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## OAT COOLANT RESISTANT SILICONE HOSE



V2

Oem Specialist Manufacturers Of Silicone Hoses

IATF 16949 Approved

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# Organic Acid Technology (OAT) Coolants and Silicone Hose

Ethylene Glycol coolants usually contain compounds such as amines, phosphates, nitrites, borates and or silicates. The mixture is far less environmentally friendly than a typical pure OAT coolant mix which usually contains none of the above. Hybrid (HOAT) coolants are generally moderately 'silicated' for improved aluminium protection.

Ethylene glycol coolants offer rapid protection of cooling system components. However, the inhibitors deplete rapidly meaning that frequent changes of coolant are needed to maintain effectiveness. Typical coolant life can be 30 – 50,000 miles. Pure OAT coolants take longer to protect the metallic components in the system however, once the protective layer is laid down, the inhibitors deplete only very slowly. Coolant life is typically between 150 – 300,000 miles. The initial cost of OAT coolants is also generally, lower than that of traditional coolant. Cost savings can therefore be significant.

Developed in 2010, Leyland Hose and Silicone OAT grade coolant hose, has been extensively tested and proven, in the most extreme environments. Our premium quality, silicone OAT grade coolant hose, has been specifically developed to operate under Euro 6 service conditions.

One of the main challenges, was to develop a hose which, would perform with all types of modern engine coolants, at higher pressures and temperatures than previously experienced service conditions.

Our OAT grade hoses, are tested on a regular and long term basis, in our bespoke test facility. Recreating service conditions of high temperature and pulsated pressure from 0 to 4bar gauge, hoses are tested for compatibility with all available coolants. See LHSS coolant compatibility chart.

LHSS also carry out raw material testing, fabric tests and burst testing of hoses from production samples. We are constantly testing materials, fabrics and coolants to improve our OAT grade hoses, ensuring maximum performance now and under future, ever more testing conditions.

Leyland Hose & Silicone OAT grade hose, is now widely used and trusted by OEM vehicle manufacturers and fleet operators, all over the World.

Designed to operate at temperatures between – 50C and 200C, LHSS OAT coolant resistant, silicone hose, exceeds the requirements of SAE J20 R1 Class A

#### **Construction:**

4 or 5 ply hose (89mm ID and above), constructed with a 2mm liner and 4 plies of high quality fabric reinforcement. Colour options to suit customer requirements.





# Silicone Coolant Hose

## OAT Resistant

Silicone out performs conventional, organic hose materials, maintaining performance and flexibility over a wide temperature range, giving longer life and optimum reliability.

Hand built and available in a range of sizes, our silicone coolant hose resists hardening, cold leakage, high and low temperatures, varying pressures and is manufactured to resist OAT coolants and additives.

Meets or exceeds the requirements of SAE J20 R1 Class A.

Our standard, green silicone hose (OSH) stock includes:

### Straight hose

6mm - 152mm ID in 1m, 2m or 3m lengths.

### 90 Degree elbows

6mm - 152mm ID with 102mm, 152mm or 250mm leg lengths.

### 45 Degree elbows

6mm - 152mm ID with 102mm or 152mm leg lengths.

### 90 Degree reducing elbows

with 102mm or 152mm leg lengths.

### 135 Degree elbows

6mm - 76mm ID with 102mm or 152mm leg lengths.

### 'U' BEND hoses

6mm - 76mm ID with 102mm or 152mm leg lengths.

### Straight reducers

Wide range of sizes available

### Summary

LHSS – OAT Grade silicone hose offers an option between EPDM, Blue Silicone Coolant Hose and Fluoro-silicone Hose, both from cost and performance aspect.

The construction of the OAT hose eliminates some of the potential failure points of a fluoro-lined and 'standard' blue silicone hose while out-performing EPDM hose.

Leyland Hose & Silicone manufacture a high-grade OAT resistant hose which also withstands much higher temperatures than conventional coolant hoses. Our OAT grade hose will operate in the range 50°C up to +200°C, making our OAT hose suitable for use in higher, under bonnet temperatures. Our OAT grade silicone hose, offers typically 20 – 30% higher burst pressure than standard coolant hoses.

