



Non – Transferable

TEST REPORT

ULR No. :

T C 1 1 8 3 4 2 5 0 3 0 0 0 4 0 4 F

Date: 27.06.2025

Test Report No. :

C T 0 C U 1 0 7 6

1.	Name & Address of Customer	M/s. Polyhose India Rubber Pvt. Ltd., Plot No.F37 - F42& F50- F55 SIPCOT Industrial Park, Irrungattukottai, Sriperumpudur Taluk- 602 117, Tamil Nadu INDIA
2.	Customer's Reference	Docket Id. CCTNPOIPUFCTL187099
3.	Description of Test Sample	Brake Hose (ICAT-CTL/187099/01-14)
4.	Date of Receipt of Sample	24.05.2025
5.	Condition of Sample	No physical damage observed.
6.	Part No.	HBK-PH138-00
7.	Dwg. No.	HBK-PH138-00
8.	Total Length(mm)	650
9.	Free Length (mm)	564
10.	Identification observed on the samples	POLYHOSE >>> PH138 - 1/8 SAE J1401 / IS 7079 >>> HL >>> T-2958-217961 05/25
11.	Material (Outer & Inner Cover)	EPDM
12.	Component Manufacturing Plant Address	M/s. Polyhose India Pvt Ltd 1/160, Kannivakkam Village, Guduvanchery(Via), Chengalpattu, Tamil Nadu – 603202, India.
13.	Test Objective	To carry out all the tests on the test samples mentioned in Sr. No. 3 above as per IS: 7079 - 2008 with its Amendment No 1 dated Sept.'2011.
14.	Test Standard	IS: 7079 - 2008 with its Amendment No 1 dated Sept.'2011.
15.	Test Location	ICAT Centre-I
16.	Date of Performance of Test	27.05.2025-31.05.2025
17.	Test Results/Test Observations	For Test Results/Test Observations, please refer Annexure-I.
18.	Conclusion	The hydraulic brake hoses as specified in Sr. No. 3 of this test report have met all the test requirements when tested as per IS:7079-2008 with its Amendment No 1 dated Sept.'2011.

Prepared By	Checked & Authorized By	Approved By	
			
JATIN WADHWA	HARISH JOSHI	PRITAM SINGH SAWARIYA	
Senior Engineer	Manager	Senior Manager	Page 1 of 5 + Dwg. (01) [187099]

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(An ISO 9001, ISO 14001 and ISO 45001 certified, Scope wise accredited as per ISO 17025 and BIS recognized agency)




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12. The appropriate local court at Gurugram shall have the jurisdiction in respect of any dispute, claim or liability arising out of this report.

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JATIN WADHWA	HARISH JOSHI	
Senior Engineer	Manager	




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Date: 27.06.2025

Annexure-I

Cl. No.	Tests	Requirements	Test Results / Observations
5.3	Visual Test [ICAT-CTL/187099/01-14]	No surface crack, porosity and air blisters	No surface crack, porosity and air blisters were observed on all the hoses.
5.4	Constriction Test [ICAT-CTL/187099/01-14]	The time for Gauge plug to drop its own mass a distance of 75 mm. into the Hose Assembly shall not exceed 5 seconds.	Within the specified limits
5.5	Expansion Test [ICAT-CTL/187099/01]	a) Internal hydraulic pressure = 6.9 MPa Volumetric Expansion (V.E.) $\leq 1.08 \text{ cm}^3/\text{m}$	0.62 cm^3/m
		b) Internal hydraulic pressure = 10.3 MPa Volumetric Expansion (V.E.) $\leq 1.38 \text{ cm}^3/\text{m}$	0.77 cm^3/m
		c) Internal hydraulic pressure = 20.0 MPa Volumetric Expansion (V.E.) $\leq 2.00 \text{ cm}^3/\text{m}$	1.39 cm^3/m
5.6	Pressure Test [ICAT-CTL/187099/02]	The test pressure shall be between 20.7 MPa and 24.8 MPa with water medium. Test Pressure hold time shall be between 10s and 25s. No leaks and permanent deformation shall occur.	No leaks and permanent deformation observed when tested at 21 MPa for 25s
5.7	Bursting Strength Test [ICAT-CTL/187099/03]	a) Retention pressure at 27.6 MPa minimum for 2 mins	Withstood retention pressure for 2 minutes
		b) Bursting pressure: 49 MPa minimum.	Bursting pressure: 76.1 MPa
5.8	Whip Test [ICAT-CTL/187099/04]	Minimum Whip Life of 35 hours.	Completed 35 hrs. without failure
5.9	Tensile Test at 27°C [ICAT-CTL/187099/05]	1446 N (min.) (Separation rate $25 \pm 3 \text{ mm/min.}$)	Max. Load: 1511N, Satisfactory (Separation rate 25 mm/min.)



