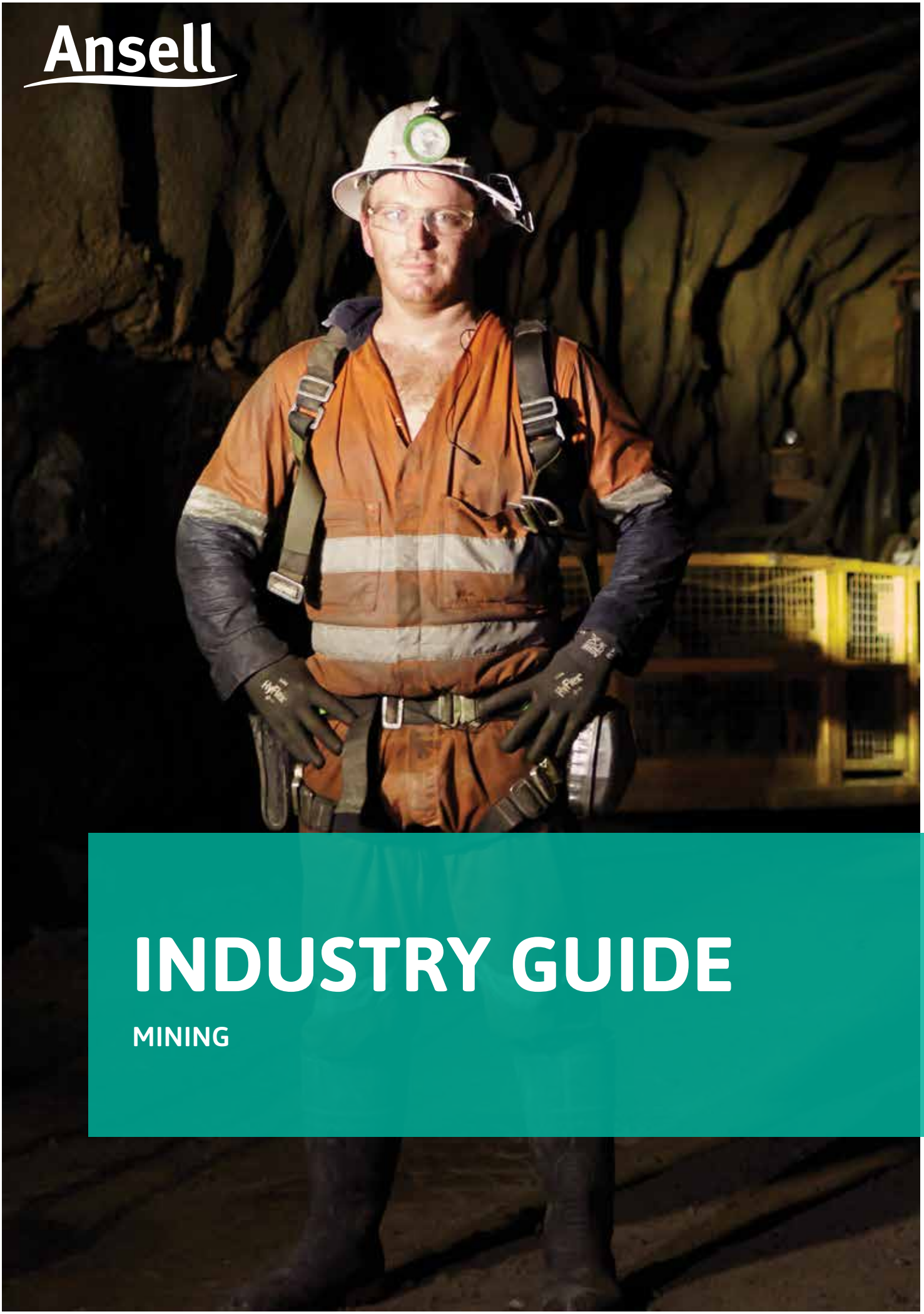


Ansell

INDUSTRY GUIDE

MINING

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%

EN ISO 374-1:2016 Type C / EN ISO 374-1:2016 Type B XYZ / EN ISO 374-1:2016 Type A UVWXYZ

New:

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

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

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

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%

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

MINING INDUSTRY PROCESSES

1. INFRASTRUCTURE CONSTRUCTION

Applications:
- Signalling/positioning
- Operating of heavy machinery
- Pipe handling

User needs:
- Abrasion resistance
- Dexterity
- Comfort
- Back-of-hand protection

HyFlex® 11-751

HyFlex® 11-840

HyFlex® 11-801

HyFlex® 11-651

Ringers 065

2. EXTRACTION & EXPLORATION

Applications:
- Drilling and blasting
- Hydraulic set and testing
- Loading and hauling

User needs:
- Dexterity and grip
- Comfort
- High visibility
- Crush protection

ActivArmr® 97-013

Ringers 065

Ringers 068

Ringers 161

3. CRUSHING

Applications:
- Crushing and unloading ore
- Primary grinding
- Inspection of primary product

User needs:
- Enhanced wet/oil grip
- Chemical resistance to splashes
- Comfort for hot environments
- Back-of-hand protection

HyFlex® 11-926

HyFlex® 11-937

TouchNTuff® 93-250

Ringers 297

Ringers 065

Ringers 267

4. WASHING & PREPARATION

Applications:
- Concentration, mixing and palletisation
- Use of binding agents
- Cleaning of equipment

