

# Chemical Defence Guide Vol.3

WATSON  
GLOVES  
ICE MAN  
STEALTH  
CE  
EN 388:2016  
XS



# CHEMICAL RESISTANT



## 316 360° Total Coverage

Heavyweight nitrile, 15 mil thickness, *sure-grip* diamond pattern finish, cotton flock lining, 12" straight cuff  
P316 packaged for retail

Size 8-11

EN374-1:2016 - AJKLOT  
TYPE A



RATINGS I  
TECHNOLOGIES

EN374-5:2016 EN374-1:2016



AJKLOT



## 400 360° Total Coverage

Heavyweight rubber latex, 28 mil thickness, *sure-grip* diamond pattern finish, cotton flock lining, 12" straight cuff

Size 7-11

EN374-1:2016 - AKLNOT  
TYPE A



RATINGS I  
TECHNOLOGIES

EN374-1:2016



AKLNOT



## 500 360° Total Coverage

Heavyweight natural rubber latex, 28 mil thickness, *sure-grip* diamond pattern finish, cotton flock lining, 12" straight cuff

Size 7-11

EN374-1:2016 - AKLNOT  
TYPE A



RATINGS I  
TECHNOLOGIES

EN374-5:2016 EN374-1:2016



AJKLOT



## 455 Triple Shot

ANSI A3 nylon/glass liner, *hi-vis* yellow fully coated PVC with sandy finish, proprietary rubber on back of hand, treated with Actifresh®, 30cm gauntlet style cuff

Size L-XXL

EN374-1:2016 - KLT TYPE B  
EN388 4X32B  
ANSI Cut A3



RATINGS I  
TECHNOLOGIES

EN374-1:2016 ANSI EN388 ANSI



KLT TYPE B

PUNCTURE

4X32B

CUT



## 9341 Foamastic

Foam lining, double-dipped PVC coating, "Be safe, be seen" with *hi-vis* safety orange, treated with Actifresh®, 12" gauntlet style cuff

Size OS

EN374-1:2016 - MTPSAKL  
TYPE A  
EN388 4212



FOAMASTIC

RATINGS I  
TECHNOLOGIES

EN374-5:2016 EN511 EN374-1:2016 EN388



VIRUS

111

MTPSAKL TYPE A

4121X



## 9408 Stealth Iceman

Acrylic/wool lining, full dip flat PVC coating, knuckle dip black PVC coating, treated with Actifresh®, gauntlet style cuff

Size L-XL

EN374-1:2016 - MKLPT  
TYPE A



STEALTH

RATINGS I  
TECHNOLOGIES

ANSI EN374-3 EN511 EN388



PUNCTURE

KLMPPT

12X

4242

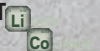


## 9456 Hammered

Acrylic lining, 13gg Aramid/steel/nylon cut resistant liner, "Be safe, be seen" with *hi-vis* orange PVC coating, sandy finish, heavy duty TPR on back of hand, 30cm gauntlet style cuff

Size M-XL

ANSI Cut A5 - F2992-15  
EN374-1:2016 - AKLOPT  
EN388 4X42EP



RATINGS I  
TECHNOLOGIES

ANSI/ISEA 138 EN388 EN374-3 EN511 EN407 ANSI



3X43EP

AKLOPT

X11

X1XXXX

CUT



## 5551PF Rival Monkey®

8 mil high risk nitrile disposable with superior chemical resistance to acids, alkalis, alcohol & fuel, extended 11" rolled cuff, 50 gloves per dispenser

Size S-XXL

EN374-1:2016 - JKOPST  
TYPE A  
EN388 2000X



Rival Monkey

RATINGS I  
TECHNOLOGIES



2000X

VIRUS

JKOPST -TYPE A

REACH COMPLIANCE



# CHEMICAL RESISTANT







**WG12 Dura Dip**  
 Double-dipped PVC, *sure-grip* textured finish, treated with Actifresh®, 12" gauntlet  
 Size OS  
**EN374-1:2016 - JKLMTPS TYPE A**

