

## ESPECIFICACIONES MATERIAL TRAJE PROTECCIÓN QUÍMICA BÁSICO

### Material properties

|                 |                          |
|-----------------|--------------------------|
| Material weight | 650 g/m <sup>2</sup>     |
| Colour          | Orange or Black/Graphite |

### Mechanical data

| EN 943-1/-2                                  | Test method        | Result          | Class |
|----------------------------------------------|--------------------|-----------------|-------|
| Abrasion                                     | EN 530             | > 2000 cycles   | 6     |
| Flex cracking                                | ISO 7854:B         | > 15 000 cycles | 4     |
| Flex cracking @-30 deg C                     | ISO 7854:B         | > 4000 cycles   | 6     |
| Tear resistance                              | EN ISO 9073-4      | > 40 N          | 3     |
| Tensile strength                             | EN ISO 13934-1     | > 1000 N        | 6     |
| Puncture resistance                          | EN 863             | > 50 N          | 3     |
| Resistance to flame                          | EN 13274-4, meth 3 | 5 Sec           | 3     |
| Seam strength                                | ISO 5082           | > 500 N         | 6     |
| Limited flame spread index                   | EN 14116           | No hole         | 3     |
| <b>NFPA 1991</b>                             |                    |                 |       |
| Tear resistance                              | ASTM D2582         | 75 N            | N.A.  |
| Burst strength                               | ASTM D751          | 1242 N          | N.A.  |
| Flamability resistance                       | ASTM F1358         | 0 sec/Pass      | N.A.  |
| Optional Overall Flash Fire ensemble test    | NFPA 1991          | Pass            | N.A.  |
| Optional Liquefied gas permeation resistance | NFPA 1991          | Pass            | N.A.  |

Test methods according to EN 943-1 and -2 and classes according to EN 14325. Except Limited flame spread, Antistatic properties and Blocking, which are voluntary tests. N.A. = not applicable.

### Chemical permeation data

| Chemical                | BT (min)           | Chemical                | BT (min)           |
|-------------------------|--------------------|-------------------------|--------------------|
| Acetic anhydride        | > 480              | Isoprene                | > 480              |
| *Acetone                | > 480 <sup>1</sup> | JP-4                    | > 480              |
| *Acetonitrile           | > 480 <sup>1</sup> | Lewisite (L)            | > 1440             |
| Acetyl chloride         | > 480              | *Methanol               | > 480 <sup>1</sup> |
| Acrylamide 40 %         | > 480              | *Methyl chloride        | > 480              |
| Acrylic acid            | > 480              | Methyl ethyl ketone     | > 480              |
| *Anhydrous ammonia      | > 480 <sup>1</sup> | Methyl isocyanate       | > 480              |
| Aniline                 | > 480              | Methyl metacrylate      | > 480              |
| Arsine (AS)             | > 480              | Methyl tert-butyl ether | > 480              |
| Benzene                 | > 480              | Monochlorobenzene       | > 480              |
| Bromine                 | > 240              | Mustard gas (HD)        | > 1440             |
| *1,3-Butadiene          | > 480              | Nitric acid 65 %        | > 480              |
| Butylamine              | > 480              | *Nitrobenzene           | > 480              |
| *Carbon disulphide 95 % | > 480              | Nitromethane            | > 480              |

|                            |                    |                                 |                    |
|----------------------------|--------------------|---------------------------------|--------------------|
| * <u>Chlorine</u>          | > 480 <sup>1</sup> | Oleum 30 %                      | > 240              |
| Chloroform                 | > 480              | Phenol 85 %                     | > 480              |
| Chlorosulfonic acid        | > 240              | Phosgene (CG)                   | > 480              |
| Cyanogen chloride (CK)     | > 60               | Phosphoric acid 85 %            | > 480              |
| * <u>Dichloromethane</u>   | > 480 <sup>1</sup> | Phosphorous trichloride         | > 480              |
| * <u>Diethyl amine</u>     | > 480 <sup>1</sup> | Pyridine                        | > 480              |
| Diethyl ether              | > 480              | Sarin (GB)                      | > 1440             |
| *Dimethyl formamide        | > 480              | * <u>Sodium hydroxide</u> 50 %  | > 480              |
| Dimethyl hydrazine 98 %    | > 480              | Soman (GD)                      | > 1440             |
| Dimethylsulfoxide          | > 480              | Styrene                         | > 480              |
| Epichlorohydrine           | > 480              | * <u>Sulphuric acid</u> 99 %    | > 480              |
| * <u>Ethyl acetate</u>     | > 480 <sup>1</sup> | Sulfur dioxide                  | > 480              |
| Ethylene glycol            | > 480              | Tabun (GA)                      | > 1440             |
| *Ethylene oxide            | > 480              | *Tetrachloroethylene            | > 480              |
| Formaldehyde 37 %          | > 480              | * <u>Tetrahydrofuran</u>        | > 480 <sup>1</sup> |
| Formic acid 96 %           | > 480              | * <u>Toluene</u>                | > 480 <sup>1</sup> |
| Furfural                   | > 480              | Toluene di-isocyanate (TDI) 96% | > 480              |
| <u>Heptane</u>             | > 480              | Tribromophenol                  | > 480              |
| *Hexane                    | > 480 <sup>1</sup> | Trichloroacetic acid            | > 480              |
| Hydrazine                  | > 480              | Trichloroethylene               | > 480              |
| Hydrochloric acid 37 %     | > 480              | Triethylamine                   | > 480              |
| Hydrofluoric acid 48 %     | > 480              | Triethylenetetramine            | > 480              |
| * <u>Hydrogen chloride</u> | > 480              | Vinyl acetate                   | > 480              |
| Hydrogen peroxide 50 %     | > 480              | Vinyl chloride                  | > 480              |
|                            |                    | VX                              | > 1440             |

**Comments:**

All permeation tests are performed in accordance with ASTM F739, breakthrough criterion 0,1 g/cm<sup>2</sup>/min and test duration 8 hours except chemical marked:

- (1) which are tested according to EN 374, breakthrough criterion 1 g/cm<sup>2</sup>/min, test duration 8 hours
- (2) which are tested in accordance with ASTM F739, breakthrough criterion 0,1 g/cm<sup>2</sup>/min, test duration 1 hour and the chemical warfare agents HD, L, GA, GB, GD and VX, which are tested according to FINABELConv. 0.7.C at 37 °C and test duration 24 hours

All chemicals are tested at 99 – 100 % concentration unless otherwise stated.

Chemicals marked \* are stipulated in NFPA 1991 and those underlined are stipulated in EN 943-2.

BT = breakthrough time