User needs:
- Durability
- Cut resistance
- Improved chemical protection
- Back-of-hand protection

AlphaTec® 58-735

AlphaTec® 1500*

AlphaTec® 58-270

5. TRANSPORT & LOGISTICS

Applications:
- Hydraulic repair
- Product inspection
- Shipping and loading of product

User needs:
- Wet and oil grip
- Chemical splash resistance
- Cut protection
- Crush protection

HyFlex® 11-927

ActivArmr® 97-013

AlphaTec® 58-128

Ringers 065

Ringers 068

6. SERVICE/MAINTENANCE

Applications:
- Vehicle maintenance
- Conveyer and long wall maintenance
- Re-fuel oil, fluid and diesel

User needs:
- Cut resistance
- Durability
- Dexterity and tactility
- Crush protection

HyFlex® 11-840

HyFlex® 11-939

TouchNTuff® 93-250

Ringers 161

Ringers 163

7. RESCUE & EMERGENCY RESPONSE

Applications:
- Accidental chemical releases
- Rescue/extraction from confined spaces
- Basic first aid

User needs:
- Chemical protection
- Crush protection

AlphaTec® 1800 STANDARD*

MICROFLEX® 93-852

MICROCHEM® 6000

Ringers 068

*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

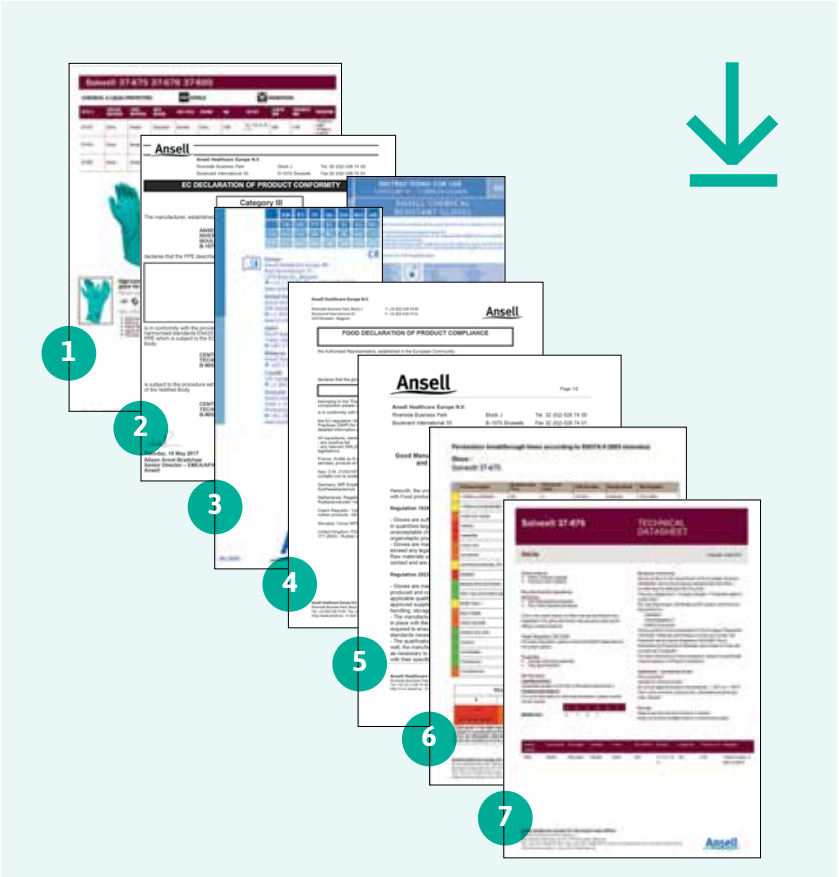
Find more information on our MICROGARD®, MICROCHEM® and AlphaTec® chemical protective clothing products.

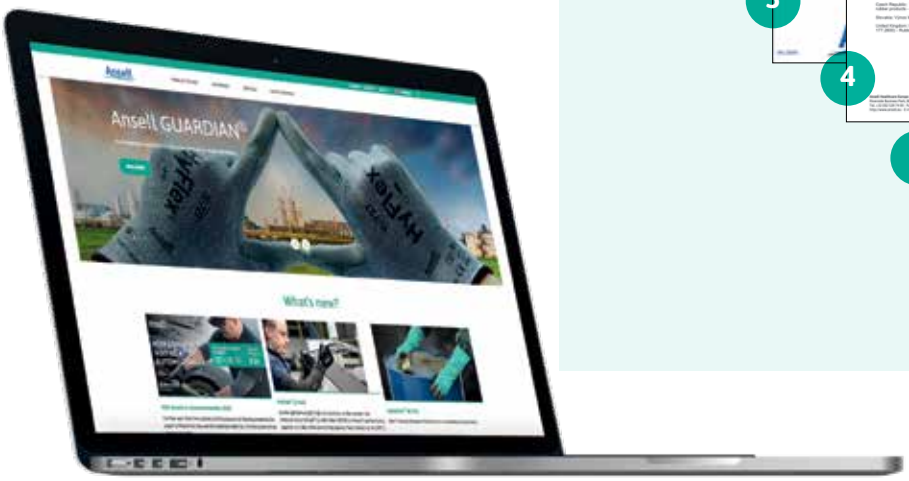
http://protective.ansell.com

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





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