RATINGS |  
TECHNOLOGIES



EN374-5:2016



VIRUS

EN374-1:2016



JKLMTPS  
TYPE A

EN388



4121X





**WG14 Dura Dip**  
 Double-dipped PVC, *sure-grip* textured finish, treated with Actifresh®, 14" gauntlet  
 Size OS  
**EN374-1:2016 - JKLMTPS TYPE A**

RATINGS |  
TECHNOLOGIES



EN374-5:2016



VIRUS

EN374-1:2016



JKLMTPS  
TYPE A

EN388



4121X





**WG18 Dura Dip**  
 Double-dipped PVC, *sure-grip* textured finish, treated with Actifresh®, 18" gauntlet  
 Size OS  
**EN374-1:2016 - JKLMTPS TYPE A**

RATINGS |  
TECHNOLOGIES



EN374-5:2016



VIRUS

EN374-1:2016



JKLMTPS  
TYPE A

EN388



4121X



**CUT  
RESISTANT**



**IMPACT  
RESISTANT**



**CHEMICAL  
RESISTANT**



**WINTER**



**WATER  
RESISTANT**



**VIRUS  
RESISTANT**

**IMPACT, CUT  
& CHEMICAL**

#9456

FEATURES

- 13GG acrylic lining keep hands warm in cold conditions
- Aramid steel/ nylon liner is cut resistant (ANSI A5)
- Hi Vis orange fully coated PVC with sandy finish provides chemical protection
- Heavy duty rubber on back of hand, fingers and wrist provides impact protection






## CHEMICAL RESISTANT STANDARD

The ISO 374 Protective gloves against dangerous chemicals and micro-organisms have changed substantially and have now been published under the standard ISO EN374-1: 2016 and EN374-5: 2016. The changes are laid out below:

| NEW  | OLD   |
|--|---|
| EN ISO 374: 2016   | EN374: 2003   |
| 18 test chemicals  | 12 test chemicals   |
| Beaker icon is not used  | Beaker icon used to illustrate: "waterproof protective gloves with limited protection against chemical dangers" |
| Gloves are classified as type A, B or C  | ----  |
| Change of labeling on product: Three pictogram flasks with different number of letters for test chemicals underneath | Pictogram flask only had three chemicals  |
| Introduction of EN 374-4: 2013 for a test of glove performance against chemical degradation                          | ----  |
| Gloves longer than 400mm will require three test specimens from cuff area tested for permeation                      | ----  |
| Microorganisms split - virus is separately tested to En374-5:2016  | Microorganism protection based on penetration performance   |
| 3 defined AQL levels gloves must meet depending on application requirements of user                                  | AQL of level 2 for all gloves tested against penetration  |
| Requirement length removed   | Minimum liquid proof length of 25Cm required  |
| Requirement removed  | En388 mechanical testing required   |

## EN374-1:2016 PICTOGRAMS

As previously stated, the beaker icon is no longer used. Instead there are three flask pictograms as shown below.

| TYPE A   | TYPE B   | TYPE C   |
|--|--|--|
| EN 374-1:2016<br> | EN 374-1:2016<br> | EN 374-1:2016<br> |
| JKLMNO   | JKL  | J  |

**TYPE A:** Protective glove with permeation resistance of at least 30 minutes each for at least 6 test chemicals

**TYPE B:** Protective glove with permeation resistance of at least 30 minutes each for at least 3 test chemicals

**TYPE C:** Protective glove with permeation resistance of at least 10 minutes each for at least 1 test chemicals





## RESISTANCE TO PERMEATION

The number of test chemicals increased from 12 to 18 chemicals which are code lettered M-T as shown below.