### 4 Or 5 Ply Fabric Reinforced Oat Coolant Resistant Silicone

ID	BURST PRESSURES (BAR)	Wall (mm) Nominal
6mm	38.0	4.5
10.0mm	33.8	4.5
12.7mm	29.0	4.5
15.9mm	28.2	5
19.0mm	27.4	5
22.0mm	26.0	5
25.4mm	25.2	5
32.0mm	24.0	5
35mm	22.5	5
38mm	21.6	5
42mm	20.5	5
44.0mm	19.6	5
50.8mm	18.8	5
54.0mm	17.5	5
57mm	16.5	5
60mm	15.5	5
63.0mm	14.8	5
70mm	13.8	5
76mm	12.2	5
80mm	10.9	5
83mm	9.2	5
89mm	11.8	5.5
95mm	9.2	5.5
101.6mm	8.0	5.5

Temp resistant to: 200°C

# Antifreeze/ Coolant Technology Cross Reference Chart

	MARKET						
	Color	App. A/HD	Conventional Without SCA's	Fully Formulated SCA Precharged	Hybrid Organic Acid (HOAT)	Organic Acid Extended Life (OAT)	Nitrited Organic Acid ELC (NOAT)
FINAL CHARGE™ Coolant	Red	HD				V1, POSH, V2, FSH, GHD, BHD	
FINAL CHARGE™ NOAT	Red	HD					V1, POSH, V2, FSH, GHD, BHD
FLEET CHARGE™ Coolant	Pink	HD		BSH		V1, POSH, V2, FSH, GHD, BHD	
Full Force Antifreeze	Green	A	BSH				
PEAK® Cool	Orange	A				V1, POSH, V2, FSH, GHD, BHD	
PEAK® Global LifeTime Antifreeze	Amber	A				V1, POSH, V2, FSH, GHD, BHD	
PEAK® Long Life Antifreeze	Yellow	A				V1, POSH, V2, FSH, GHD, BHD	
Chevron Supreme	Green	A	BSH				
Cummins Fleetguard Heavy Duty	Green	A	BSH				
PEAK® Antifreeze & Coolant	Green	A	BSH				
Prestone All Makes All Models Extended Life	Yellow	A				V1, POSH, V2, FSH, GHD, BHD	
Prestone Dex Cool	Orange	A				V1, POSH, V2, FSH, GHD, BHD	
Shell Dex Cool	Orange	A				V1, POSH, V2, FSH, GHD, BHD	
Shell Zone	Green	A	BSH				
Texaco Antifreeze Coolant	Green	A	BSH				
Texaco Halveline Dex Cool	Orange	A				V1, POSH, V2, FSH, GHD, BHD	
Valvoline Zerex Dex Cool	Orange	A				V1, POSH, V2, FSH, GHD, BHD	
Valvoline Zerex G-05 Coolant	Yellow	A			V1, POSH, V2, FSH, GHD, BHD		
Valvoline Zerex Original Formula	Green	A	BSH				
Volvo	Green	A			V1, POSH, V2, FSH, GHD, BHD		
Alliance Primecool GP C-40	Violet	HD				V1, V2, POSH, FSH, GHD, BHD	
Alliance SCA Precharged Coolant	Pink	HD		BSH			
Alpine C40	Purple	HD				V1, POSH, V2, FSH, GHD, BHD	
Antifreeze ANF KK40	Red	HD				V1, POSH, V2, FSH, GHD, BHD	
Avia Antifreeze NG	Purple	HD				V1, POSH, V2, FSH, GHD, BHD	
Calfrost Extended Life Coolant	Orange	HD				V1, POSH, V2, FSH, GHD, BHD	
Calguards HD48	Blue	HD				V1, POSH, V2, FSH, GHD, BHD	
Castrol Heavy Duty Antifreeze with SCA	Pink	HD		BSH			
Castrol Heavy Duty Extended Life	Red	HD					V1, POSH, V2, FSH, GHD, BHD
Castrol Radicool Si OAT	Red	HD				POSH, V2, FSH, GHD, BHD	
CAT Diesel Engine Antifreeze/Coolant (DEAC)	Pink	HD		BSH			
CAT Extended Life Coolant	Red	HD					V1, POSH, V2, FSH, GHD, BHD
Chevron Delo Extended Life Coolant	Red	HD					V1, POSH, V2, FSH, GHD, BHD
Chevron Delo Extended Life NF	Yellow	HD				V1, POSH, V2, FSH, GHD, BHD	
Chevron Heavy Duty Coolant	Purple	HD		BSH			
CLASSIC KOLDA UE G40	Violet	HD				POSH, V2, FSH, GHD, BHD	
