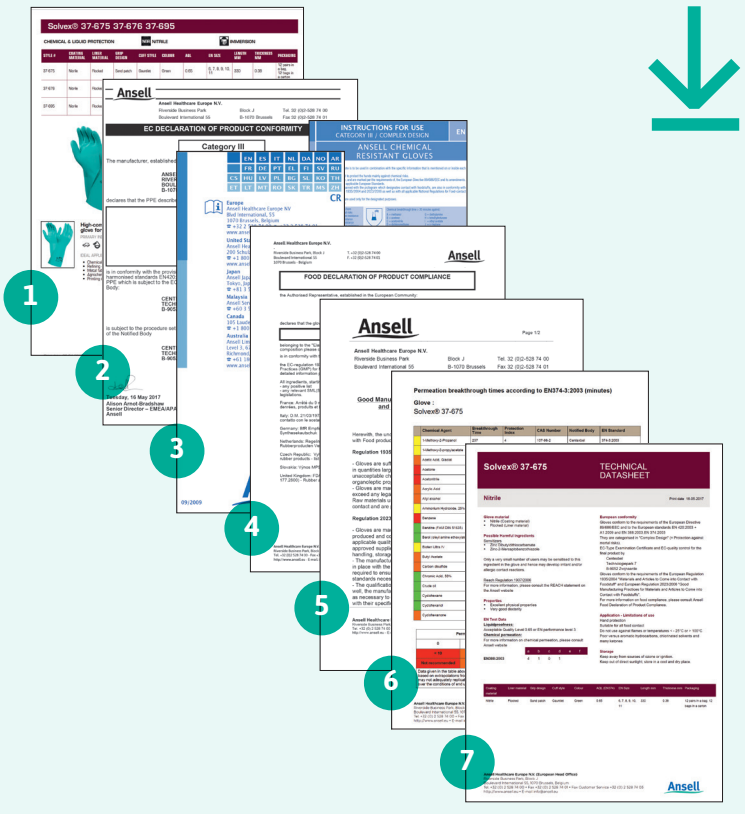
http://protective.ansell.com

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.