VESTAMID®
The polyamide of choice in multilayer tubing

VESTAMID®

Evonik. Power to create.
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**
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

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
<th>Components</th>
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<tbody>
<tr>
<td><strong>MLT 4300</strong></td>
<td>MLT with very good permeation resistance against ethanol-containing fuels, good cold impact performance, but limited chemical resistance</td>
<td>VESTAMID® (PA 12), VESTAMID® (PA adhesive), EVOH, VESTAMID® (PA 6)</td>
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<tr>
<td><strong>MLT 4500</strong></td>
<td>MLT with very good permeation resistance against ethanol-containing fuels and excellent cold impact performance</td>
<td>VESTAMID® (PA 12), VESTAMID® (PA adhesive), EVOH, VESTAMID® (PA adhesive, PA 12)</td>
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<tr>
<td><strong>MLT 4540</strong></td>
<td>Conductive MLT with very good permeation resistance against ethanol-containing fuels and excellent cold impact performance</td>
<td>VESTAMID® (PA 12), VESTAMID® (PA adhesive), EVOH, VESTAMID® (PA adhesive, PA 12, conductive)</td>
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<tr>
<td><strong>MLT 4800</strong></td>
<td>Low-extractable MLT with very good permeation resistance against ethanol-containing fuels and excellent cold impact performance; significantly reduced extraction</td>
<td>VESTAMID® (PA 12), VESTAMID® (PA adhesive), EVOH, VESTAMID® (PA adhesive, low extract), VESTAMID® (PA 612, low extract)</td>
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</table>
**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)

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**Multilayer tubing for cooling lines**

**MLT 8000**
High resistant MLT against coolant liquids and urea solutions.

- VESTAMID® (PA 12)
- Polypropylene (PP adhesive)
- Polypropylene (PP)
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