Comma Xstream G30	Violet	HD				POSH, V2, FSH, GHD, BHD	
Cummins Fleetguard ES Compleat	Blue	HD			V1, POSH, V2, FSH, GHD, BHD		
Cummins Fleetguard ES Compleat OAT	Red	HD				V1, POSH, V2, FSH, GHD, BHD	
Cummins Fleetguard Fleet Cool	Green	HD		BSH			
Cummins Fleetguard Fleet Cool	Pink	HD			V1, POSH, V2, FSH, GHD, BHD		
DAF Extreme Longlife	Red	HD				POSH, V2, FSH, GHD, BHD	
Detroit Diesel Power Cool Coolant	Pink	HD		BSH			
Detroit Diesel Power Cool Plus Coolant	Red	HD				POSH, HOSH, FSH, GHD, BHD	
Evans Heavy Duty	Brown	HD				POSH, FSH, GHD, BHD	
EVO ST40	Red/Violet	HD				V2, FSH, GHD, BHD	
EXLCS Extended Life	Yellow	HD				BSH, POSH, FSH, V2, GHD, BHD	
Fuchs MAINTAIN FRICOFIN	Orange	HD				V1, V2, POSH, GHD, GHD, BHD	
Glystantin G40	Red/Violet	HD			V2, FSH, POSH, GHD, BHD		
Havoline XLC	Orange	HD				V2, FSH, POSH, GHD, BHD	
John Deere Cool-Gard Coolant	Green	HD			POSH, V2, FSH, GHD, BHD		
John Deere Cool-Gard II	Amber	HD				POSH, V2, FSH, GHD, BHD	
Komatsu Super Coolant AF-NAC	Blue	HD				POSH, V2, FSH, GHD, BHD	
Lukoil Coolant SOT	Red/Violet	HD				V2, FSH, POSH, GHD, BHD	
MAN 324 Type Si OAT	Pink	HD				POSH, V2, FSH, GHD, BHD	
Mercedes MB 325.5	Red	HD				POSH, V2, FSH, GHD, BHD	
Mofin Kuhlerfrostschtz M40 extra	Violet	HD				V2, FSH, POSH, GHD, BHD	
MOTOREX COOLANT M4.0	Orange	HD				V2, FSH, POSH, GHD, BHD	
Neste Coolant Longlife M	Violet	HD				V2, FSH, POSH, GHD, BHD	
Pakelo Coolant G40 Hybrid	Pink	HD				V2, FSH, POSH, GHD, BHD	
PANOLIN ANTI FROST MT 650	Blue	HD				V2, FSH, POSH, GHD, BHD	
PETRONAS ANTIFREEZE HT	Yellow	HD				V2, FSH, POSH, GHD, BHD	
Polyston G40	Red	HD				V2, FSH, POSH, GHD, BHD	
Prestone Heavy Duty Coolant	Green	HD		BSH			
Prestone Heavy Duty Extended Life	Red	HD					POSH, V2, FSH, GHD, BHD
Shell Diesel Ready Coolant	Purple	HD		BSH			
Shell Rotella Extended Life Coolant	Red	HD					POSH, V2, FSH, GHD, BHD
Shell Rotella Ultra Extended Life Coolant	Yellow	HD				POSH, V2, FSH, GHD, BHD	
SIXLC6-50	Pink	HD				POSH, V2, FSH, GHD, BHD	
Texaco Extended Life Coolant	Red	HD					POSH, V2, FSH, GHD, BHD
Texaco Heavy Duty Coolant	Purple	HD		BSH			
Valvoline Zerex Extended Life Coolant	Red	HD			POSH, V2, FSH, GHD, BHD		
Valvoline Zerex G-05 Coolant	Yellow	HD			POSH, V2, FSH, GHD, BHD		
Volvo VCS	Yellow	HD				POSH, V2, FSH, GHD, BHD	
XTAR Super Coolant Si OAT	Pink	HD				POSH, V2, FSH, GHD, BHD	

A = Automotive. HD = Heavy Duty.  
 BSH = Silicone hose polyester reinforced.  
 FSH = Silicone hose FVMQ, FKM lined (18 Months Warranty).  
 POSH, GOAT, DOAT, GOSH = OAT compatible silicone hose 2013 (5 Year Warranty).  
 V1 = OAT compatible hose OSH 2009 discontinued 2015.  
 V2 = OAT compatible silicone hose V2 2015 (5 Year Warranty).  
 GHD = Gates Heavy Duty (2 Year Warranty).  
 BHD = Blue Heavy Duty 4 ply (2 Year Warranty).

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