

GP - General Purpose Liner



Purpose

Corroline⁺ GP is the 'General Purpose' grade, for use in all applications where fluids or gases are being conveyed which do not generate a risk of static charge development (see 'AS').

Materials & Specifications

Corroline⁺ GP is a virgin PTFE liner, manufactured from hose grade PTFE which conforms to the requirements of:

FDA 21 CFR 177.1550.

The helical reinforcement in the convolutions in the liner is High Tensile Grade 316 SS wire. The helical reinforcing wires embedded in the rubber cover are carbon steel wires. The specially compounded, black EPDM rubber cover is antistatic in accordance with EN ISO 8031 Annex A and the stainless steel braid is grade 304 SS.

GP & AS grade approvals

The full list of approvals and certifications are given on page 26.



FIREPROOF

Corroline⁺ GP and AS grade hose is Fireproof to BS5173 Section 103.13 Part 6.2 and 6.3. When end fittings are assembled to the hose, the assembly is Fire Resistant, but can be made Fireproof by adding DBK-300 rubber cover end protection.

SPECIAL NOTE:

Electrical Continuity (Also known as 'Electrically Bonded')

Electrical continuity requires that the hose assembly supplied is electrically continuous, or conductive, between metal end fittings at each end of the hose. This can apply whether the hose is GP or AS grade.

The requirements for this are specified in the German Document BRG 132 and EN ISO 8031 Annex A, when tested in accordance with EN ISO 8031, which requires that the resistance between end fittings shall be $<10^2$ ohms per assembly. For hose assemblies which meet this requirement a Grade 'M' marking can be applied in accordance with EN ISO 8031 Annex A if requested.

Corroline⁺ Hose Assemblies are all electrically continuous with a resistance of less than 100 ohms.

AS - Anti-Static PTFE Liner



Purpose

Corroline⁺ AS is an essential requirement in applications where there is the risk of an electrostatic charge build-up on the inside surface of the PTFE tube which may then discharge through the tube wall. Media passing through which create such a risk are fluids which have a Conductance of less than 10^{-8} S/m (Siemens per Metre), or 10^4 pS/m such as fuels, solvents, freons, some WFI (ultra-pure 'Water for Injection') and non-polar organics which are being transferred at a medium to high flow velocity.

All twin or multi phase media, and any non-mixing media, such as powder in air, or water droplets in steam, in gases or in oil, also colloidal fluids constitute a particular hazard for static charge generation, and always require grade AS.

If in doubt, consult Aflex Hose.

Materials & Specifications

Corroline⁺ AS is an anti-static PTFE liner manufactured from FDA 21 CFR 177.1550 approved PTFE, and less than 2.5% of 'high purity' Carbon Black material to FDA requirement 21 CFR 178.3297 and European Commission Directive 2007/19/EC. The carbon is encapsulated by the PTFE, and in normal, non-abrasive applications will not come loose to contaminate any fluid passing through. This has been proved during Leachables and Extractables testing.

Antistatic Hose Assemblies

When 'AS' (Antistatic) grade hose is specified, then the hose or hose assembly supplied will be tested in accordance with EN ISO 8031 and meet the Antistatic requirements of EN ISO 8031 Annex A. This requires, for an antistatic liner or antistatic cover, that the resistance between an appropriately placed foam electrode and a metallic end fitting will be between 10^3 to 10^8 ohms per assembly. For hose assemblies which meet these requirements an appropriate Grade 'Ω' marking can be applied in accordance with EN ISO 8031 Annex A if requested.

NOTE: When in service, at least one end fitting must be connected to earth, to permit dissipation of the static charge from the end fitting.