

Vacuum Brake Tubes

OEM/Vehicle

**General Motors Co.
2016 Chevrolet Silverado & GMC
Sierra**

System Supplier

Cooper Standard

Material Processor

Cooper Standard

Material Supplier

DSM Engineering Plastics

Resin

Arnitel CM622 TPC-ET



A high-performance thermoplastic was needed for vacuum brake tubing to replace reinforced rubber. It needed broad temperature performance (-40-150C), chemical resistance, burst strength to 60 bar min. and flexural strength to 50 N min. It also had to resist vacuum collapse after 2 hr @ 150C and provide impact retention after 336 hr @ 150C. The design was changed to use a smaller diameter, thinner wall to simplify engine/undercarriage routing and eliminate heat shields plus allow quick connects. A TPC-ET elastomer with high thermal oxidative stability was developed. It is 30% lighter, less costly, and eliminates brackets.