

VESTAMID®

The polyamide of choice in multilayer tubing



VESTAMID®

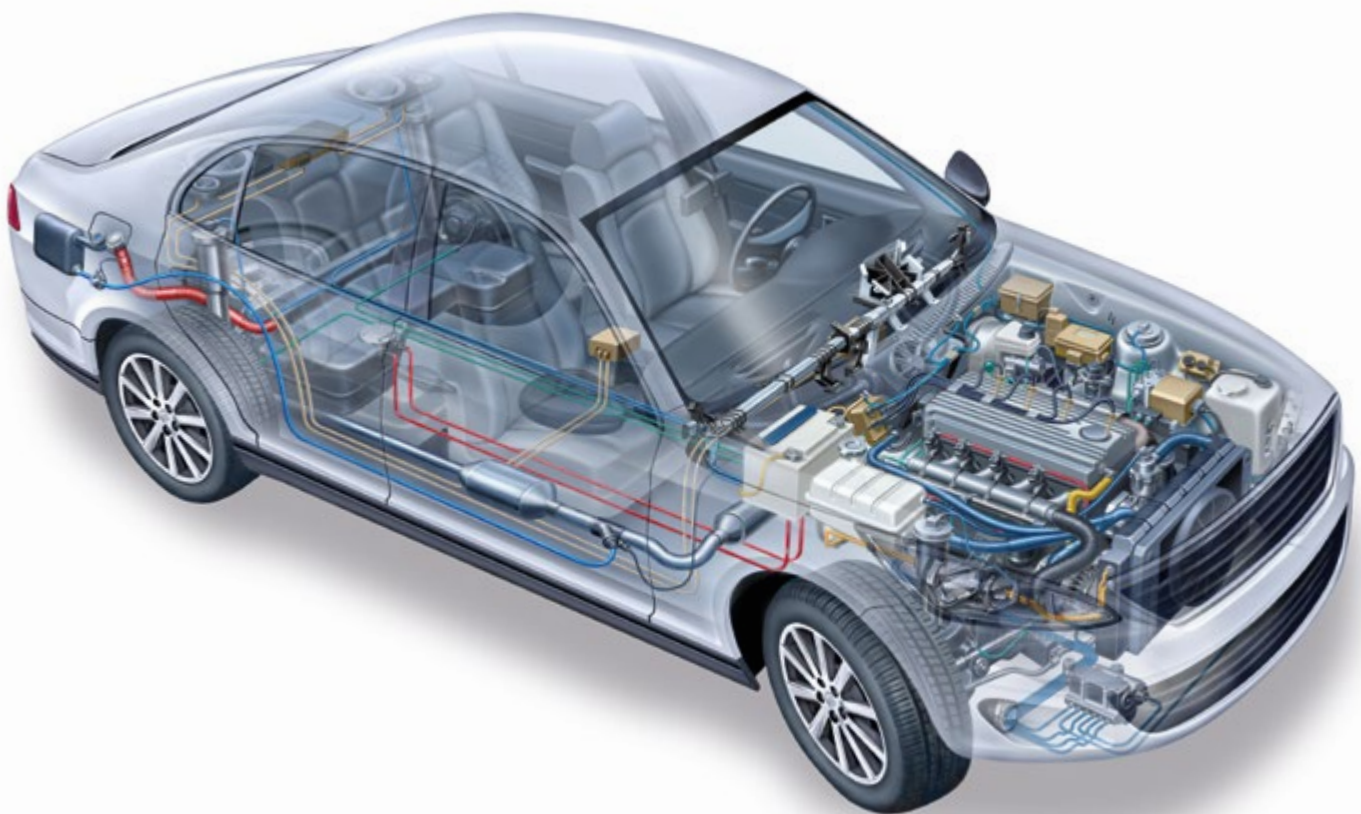
Pioneering multilayer technology for over 25 years

For more than 25 years, Evonik has been developing multilayer tubing (MLT), with a special focus on tubing systems for the automotive industry. This flyer deals with MLT for fuel and cooling line systems.

As the market leader in polyamides for fuel lines, Evonik's High Performance Polymers Business Line has developed a series of patented MLT systems based on VESTAMID® and various barrier layers.

