

## Pharmaflex

T4210 series

Braid Reinforced Silicone Delivery Hose



### Overview

A smoothbore, smooth cover, high purity platinum cured silicone hose. This hose has a high purity platinum cured extruded liner and is reinforced with one layer of an open mesh polyester braiding which increases pressure capabilities. Braid reinforced Pharmaflex is an extremely flexible, high purity hose designed specifically for positive pressure pharmaceutical applications.

This hose is produced in the most versatile and flexible FED STD 209E Class 10,000 Clean Room manufacturing facility in Europe, using procedures controlled by ISO9001:2008 standards. Clean Room conditions are continually monitored to ensure a Class 7 standard is maintained. The production facility used only produces Platinum Cured Silicone products ensuring there is NIL cross contamination.

These silicone hoses are packaged individually in double wrapped heat sealed polybags and then placed in a clean, white box ready for despatch.

### Key features

- Biopharmaceutical grade
- Manufactured in a Clean Room
- Good bend radius
- Excellent pressure rating
- Autoclavable and sterilisable
- Suitable for sterilisation with steam, argon and cobalt
- Tasteless, odourless and inert
- Phthalate free
- Platinum cured for highest degree of purity
- Translucent natural colour for visual contact with flow
- Kink resistant

### Standards, Accreditations & Registered compliances

- ISO 10993-6, ISO 10993-10, ISO 10993-11 biological evaluation of medical devices
- ISO 9001:2008
- EU ResAP 2004 (4), CE 1935/2004, Reg 10/2011/ ECC
- European Pharmacopoeia 3.1.9
- BfR hose material recommendation XV
- BGA Class XV
- FDA CFR 177.2600
- USP Class VI biological reactivity test, in vivo
- USP XXIV (87) biological reactivity, in vitro
- USP XXIV (88) biological reactivity, in vivo
- Meets and exceeds 3A sanitary approval
- GB/T 21928-2008

### Applications

Pharmaflex braid reinforced silicone hose is suitable for a variety of applications as it can resist temperature extremes, radiation, compression sets, weathering, chemical attack, corona and ozone as well as being odourless and tasteless.

### Options

- Colour coded labelling system
- A range of end connections all manufactured from 316L stainless steel including; Triclover, DIN, RJT, SMS, BSPT
- Can be electropolished to <math><0.625\mu\text{m Ra}</math> or <math><0.4\mu\text{m Ra}</math>
- Full 3:1.B material batch traceability

### Temperature range

-60°C to +180°C, Intermittent to +200°C

| Available sizes                                 | Colour      |
|---|-------------|
| 6mm, 8mm, 9.5mm, 13mm, 16mm, 19mm, 22mm, 25.4mm | Translucent |

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## T4210 - Pharmaflex Braid Reinforced Delivery Hose

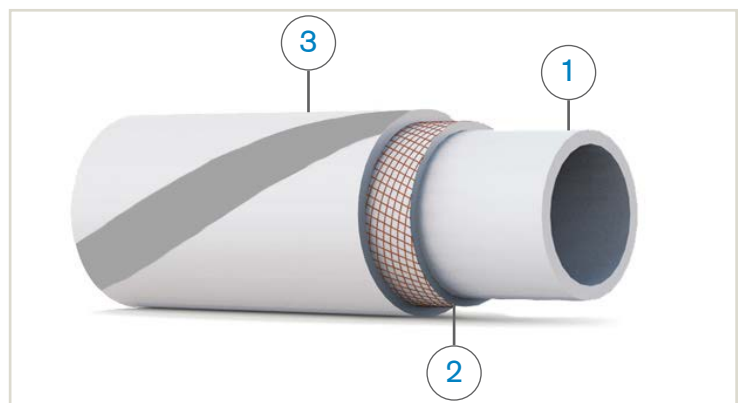
| Size  |  (mm) |  (mm) |  (mm) |  (mm) |  (bar) |  (bar) |  (g/m) | Product Code |
|-------|--|--|--|--|---|---|---|--------------|
| 1/4"  | 6.35   | 13.2   | 3.45   | 40   | 10  | 30  |   | T4210-06     |
| 5/16" | 7.93   | 15.0   | 3.55   | 45   | 10  | 30  |   | T4210-08     |
| 3/8"  | 9.52   | 16.6   | 3.55   | 55   | 9   | 27  |   | T4210-010    |
| 1/2"  | 12.70  | 20.3   | 3.80   | 70   | 8   | 24  |   | T4210-013    |
| 5/8"  | 15.87  | 24.5   | 4.30   | 85   | 6   | 18  |   | T4210-016    |
| 3/4"  | 19.05  | 27.9   | 4.55   | 95   | 5   | 15  |   | T4210-019    |
| 7/8"  | 22.22  | 31.3   | 4.55   | 110  | 5   | 15  |   | T4210-022    |
| 1"    | 25.40  | 34.5   | 4.55   | 135  | 4   | 12  |   | T4210-025    |

\*Safety factor of 3:1 ratio burst pressure to working pressure.

### Typical Physical Properties

| Typical properties of the Vulcanized Rubber: Test results on moulded slabs, Vulcanisation conditions: 10 min. 175°C post cured: 4h at 200°C in hot air |                  |                   | Pharmaflex Silicone Hose Test Results |
|--|------------------|-------------------|---------------------------------------|
| Density  | DIN 53 479 A     | g/cm <sup>3</sup> | 1.18                                  |
| Hardness   | DIN 53 505       | Shore A           | 65                                    |
| Tensile strength   | DIN 53 504 S2    | N/mm <sup>2</sup> | 11                                    |
| Elongation at break  | DIN 53 504 S2    | %                 | 630                                   |
| Tear strength  | ASTM D 624 die B | N/mm              | 42                                    |
| Comp. Set 22h at 175°C   | DIN 53 517       | %                 | 15                                    |

### Pharmaflex T4210 composition structure



1. Extruded platinum cured liner
2. Polyester braid reinforcement
3. Extruded platinum cured cover

#### Disclaimer

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