

TYPE APPROVAL CERTIFICATE

This is to certify:**That the Flexible Hoses of Non-Metallic Material with Permanently Fitted Couplings**with type designation(s)
Aeroquip 2556 and Aeroquip 2651

Issued to

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

is found to comply with

**DNV GL class programme DNVGL-CP-0183 – Type approval – Flexible hoses
DNV GL rules for classification – Ships****Application :****Products approved by this certificate are accepted for installation on all vessels classed by DNV GL.****Temperature range:** -40°C up to +100°C (see certificate)**Max. working press.:** 2556: 17 bar up to 25 bar / 250 to 360 psi (see certificate) 2651: 24 bar up to 207 bar (see certificate)**Sizes:** 0.19" to 2,38" (see certificate)Issued at **Hamburg** on **2017-07-03**This Certificate is valid until **2022-07-02**.for **DNV GL**DNV GL local station: **Houston Containers**Approval Engineer: **Peter Gierhan**

**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: **262.1-014031-10**
Certificate No: **TAP00000Y8**

Product description

Aeroquip 2556:

Synthetic rubber tube, textile braid reinforcement, synthetic rubber cover.
Couplings made of carbon steel or brass. Type 4738 "socketless" push on fitting.

Manufacturing plants:

Hoses:

Eaton Aeroquip LLC 240 Daniel Road Forest City North Carolina 28043
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Couplings:

Eaton Aeroquip LLC 1225 W. Main Street Van Wert Ohio 45891-0389
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Aeroquip 2651:

Synthetic rubber tube, textile inner braid, single wire braid reinforcement and synthetic rubber cover.
Coupling 1210 type threaded socket, made of carbon steel, brass, stainless steel or aluminium.

Manufacturing plants:

Couplings:

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

Eaton Aeroquip LLC 1830 Highway 201 South Spur Mountain Home Arkansas 72653
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Eaton Aeroquip LLC 240 Daniel Road Forest City North Carolina 28043
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Eaton Aeroquip LLC 860 Blankenship Road Newbern Tennessee 38059
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Eaton Fluid Power GmbH Auefeld 1 34346 Hann Munden Germany

Application/Limitation

Aeroquip 2556:

Maximum working pressure:

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Part no.	Hose ID (inch)	MAWP	
		bar	psi
-4	0.25	25	360
-6	0.38	21	300
-8	0.50	21	300
-10	0.53	17	250
-12	0.75	17	250

Operating temperature range: -40°C to +100°C / -40°F to +212°F. Water not to exceed +66°C / +150°F, air not to exceed +71°C / +160°F.

This approval for 2556 is not valid for systems where pressure impulses may occur.

Aeroquip 2651:

Max. working pressure:

Part no.	Hose ID (inch)	MAWP	
		bar	psi
-4	0.19	207	3000
-5	0.25	207	3000
-6	0.31	155	2250
-8	0.41	138	2000
-10	0.50	121	1750
-12	0.62	103	1500
-16	0.88	55	800
-20	1.12	43	625
-24	1.38	34	500
-32	1.81	24	350
-40	2.38	24	350

(Part no. corresponding to dash-size acc. to SAE 100R5)

Operating temperature range: -40°C to +100°C, air not to exceed 70°C

Range of Application

The a.m. hose sizes of Aeroquip 2651 and Aeroquip 2652 are approved for use in:

- Fresh water cooling systems
- Sanitary 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.

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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