

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Flexible Hoses of Non-Metallic Material with Permanently Fitted Couplings

with type designation(s)

Aeroquip GH194; FLAME RESISTANT HOSE IN ACC. WITH ISO 15540

Issued to

**Eaton Corporation
Van Wert OH, United States**

is found to comply with

DNV GL rules for classification – Ships

DNV GL class programme DNVGL-CP-0183 – Type approval – Flexible hoses

Application :

Products approved by this certificate are accepted for installation on all vessels classed by DNV GL.

Temperature range: - 40°C to 150°C

Max. working press.: 63 - 225 bar (dep. on size, see cert.)

Sizes: 0.25" to 1.25"

Issued at **Hamburg** on **2017-07-03**

This Certificate is valid until **2022-07-02**.

DNV GL local station: **Houston Containers**

for **DNV GL**

Approval Engineer: **Peter Gierhan**

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**Olaf Drews
Head of Section**

This Certificate is subject to terms and conditions overleaf. Any significant change in design or construction may render this Certificate invalid. The validity date relates to the Type Approval Certificate and not to the approval of equipment/systems installed.



Job Id: **262.1-014031-11**
Certificate No: **TAP00000Y2**

Production Place

Hose manufacturers:

Eaton Aeroquip LLC
1830 Highway 201 South Spur
Mountain Home, Arkansas 72653
USA

Coupling manufacturer:

Eaton Aeroquip LLC
1225 W. Main Street
Van Wert
Ohio 45891-0389
USA

Product description

Inner tube: synth. rubber
Reinforcement: single wire braid
Cover: synth. rubber
End fittings : TTC crimp
Fire sleeve: single layer silicon impregnated braided glass fibre

Application/Limitation

Hose Aeroquip GH194

Hoses Aeroquip GH194; Max Working Pressure (MWP), depending on nominal inner diameter (ID):						
Part no.	Hose I.D.		Hose O.D max.		Max. Operating Pressure	
	mm	in	mm	in	bar	psi
GH194-4	6.4	0.25	14.1	0.56	225	3250
GH194-6	9.5	0.38	18.1	0.71	215	3125
GH194-8	12.7	0.50	21.5	0.85	175	2550
GH194-10	15.9	0.63	24.6	0.97	140	2050
GH194-12	19.1	0.75	28.6	1.13	125	1800
GH194-16	25.4	1.00	36.5	1.44	90	1300
GH194-20	31.8	1.25	44.8	1.76	65	950

Range of Application

The a.m. hose sizes of Aeroquip GH194 are approved for use in:

- Fuel oil, lubricating oil and hydraulic oil systems
- Fresh water cooling systems
- Compressed air systems**

**Pin prick cover is required for air or gas applications above 17 [bar].

All hose assemblies delivered under this type approval certificate shall be in compliance with an assembly procedure issued by the certificate holder.

Each hose assembly is pipe class III to be hydraulic pressure tested to 1.5 times the maximum working pressure and shall be delivered with manufacturer's pressure test certificate.

Flexible hoses are only to be used where it is necessary due relative movements or flexible mounting of the machinery. The hoses shall not be used where permanent piping is possible.
The hoses must only be fitted in places where they are always accessible.
The hoses are not to be used for suction.
Flexible hoses of these types are not to be used in boiler fronts.
Hose assemblies with couplings made of carbon steel are not to be used at temperatures below -10°C unless the material is normalized.
The use of hose assemblies is not permitted in permanently pressurized starting air lines of diesel engines.

Type Approval documentation

Tests carried out

Proof pressure test, Change in length test, Burst test, Pressure pulsation test, Fire test, Dimensional Check test, Cold Flexibility test, Oil Resistance test, Cover Adhesion test, Ozone resistance test.

Marking of product

For traceability to this type approval the products are to be marked with:

- Manufacturers name or trade mark
- Type designation

Periodical assessment

For retention of the Type Approval, a DNV GL Surveyor shall perform a survey every 2,5 years, to verify that the conditions for the type approval are complied with and to witness the following tests on a selection of sizes:

- Dimensional check
- Change in length
- Leakage test
- Burst test

The tests shall be performed in accordance with procedures given in DNV GL Type Class Program CP-0183 "Type Approval of Flexible Hoses of Non-Metallic Material".

The tests are to be performed with the type of couplings fitted that are Type Approved with the hoses.

END OF CERTIFICATE