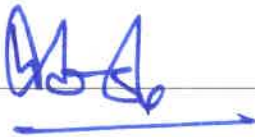
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Senior Engineer	Manager	

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Annexure-I (Contd..)

Cl. No.	Tests	Requirements	Test Results / Observations
5.10	Water Absorption Test: Following three tests are conducted:	After conditioning the brake hose assemblies in water at $85 \pm 2^\circ\text{C}$ for 70 to 72 h, hose shall pass all these tests.	Hydraulic brake hoses 3 nos. were conditioned in water at 85°C for 72 hrs., & met the requirements
	1. Burst Test [ICAT-CTL/187099/06]	Bursting Pressure: 49 MPa (min.)	Bursting pressure: 81.6 MPa
	2. Tensile Test [ICAT-CTL/187099/07]	1446 N (min.) (Separation rate 25 ± 3 mm/min.)	Max. Load: 1911N, Satisfactory (Separation rate 25 mm/min.)
	3. Whip Test [ICAT-CTL/187099/08]	Minimum Whip Life of 35 hours	Completed 35 hrs. without failure
5.11	Salt Spray Test [ICAT-CTL/187099/09]	After 24 hours of Corrosion Test the Hose assembly and end connections shall not show any corrosion.	No corrosion or rust was observed on Hose assembly and end connections after 24 hours of Corrosion Test and it met the requirement.
5.12	Cold Bend Test [ICAT-CTL/187099/10]	The Hose shall not crack after being subjected to -45°C to -48°C for 70 to 72 hours and wound, round a mandrel having dia. of 76.2 to 77.2 mm.	No cracks were observed, and it met the requirement
5.13	Static Ozone Resistance Test [ICAT-CTL/187099/11]	Hose shall be bent around a mandrel of dia. equal to 8 times the nominal outside dia. of hose. Hose to be exposed to ozone concentration of 100 ± 5 ppm for 70 to 72 hours. Hose shall not show any cracks on outer cover when examined under 7 power magnification.	No cracks were observed on outer cover when tested at 100pphm for 72 hrs. and it met the requirement when inspected under 7 power magnification. [Met the requirement]




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Annexure-I (Contd..)

Cl. No.	Tests	Requirements	Test Results / Observations
5.14	Dynamic Ozone Resistance Test [ICAT-CTL/187099/12]	Pre-conditioning = $27 \pm 6^\circ\text{C}$ Air temp. in chamber = $40 \pm 3^\circ\text{C}$ Length of hose = $218 \pm 3\text{mm}$ Ozone concentration = 100 ± 10 ppm Flex rate = 0.3 ± 0.05 Hz Stroke length = $76.2 \pm 2.5\text{mm}$ Test duration = 48 to 49 h	No cracks were observed on the outer cover when tested at 100pphm for 49 h and it met the requirement when inspected with naked eye. [Met the requirement]
5.15	Hot Impulse Strength Test	Cyclic internal pressure : 11 to 11.5 MPa Cyclic internal pressure on time: for $60 \pm 6\text{s}$ Cyclic internal pressure off time: 60 ± 6 s Test chamber temp. = $143 \pm 3^\circ\text{C}$ Temp. attained time: 30 mins. Pressure attained time: 2s No. of cycles = 150	Completed 150 cycles without leakage [Chamber Temp.: 143°C]
	a) Pressure Hold	i) Retention pressure at 27.6 MPa for 2 mins.	Withstood pressure for 2 minutes
	b) Burst Test [ICAT-CTL/187099/13]	ii) Bursting pressure: 34.5 MPa minimum.	Bursting pressure: 78.4 MPa
5.16	Brake Fluid Compatibility Test	Conditioning of hose = 70 h at 120°C Gauge plug to drop its own mass a distance of 75 mm. into the Hose Assembly shall not exceed 5 seconds.	Within the specified limits
	a) Constriction Test.		
	b) Retention Pressure Test.	i) Retention pressure at 27.6 MPa for 2 mins.	Withstood pressure for 2 minutes
	c) Bursting Strength Test [ICAT-CTL/187099/14]	ii) Bursting pressure: 49 MPa minimum.	Bursting pressure: 71.5 MPa

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