

A pharma hose producer published several papers alleging general deficiencies of competitive products. To avoid confusion we state that the construction of our high quality technical rubber hose ELAPHARM (Type EPH) is in accordance with EN 16820 and incorporates the following advantages:

1. All materials of EPH hoses (PTFE lining, rubber compounds /rubber layers) are FDA /USP Class IV conform.

2. The smooth bore 1 mm thick PTFE lining (both conductive and non-conductive) guarantees the highest purity, chemical and temperature resistance.

3. The bonding between the PTFE lining and rubber is very strong and robust, without the use of any adhesives. The outer surface of the liner is activated by a residue-free etching in such a way that the rubber can safely imbed in the activated surface. This ensures a secure and permanent physical bonding between lining and rubber. The adhesion values between the different hose layers are significantly higher than those required by the EN standard.

4. The very durable bore construction of the PTFE-liner stays smooth during the permitted handling processes, (does not ripple when flexed), which, in return provides superior performance compared to alternative construction methods. The true smooth bore lining is also easy to clean and drain, resulting in time and cost savings during the cleaning process.

5. The hose is very flexible with an excellent flex life (more than 100.000 cycles without failure).

6. The FDA compliant hose cover is smooth (satin finish) and easy to clean.

7. The hose is vacuum stable and has a high kink resistance due to their stainless steel braids (up to DN 19) or stainless steel helix.

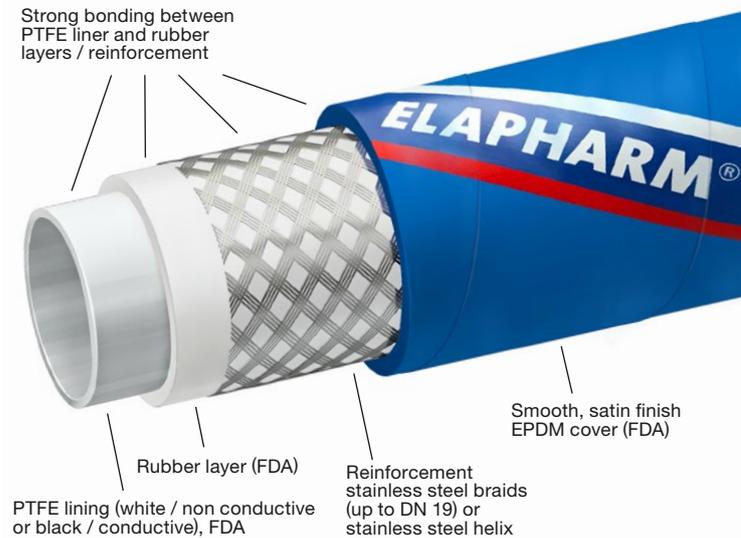
8. There is no risk of process fluid contamination: The FDA-conforming layers are permanently bonded to each other (no cavities), thus safely protecting against process fluid contamination, even if the PTFE liner has accidentally been damaged.

9. According to EN 16820 so-called 'Ω/T' or 'M/T' hoses should be used for flammable liquids or in Ex zones. ELAPHARM Ohm fulfils the requirement of the continuous conductivity through the hose wall without connecting couplings by metallic hose components. This construction avoids brush discharges and corresponding damages of the liner as well as any formation of sparks during coupling processes of interfaces with different electrostatic potentials.

10. The conductive PTFE-liner is produced with FDA compliant carbon black and completely resistant against leaching out, is proven by extensive tests.

11. The hose meets all EN 16820 requirements, including a flame (fire) resistance test to EN 12115.

Construction of an Elaflex ELAPHARM Hose (Example: Type EPH 19, non electrically conductive)



Type EPH hose assembly
(non electrically conductive)



Type EPH OHM G hose assembly
(electrically conductive)



Further technical details see Elaflex Information 3.13 E