

There are various concerns today regarding the suitability of silicone hoses for use with OAT coolants such as: BASF Glysantin G30, BASF G48, Calfrast and Cummins AS Complete.

The issues are whether or not erosion and deterioration of the silicone hose is caused due to the use of such coolants and other OAT additives.

Two primary issues affect the behaviour and life of a silicone hose under such service conditions:

1. The quality of the silicone used.

In fact, the silicone itself is not significantly affected by OAT coolants. However, if poor quality, highly filled material is used to manufacture the hoses, then more rapid diffusion of the harmful vapours can occur through the hose.

2. The type and quality of the fabric used in the reinforcement.

The greatest effect of OAT coolant on a silicone hose is on the fabric used in the hose reinforcement. Traditional, blue coolant hose uses knitted polyester reinforcement. Two problems occur with this material firstly, the fabric is slowly degraded by the OAT vapours, diffusing through the hose. Secondly, knitted polyester allows greater dilation of the hose under pressure.

Therefore, as the first (inner layer) of fabric degrades, the remaining plies (usually only another 2 in standard coolant hose) dilate quite significantly, combined with a 1mm tube liner.

This increased flexing of the hose often results in early failure.

OAT Resistant Hoses

The issue can be approached in 2 ways. One solution is to include a Fluorosilicone liner in the hose. This is effective and prevents diffusion of the OAT vapours however; this makes the hose extremely expensive in relation to the equivalent unlined hose, also as these tend to have a very thin tube liner (typically 0.5mm) they are susceptible to damage whilst fitting which renders the hose ineffective against the OAT additives.

The second way, and the route preferred by Partline, is to use the highest quality silicone, reinforced with coated OAT resistant WOVEN fabrics.

Partline in conjunction with the manufacturer Leyland Hose and Silicone (LHSS) have addressed the above issues, and developed a specific long-life OAT resistant range of hoses (P.O.S.H. – Partline Organic Silicone Hose)



This moves away from the traditional coolant hose construction, all of our POSH range combines added security by providing a minimum of 4 plies, combined with a 2mm tube liner and the woven fabric (Meta-Aramid) also reduces the amount of dilation in the hose and hence, reduces the tendency for flex cracking.

We are so confident in this product – we offer a 5 year warranty.

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