These are made of:

- polyvinylidene fluoride (PVDF) – **DYFLOR®**
- ethylene perfluoroethylene propene copolymer (EFEP) – **NEOFLON™**
- polybutylene terephthalate (PBT) – **VESTODUR®**
- ethylene vinyl alcohol (EVOH) – **EVAL™**



Multilayer tubing for fuel lines

MLT without barrier layer

MLT 140

Conductive MLT for applications requiring performance of PA 12 monowall tubes



- VESTAMID® (PA 12)
- VESTAMID® (PA 12, conductive)

MLT 1000 with PBT barrier layer

MLT 1000

MLT with improved permeation resistance against alcohol-containing fuels, good cold impact performance, but limited chemical resistance, extraction close to zero



- VESTAMID® (PA 12)
- VESTODUR® (PBT adhesive)
- VESTODUR® (PBT)

MLT 2000 with PVDF barrier layer

MLT 2030

MLT with very good permeation resistance against alcohol-containing fuels and excellent cold impact performance



- VESTAMID® (PA 12)
- DYFLOR® (PVDF, modified)
- VESTAMID® (PA 12)

MLT 2040

Conductive MLT with very good permeation resistance against alcohol-containing fuels and excellent cold impact performance

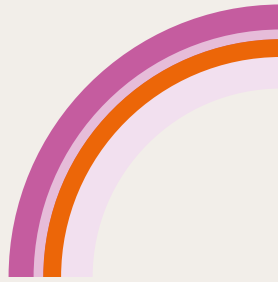


- VESTAMID® (PA 12)
- DYFLOR® (PVDF, modified)
- VESTAMID® (PA 12)
- VESTAMID® (PA 12, conductive)

MLT 4000 series with EVOH barrier layer

MLT 4300

MLT with very good permeation resistance against ethanol-containing fuels, good cold impact performance, but limited chemical resistance



- VESTAMID® (PA 12)
- VESTAMID® (PA adhesive)
- EVOH
- VESTAMID® (PA 6)

MLT 4500

MLT with very good permeation resistance against ethanol-containing fuels and excellent cold impact performance



- VESTAMID® (PA 12)
- VESTAMID® (PA adhesive)
- EVOH
- VESTAMID® (PA adhesive)
- VESTAMID® (PA 12)

MLT 4540

Conductive MLT with very good permeation resistance against ethanol-containing fuels and excellent cold impact performance



- VESTAMID® (PA 12)
- VESTAMID® (PA adhesive)
- EVOH
- VESTAMID® (PA adhesive)
- VESTAMID® (PA 12, conductive)

MLT 4800

Low-extractable MLT with very good permeation resistance against ethanol-containing fuels and excellent cold impact performance; significantly reduced extraction



- VESTAMID® (PA 12)
- VESTAMID® (PA adhesive)
- EVOH
- VESTAMID® (PA adhesive, low extract)
- VESTAMID® (PA 612, low extract)

MLT 7000 series with EFEP barrier layer

MLT 7000

MLT with very good permeation resistance against alcohol-containing fuels and superior chemical resistance, extraction close to zero

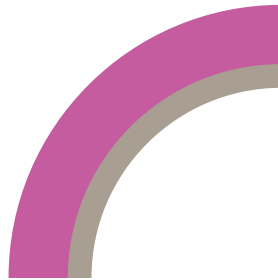


■ VESTAMID® (PA 12)

■ NEOFLON® (EFEP)

MLT 7040

Conductive MLT with very good permeation resistance against alcohol-containing fuels and superior chemical resistance of inner tube surface, extraction close to zero. Also applicable for aggressive bio-diesel fuels

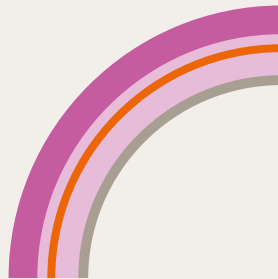


■ VESTAMID® (PA 12)

■ NEOFLON® (EFEP, conductive)

MLT 7440

Low-extractable, conductive MLT featuring two barrier layers with very good permeation resistance against alcohol-containing fuels and superior chemical resistance of inner tube surface; extraction close to zero



■ VESTAMID® (PA 12)

■ VESTAMID® (PA adhesive)

■ EVOH

■ VESTAMID® (PA adhesive)

■ NEOFLON® (EFEP, conductive)

Multilayer tubing for cooling lines

MLT 8000

MLT 8000

High resistant MLT against coolant liquids and urea solutions



■ VESTAMID® (PA 12)

■ Polypropylen (PP adhesive)

■ Polypropylen (PP)

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