

For road tanker fuel deliveries from the terminal to petrol stations, many operators use 'Cross-Over Prevention' systems (COP) which enable data communication between tanker and filling point. The main task of these systems is to prevent costly product mixup between fuel grades.

For unloading at the petrol station the data are being transmitted via the loading hoses.

Elaflex rubber hoses with embedded steel helix and a defined electrical resistance can be used for COP systems without any technical issue; see also Information 3.14 E.

For composite hoses the situation is different. EN 13765 conform hose assemblies have a high conductivity ($\leq 100 \Omega$) between the hose end fittings. For the above application (flammable liquids, zone 1 and 2) both inner and outer helix shall be connected with the fittings. If the outer helixes of different hose assemblies are in contact with each other or with electrically conductive substances like water (rain), COP systems may suffer an electrical short circuit and stop the loading process.

To overcome this common problem, various composite hose assembly manufacturers simply isolate the outer helix electrically. The resulting hoses do not comply to EN 13765 standard specifications and are potentially hazardous as they do not respect the requirements for electrostatic discharge.

Dantec, member of the Elaflex group and a leading manufacturer of composite hoses, developed the 'COPSAFE' system where the outer helix is controlled to have a defined electrical resistance of approximately 500 KOhm. The hose assemblies provide clear signals through the conductive inner helix.

Dantec's COPSAFE System

- enables composite hoses to transmit data from cross-over prevention systems
- complies to EN 13765 and the international electrostatic standard requirements
- is field proven and safe to operate
- is built to last over the total expected hose life expectancy
- can also be used for ASS / QSS systems (e.g. Germany)

Available sizes: 2", 2½", 3" and 4"

Part Number: VPH ... **COPSAFE**
for male fittings

MPH ... **COPSAFE**
for female fittings

Simplified diagram of a cross-over prevention system; unloading of road tankers at petrol station