| CODE LETTER | CHEMICAL               | CAS NUMBER | CATEGORY   |
|-------------|------------------------|------------|--|
| A           | Methanol               | 67-56-1    | Primary alcohol                                    |
| B           | Acetone                | 67-64-1    | Ketone   |
| C           | Acetonitrile           | 75-05-8    | Nitrile Compound                                   |
| D           | Dichloromethane        | 75-09-2    | Chlorinated Paraffin                               |
| E           | Carbon Disulfide       | 75-15-0    | Sulphur <small>Containing Organic Compound</small> |
| F           | Toluene                | 108-88-3   | Aromatic hydrocarbon                               |
| G           | Diethylamine           | 109-89-7   | Amine  |
| H           | Tetrahydrofuran        | 109-99-9   | Heterocyclic & Ethereal                            |
| I           | Ethyl Acetate          | 141-78-6   | Ester  |
| J           | n-Heptane              | 142-85-5   | Saturated hydrocarbon                              |
| K           | Sodium hydroxide 40%   | 1310-73-2  | Inorganic base                                     |
| L           | Sulfuric Acid 96%      | 7664-93-9  | Inorganic Mineral Acid                             |
| M           | Nitric Acid 65%        | 7697-37-2  | Inorganic Mineral Acid                             |
| N           | Acetic Acid 99%        | 64-19-7    | Organic Acid                                       |
| O           | Ammonium Hydroxide 25% | 1336-21-6  | Organic base                                       |
| P           | Hydrogen Peroxide 30%  | 7722-84-1  | Peroxide   |
| S           | Hydrofluoric Acid 40%  | 7664-39-3  | Inorganic Mineral Acid                             |
| T           | Formaldehyde 37%       | 50-00-0    | Aldehyde   |

## EN374-5:2016 PICTOGRAMS

The EN 374-5:2016 standard specifies performance requirements for gloves that protect users against micro-organisms (bacteria, fungi and/or viruses). Standards for micro-organisms risk was formerly under EN374-2 but now has been developed as a separate EN 374 part as EN374-5:2016. Gloves claiming protection against bacteria, fungi and viruses require additional penetration testing according to ISO 16604:2004 Determination of resistance to protective clothing materials to penetration by blood-borne pathogens. Test method uses Phi-X174 bacteriophage

| WITHOUT VIRUS PROTECTION  | WITH VIRUS PROTECTION   |
|---|---|
| <p>EN374-5:2016</p>  | <p>EN374-5:2016</p>  <p>VIRUS</p> |

The pictogram above is used for our gloves that protect against bacteria and fungi

The pictogram above is used for our gloves that protect against bacteria, fungi and viruses



# CHEMICAL RESISTANT CHART

| LEGEND   | LATEX   |   | PVC  | PVC   |
|--|---|---|--|---|
| NOT RECOMMENDED (LEVEL 0)                        | 400<br>360 TOTAL<br>COVERAGE  | 500<br>360 TOTAL<br>COVERAGE  | 9341<br>FOAMTASTIC   | WG12/WG14/<br>WG18  |
| SPLASH (LEVEL 1-2)                               |  |  |  |  |
| GOOD (LEVEL 3-4)                                 |   |   |  |   |
| EXCELLENT<br>(LEVEL 5-6)                         |   |   |  |   |
| EXACT BREAKTHROUGH<br>TIME UNKNOWN<br>(<30 MINS) |   |   |  |   |
| COATING  | LATEX   | LATEX   | PVC  | PVC   |
| THICKNESS (MIL)                                  | 28 MIL  | 28 MIL  |  |   |
| AQL  |   |   |  |   |
| EN374-2:2003<br>(PENETRATION)                    | PASS  | PASS  | PASS   | PASS  |
| EN374-1:2016<br>(PERMEATION)                     | AKLNOT  | AKLNOT  | MTPSAKL  | JKLMTPS   |
| PERFORMANCE LEVEL                                | 265443  | 265444  | 3665363  | 2655666   |
| METHANOL (A)                                     | 32 MINS   | >30 MINS  | >60 MINS   |   |
| ACETONE (B)                                      |   |   |  |   |
| ACETONITRILE (C)                                 |   |   |  |   |
| DICHLOROMETHANE (D)                              |   |   |  |   |
| CARBONE<br>DISULPHIDE (E)                        |   |   |  |   |
| TOLUENE (F)                                      |   |   |  |   |
| DIETHYLAMINE (G)                                 |   |   |  |   |
| TETRAHYDROFURANCE (H)                            |   |   |  |   |
| ETHYL ACETATE (I)                                |   |   |  |   |
| N-HEPTANE (J)                                    |   |   |  | >30 MINS  |
| SODIUM HYDROXIDE 40% (K)                         | >480 MINS   | >480 MINS   | >480 MINS  | >480 MINS   |
| SULPHURIC ACID 96% (L)                           | 319 MINS  | 356 MINS  | >60 MINS   | >240 MINS   |
| NITRIC ACID 65% (M)                              |   |   | >60 MINS   | >240 MINS   |
| ACETIC ACID 99% (N)                              | 159 MINS  | 217 MINS  |  |   |
| AMMONIUM HYDRO 30% (O)                           | 199 MINS  | 153 MINS  |  |   |
| HYDROGEN<br>PEROXIDE 30% (P)                     |   |   | >480 MINS  | >480 MINS   |
| HYDROFLURIC ACID 40% (S)                         |   |   | >240 MINS  | >480 MINS   |
| FORMALDEHYDE (T)                                 | 110 MINS  | 197 MINS  | >480 MINS  | >480 MINS   |

