## Silicone hoses for pharmaceutical and biotechnology applications

# Sani-Tech® ULTRA-C / ULTRA-65 - *continued*

**ULTRA-C**

**d** - internal diameter; **D** - external diameter; **t** - wall thickness; **WP** - working pressure 20°C;
**BP** - burst pressure 20°C; **m** - unit weight; **L** - standard roll length;

| index | d [mm] | D [mm]. | t [mm]. | WP [bar]. | BP [bar]. | m [kg/m] | L [m] |
|---|---|---|---|---|---|---|---|
| **VE-ULTRA-C-750-1*** | 19,1 | 20,6 | 0,8 | 0,08 | 0,39 | 0,056 | 7,5; 15 |
| **VE-ULTRA-C-750-2*** | | 22,2 | 1,6 | 0,16 | 0,79 | 0,117 | 7,5; 15 |
| **VE-ULTRA-C-750-3*** | | 23,8 | 2,4 | 0,23 | 1,17 | 0,183 | 7,5; 15; 30 |
| VE-ULTRA-C-750-4 | | 25,4 | 3,2 | 0,30 | 1,52 | 0,253 | 7,5; 15; 30 |
| VE-ULTRA-C-750-5 | | 28,6 | 4,8 | 0,41 | 2,04 | 0,406 | 7,5; 15; 30 |
| VE-ULTRA-C-750-6 | | 31,8 | 6,4 | 0,54 | 2,69 | 0,577 | 7,5; 15 |
| **VE-ULTRA-C-875-1*** | 22,2 | 23,8 | 0,8 | 0,06 | 0,32 | 0,065 | 7,5 |
| VE-ULTRA-C-875-2 | | 25,4 | 1,6 | 0,13 | 0,67 | 0,135 | 7,5; 15 |

| index | d [mm] | D [mm]. | t [mm]. | WP [bar]. | BP [bar]. | m [kg/m] | L [m] |
|---|---|---|---|---|---|---|---|
| VE-ULTRA-C-875-4 | 22,2 | 28,6 | 3,2 | 0,26 | 1,32 | 0,289 | 7,5; 15 |
| VE-ULTRA-C-875-5 | | 31,8 | 4,8 | 0,38 | 1,90 | 0,460 | 7,5; 15 |
| VE-ULTRA-C-875-6 | | 34,9 | 6,4 | 0,48 | 2,40 | 0,650 | 7,5; 15 |
| **VE-ULTRA-C-1000-1*** | 25,4 | 27,0 | 0,8 | 0,06 | 0,28 | 0,075 | 7,5 |
| **VE-ULTRA-C-1000-2*** | | 28,6 | 1,6 | 0,12 | 0,59 | 0,154 | 7,5 |
| **VE-ULTRA-C-1000-3*** | | 30,2 | 2,4 | 0,18 | 0,88 | 0,237 | 7,5 |
| VE-ULTRA-C-1000-4 | | 31,8 | 3,2 | 0,23 | 1,17 | 0,325 | 7,5; 15 |
| VE-ULTRA-C-1000-5 | | 34,9 | 4,8 | 0,31 | 1,56 | 0,515 | 7,5; 15 |
| VE-ULTRA-C-1000-6 | | 38,1 | 6,4 | 0,43 | 2,16 | 0,722 | 7,5; 15 |

