

## Ultranitril 491

| Chemical Product                         | CAS #      | Breakthrough time (minutes) | Permeation level | Standard        | Degradation level | Rating |
|--|------------|-----------------------------|------------------|-----------------|-------------------|--------|
| 1,1,1-Trichloroethane 99%                | 71-55-6    | 45                          | 2                | EN 374-3:2003   | 1                 | -      |
| 2-Butoxyethanol (Butyl Cellusolve) 99%   | 111-76-2   | 236                         | 4                | EN 374-3:2003   | 3                 | ++     |
| 2-Nitropropane 99%                       | 79-46-9    | NT                          | NT               |                 | 1                 | NA     |
| 2-Propanol (Isopropanol) 99%             | 67-63-0    | 360                         | 5                | EN 374-3:2003   | 3                 | ++     |
| Acetic acid 99%                          | 64-19-7    | 47                          | 2                | EN 374-3:2003   | 1                 | -      |
| Acetone 99%                              | 67-64-1    | 3                           | 0                | EN 374-3:2003   | 1                 | -      |
| Ammonium hydroxide solution 25%          | 1336-21-6  | 132                         | 4                | EN 16523-1:2015 | 4                 | ++     |
| Bromine 100%                             | 7726-95-6  | 18                          | 1                | EN 374-3:2003   | NT                | NA     |
| Bromobenzene 99%                         | 108-86-1   | 9                           | 0                | EN 374-3:2003   | NT                | NA     |
| Butyl Acetate 99%                        | 123-86-4   | 25                          | 1                | EN 374-3:2003   | 1                 | -      |
| Carbon disulfide 99%                     | 75-15-0    | 3                           | 0                | EN 16523-1:2015 | NT                | NA     |
| Cyclohexane 99%                          | 110-82-7   | 480                         | 6                | EN 374-3:2003   | 4                 | ++     |
| Cyclohexanone 99%                        | 108-94-1   | 29                          | 1                | EN 374-3:2003   | 1                 | -      |
| Dichloromethane (Methylene Chloride) 99% | 75-09-2    | 1                           | 0                | EN 374-3:2003   | 1                 | -      |
| Diethylamine 98%                         | 109-89-7   | 17                          | 1                | EN 374-3:2003   | 1                 | -      |
| Dimethylformamide 99%                    | 68-12-2    | NT                          | NT               |                 | 1                 | NA     |
| Dimethylsulfoxide 99%                    | 67-68-5    | 47                          | 2                | EN 374-3:2003   | 1                 | -      |
| Ethanol 95%                              | 64-17-5    | 130                         | 4                | EN 374-3:2003   | 3                 | ++     |
| Ethylene glycol 99%                      | 107-21-1   | NT                          | NT               |                 | 4                 | NA     |
| Formaldehyde 37%                         | 50-00-0    | 480                         | 6                | EN 16523-1:2015 | 4                 | ++     |
| Fuel oils mixture                        | 68476-34-6 | 480                         | 6                | EN 374-3:2003   | 4                 | ++     |
| Hydrochloric acid 10%                    | 7647-01-0  | NT                          | NT               |                 | 4                 | NA     |
| Hydrochloric acid 35%                    | 7647-01-0  | NT                          | NT               |                 | 4                 | NA     |
| Hydrogen peroxide 30%                    | 7722-84-1  | 480                         | 6                | EN 16523-1:2015 | 3                 | ++     |
| Methanol 99%                             | 67-56-1    | 47                          | 2                | EN 16523-1:2015 | 1                 | -      |
| Methyl Ethyl Ketone (2-Butanone) 99%     | 78-93-3    | 5                           | 0                | EN 374-3:2003   | 1                 | -      |
| Methyl methacrylate 95%                  | 80-62-6    | 11                          | 1                | EN 374-3:2003   | 1                 | -      |

\*not normalized result

### Overall Chemical Protection Rating

Protection rating is determined by taking into account the effects of both permeation and degradation in an attempt to provide users with an overall protection guideline when using our glove products against specific chemicals.

- Used for **high chemical exposure** or chemical immersion, limited to breakthrough time based on a working day.
- Used for **repeated chemical contact**, limited to total chemical exposure i.e. : accumulative breakthrough time based on a working day.
- **Splash protection only**, on chemical exposure the gloves should be discarded and new gloves worn as soon as possible.
- **Not recommended**, these gloves are deemed unsuitable for work with this chemical.

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The chemical test data and overall chemical protection rating should not be used as the absolute basis for glove selection. Actual in-use conditions may vary glove performance from the controlled conditions of laboratory tests. Factors other than chemical contact time

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| Methylisobutylketone 99%                    | 108-10-1   | 15                          | 1                | EN 374-3:2003   | 1                 | -      |
| n-Heptane 99%                               | 142-82-5   | 480                         | 6                | EN 16523-1:2015 | 4                 | ++     |
| N-methyl-2-Pyrrolidone 99%                  | 872-50-4   | 35                          | 2                | EN 374-3:2003   | 1                 | -      |
| N-N dimethyl acetamide 99%                  | 127-19-5   | 10                          | 0                | EN 374-3:2003   | 1                 | -      |
| Naphtha, Hydrodesulphurized Heavy mixture   | 64742-82-1 | 480                         | 6                | EN 374-3:2003   | 4                 | ++     |
| Naphtha, Hydrotreated Heavy mixture         | 64742-48-9 | 480                         | 6                | EN 374-3:2003   | 4                 | ++     |
| Nitric acid 65%                             | 7697-37-2  | NT                          | NT               |                 | 0                 |        |
| Pentane isomers mixture                     | NA         | 480                         | 6                | EN 374-3:2003   | NT                |        |
| Phosphoric acid 75%                         | 7664-38-2  | 480                         | 6                | EN 374-3:2003   | 4                 | ++     |
| Sodium hydroxide 20%                        | 1310-73-2  | 480                         | 6                | EN 374-3:2003   | 4                 | ++     |
| Sodium hydroxide 40%                        | 1310-73-2  | 480                         | 6                | EN 16523-1:2015 | 4                 | ++     |
| Sodium hydroxide 50%                        | 1310-73-2  | 480                         | 6                | EN 374-3:2003   | 4                 | ++     |
| Styrene 99%                                 | 100-42-5   | 9                           | 0                | EN 374-3:2003   | 1                 | -      |
| Sulfuric acid 96%                           | 7664-93-9  | 80                          | 3                | EN 374-3:2003   | 1                 | -      |
| t-Butyl Methyl Ether 98%                    | 1634-04-4  | 240                         | 4                | EN 374-3:2003   | 3                 | ++     |
| Tetrachloroethylene (Perchloroethylene) 99% | 127-18-4   | 117                         | 3                | EN 374-3:2003   | 3                 | ++     |
| Tetrahydrofuran 99%                         | 109-99-9   | 4                           | 0                | EN 374-3:2003   | 1                 | -      |
| Toluene 99%                                 | 108-88-3   | 16                          | 1                | EN 374-3:2003   | 1                 | -      |
| Trichloroethylene 99%                       | 79-01-6    | 4                           | 0                | EN 374-3:2003   | 1                 | -      |
| Unleaded gasoline mixture                   | 8006-61-9  | 98                          | 3                | EN 374-3:2003   | 4                 | ++     |
| Vinyl acetate 99%                           | 108-05-4   | 9                           | 0                | EN 374-3:2003   | 1                 | -      |
| Xylene 99%                                  | 1330-20-7  | 33                          | 1                | EN 374-3:2003   | 1                 | -      |

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