| BREAKTHROUGH TIME | PERFORMANCE LEVEL | BREAKTHROUGH TIME | PERFORMANCE LEVEL |
|-------------------|-------------------|-------------------|-------------------|
| >10 MINS          | LEVEL 1           | >120 MINS         | LEVEL 4           |
| >30 MINS          | LEVEL 2           | >240 MINS         | LEVEL 5           |
| >60 MINS          | LEVEL 3           | >480 MINS         | LEVEL 6           |



# CHEMICAL RESISTANT CHART



| LEGEND                                     | PVC   |   |  | NITRILE   | NITRILE   |
|--|---|---|--|---|---|
| NOT RECOMMENDED (LEVEL 0)                  | 455 TRIPLE SHOT   | 9408 ICEMAN   | 9457 HAMMERED  | 316 360 TOTAL COVERAGE  | 5551PF RIVAL MONKEY®  |
| SPLASH (LEVEL 1-2)                         |  |  |  |  |  |
| GOOD (LEVEL 3-4)                           |   |   |  |   |   |
| EXCELLENT (LEVEL 5-6)                      |   |   |  |   |   |
| EXACT BREAKTHROUGH TIME UNKNOWN (<30 MINS) |   |   |  |   |   |
| COATING                                    | PVC   | PVC   | PVC  | NITRILE   | NITRILE   |
| THICKNESS (MIL)                            |   |   |  | 15 MIL  | 8 MIL   |
| AQL  |   |   |  |   | 0.65  |
| EN374-2:2003 (PENETRATION)                 | PASS  | PASS  |  |   |   |
| EN374-1:2016 (PERMEATION)                  | KLT   | MKLPT   | AKLOPT   | AJKLOT  | JKOPST  |
| PERFORMANCE LEVEL                          | 636   | 36366   |  | 266356  | 662624  |
| METHANOL (A)                               |   |   | TBD  | 44 MINS   |   |
| ACETONE (B)                                |   |   |  |   |   |
| ACETONITRILE (C)                           |   |   |  |   |   |
| DICHLOROMETHANE (D)                        |   |   |  |   |   |
| CARBONE DISULPHIDE (E)                     |   |   |  |   |   |
| TOLUENE (F)                                |   |   |  |   |   |
| DIETHYLAMINE (G)                           |   |   |  |   |   |
| TETRAHYDROFURANCE (H)                      |   |   |  |   |   |
| ETHYL ACETATE (I)                          |   |   |  |   |   |
| N-HEPTANE (J)                              |   |   |  | >480 MINS   | >480 MINS   |
| SODIUM HYDROXIDE 40% (K)                   | >480 MINS   | >480 MINS   | TBD  | >480 MINS   | >480 MINS   |
| SULPHURIC ACID 96% (L)                     | 60 MINS   | >60 MINS  | TBD  | 85 MINS   | >14 MINS  |
| NITRIC ACID 65% (M)                        |   | >60 MINS  |  |   |   |
| ACETIC ACID 99% (N)                        |   |   |  |   |   |
| AMMONIUM HYDRO 30% (O)                     |   |   | TBD  | 390 MINS  | >39 MINS  |
| HYDROGEN PEROXIDE 30% (P)                  |   | >480 MINS   | TBD  |   | >480 MINS   |
| HYDROFLURIC ACID 40% (S)                   |   |   |  |   | 35 MINS   |
| FORMALDEHYDE (T)                           | >480 MINS   | >480 MINS   | TBD  | >480 MINS   | 223 MINS  |