**Notes: * - minimum order quantities apply.**

**Metric sizes:**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| VE-ULTRA-CM-01-03 | 1 | 3 | 1 | 0,93 | 4,64 | 0,007 | 7,5; 15 |
| VE-ULTRA-CM-03-05 | 3 | 5 | 1 | 0,55 | 2,73 | 0,014 | 15; 30 |
| VE-ULTRA-CM-03-06 | | 6 | 1,5 | 0,70 | 3,48 | 0,024 | 15 |
| VE-ULTRA-CM-03-07 | | 7 | 2 | 0,80 | 4,00 | 0,036 | 15 |
| VE-ULTRA-CM-04-06 | 4 | 6 | 1 | 0,45 | 2,23 | 0,018 | 15; 30 |
| VE-ULTRA-CM-04-08 | | 8 | 2 | 0,70 | 3,48 | 0,043 | 15; 30 |
| VE-ULTRA-CM-04-10 | | 10 | 3 | 0,84 | 4,20 | 0,075 | 15 |
| VE-ULTRA-CM-05-08 | 5 | 8 | 1,5 | 0,51 | 2,54 | 0,035 | 15; 30 |
| VE-ULTRA-CM-05-10 | | 10 | 2,5 | 0,70 | 3,48 | 0,067 | 7,5; 15; 30 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| VE-ULTRA-CM-06-10 | 6 | 10 | 2 | 0,55 | 2,73 | 0,057 | 7,5; 15; 30 |
| VE-ULTRA-CM-08-12 | 8 | 12 | 2 | 0,45 | 2,23 | 0,072 | 15 |
| VE-ULTRA-CM-08-14 | | 14 | 3 | 0,59 | 2,94 | 0,118 | 7,5 |
| VE-ULTRA-CM-10-14 | 10 | 14 | 2 | 0,38 | 1,88 | 0,086 | 30 |
| VE-ULTRA-CM-10-15 | | 15 | 2,5 | 0,45 | 2,23 | 0,112 | 15; 30 |
| VE-ULTRA-CM-10-16 | | 16 | 3 | 0,51 | 2,54 | 0,140 | 15 |
| VE-ULTRA-CM-11-16 | 11 | 16 | 2,5 | 0,42 | 2,08 | 0,121 | 30 |
| VE-ULTRA-CM-12-16 | 12 | 16 | 2 | 0,32 | 1,62 | 0,100 | 15 |

**Notes: Metric sizes - minimum order quantities apply.**

### Sani-Tech hose® ULTRA-65:

The Sani-Tech® ULTRA-65 hose is a version of the Sani-Tech® ULTRA-C hose, made of harder silicone (65 Shore A), with a higher working pressure (from approximately 20 ÷ 100%). Available on special order, minimum quantities to order apply - contact Tubes International.

## *HOW TO CHOOSE - selecting a hose for biopharmaceutical applications:*

*The selection of a hose for biopharmaceutical applications should be guided by the physical properties of the material and the design of the hose, the chemical resistance, the applicability and service life of the peristaltic pump, the method of installation in the system (end fittings, connectors), the hygienic properties of the hose, the intended method of sterilisation, the use in single-use or closed-process systems.*
*Saint-Gobain Performance Plastics offers a wide range of different hoses for the biopharmaceutical industry. Despite their seemingly similar appearance, these hoses have different properties.* ***The table below can be helpful for an initial orientation.*** *All Saint-Gobain Performance Plastics hoses have high hygienic properties as described in the catalogue characteristics, however, when selecting for critical biotechnology applications, please refer to the manufacturer's Validation Guides - contact Tubes International for details.*

| | C-Flex® 374 C-Flex® 082 | C-Flex® 072 | STHT® -C (STHT® - 65) | ULTRA-C (ULTRA-65) | STHT® -R | PharmaPure® | PharMed® BPT | PharmaFluor® |
|---|---|---|---|---|---|---|---|---|
| material type | TPE | TPE | silicone | silicone | silicone / braid | TPE | TPE | FEP |
| hardness | 60 Shore A | 60 Shore A | 50 (65) Shore A | 50 (65) Shore A | 65 Shore A | 65 Shore A | 64 Shore A | 55 Shore D* |
| transparency | YES | NO | YES | YES | YES | NO | NO | YES |
| welding | YES | YES | NO | NO | NO | NO | NO | NO |
| service life in the peristaltic pump | + | ++ | + | ++ | - | +++ | +++ | - |
| minimum extractability | + | + | ++ | +++ | ++ | + | + | +++ |
| operating pressure> 6 bar | NO | NO | NO | NO | YES | NO | NO | YES |
| autoclaving | YES | YES | YES | YES | YES | YES | YES | YES |
| gamma sterilisation | YES | YES | YES | YES | YES | YES | YES | NO |
| max. temperature | 135°C | 135°C | 260°C | 260°C | 260°C | 135°C | 135°C | 204°C |
| temperature min. | - 45°C | - 45°C | - 62°C | - 62°C | - 62°C | - 40°C | - 40°C | - 73°C |
| chemical resistance | see table of chemical resistance of Saint-Gobain hoses - contact Tubes International | | | | | | | |
| vulcanisation of the ends (optional) | YES | YES | YES | YES | YES | YES | YES | NO |

NOTES: * - Shore D is a higher (harder) scale than Shore A; PharmaPure® and PharMed® BPT - see next section "Tygon hoses® ". PharmaFluor FEP - contact Tubes International.