WARNING AND DISCLAIMER. WATSON GLOVES HEREBY WARNS ALL POTENTIAL USERS OF ITS CHEMICAL RESISTANT PRODUCTS THAT THEY ARE NOT SUITABLE FOR ALL USES. THESE PRODUCTS HAVE BEEN TESTED IN LAB CONDITIONS ONLY.

NOTHING IN THE MATERIAL ACCOMPANYING THIS WARNING OR IN ANY OTHER STATEMENT MADE BY OR ON BEHALF OF WATSON GLOVES SHOULD BE CONSTRUED AS A WARRANTY OF THE MERCHANTABILITY OF ANY CHEMICAL RESISTANT WATSON GLOVES PRODUCT OR THAT ANY WATSON GLOVES PRODUCT IS FIT FOR A PARTICULAR PURPOSE. WATSON GLOVES DISCLAIMS ANY RESPONSIBILITY FOR THE SUITABILITY OR ADEQUACY OF ITS PRODUCTS FOR ANY SPECIFIC USE BY AN END USER.





## Our Story

### Watson in a Nutshell

With a century of experience, Watson Gloves is Canada's single source for hand protection at work, at home, at play. Our team of glove specialists gets tremendous satisfaction from working with our customers to find the perfect hand protection for just about any task imaginable. Whether we source our gloves from the world's finest manufacturers, or hand-craft them in our local factory, every pair of gloves we sell has been selected for top-of-the-line materials, design and craftsmanship. Try on a pair of Watson gloves. Your hands will thank you!

### 2 Man Show to International Operation

In April 1918, John Watson and Wayne Stanley started a small business selling hand-crafted gloves to Vancouver's dock workers. Today, 102 years later, Watson Gloves has grown across Canada. We are among the country's leaders of distributing hand protection; offering the widest range of quality gloves for work, home and play.

How did we get here? We have stayed true to our founders' belief that quality materials and above-and-beyond customer service go hand-in-glove. We still make gloves. In fact, our artisans – with an average 20 years' experience – put the same level of dedication and craftsmanship into every pair of gloves we make, as did our founders.

Perhaps more importantly, we have expanded our horizons to keep up with our customers' changing needs. Our talented buyers travel the world over in search of the most innovative materials and designs so that we can offer the best gloves for any task: at work, at home, at play. From bustling cities to remote corners of our country and countries across the Atlantic, our team of sales reps and efficient distribution system make it easy to protect the hands of our customers.

At Watson Gloves, we do one thing, and we do it extremely well: we are the glove experts. Mr. Watson and Mr. Stanley would be proud to know that, even as we continue to grow, we continue to earn our reputation as Canada's single source for hand protection.

### Our Commitment

At Watson Gloves, quality materials and above-and-beyond customer service go hand-in-glove. You can count on Watson for:

**Quality** Every pair of gloves we sell has been hand-selected for top-of-the-line materials, design, and craftsmanship.

**Service with a Smile** Our experienced team of specialists is committed to our customers' complete satisfaction with each and every pair of Watson gloves purchased.

**Innovation** We commit to staying one step ahead of our customers; anticipating their needs and bringing the most advanced gloves for just about any job imaginable.



Watson Gloves 1920's

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