S40-028-117EN (2015-09-15) (F540_028_117EN)

CERTIFICATE



Registration number 08.488.297

on the approval of construction type,

issued pursuant to Directive 2010/35/EU (Government Executive Order No. 208/2011 Sb. (Coll.)., as amended) and agreement ADR/RID:2015

for the applicant:

HPC Research s.r.o. Vodňanského 1184/1 CZ - 169 00 Praha 6 - Břevnov Company Registration No.: 29132908

for transportable pressure equipment:

Name: UN composite cylinder LPGC24G1 without valve

Manufacturer: HPC Research s.r.o.

Drawing No.: 9170, 9168

Construction standard: ISO 1119-3:2002 Approval number: CZ-08.488.297

Volume: 24,4 L 30 bar Test pressure:

Place of manufacture: Pod Vranovou 273, CZ - 330 01 Kyšice

at which the construction type assessment has been performed pursuant to Directive 2010/35/EU (Government Decree No. 208/2011 Coll., as amended).

We hereby certify the conformity of properties of a sample of the product at stake with the basic requirements of

> Directive 2010/35/EU (Government Decree No. 208/2011 Sb. (Coll.), as amended) and agreement ADR/RID:2015

> > Validity period: 29.10.2025

This certificate is issued for the purpose of the issue of the Declaration of Conformity of the product with the above-mentioned technical regulation.

Details and list of important parts of the technical documentation are specified in the Report on evaluation - certification of construction type No. 08.486.060 which is an integral part hereof.

Validity conditions and rules for manipulation with the certificate are specified on the second page hereof.

Prague, on 29.10.2015



on behalf of Notified Body 1017 Jana Bačinová Head of Quality Department

Range of validity

of the Certificate Reg.No. 08.488.297 issued on the basis of applying ICSO 11119-3:2002 Gas cylinders of composite construction- Specification and test methods

Type of cylinder: LPGC24G1

Design life: Non limited life

Underwater: No

Pressure relief device: Recommended

| Finished cylinder | | | Liner | | Composite material | | |
|------------------------|-----------------------|-------------------|-------------------------------|----------------------------|----------------------|------------------|--|
| Capacity: | 24.4 liter | | Material: | PET | Fibber ty | /pe: | E-glass |
| Test pressure: | 30 bar | | Density: | 1.32-1.4 g/cm ³ | Min. Dry Tensile | Fibber strength: | 0.35 N/tex |
| Diameter: | | | Melting Point: | 245-250 °C | Fibber n | nodulus: | 68-72 GPa |
| Without outer case: | 292 ± 3 mm | | Glass transition temperature: | 74-80 °C | Matrix Compor | ents: | Epoxy resin, Hardener, Accelerant, Diluents |
| With outer case: | 310 ± 3 mm | | Auto ignition temperature: | 440-460 °C | Min. Ter strength | | 1500 N/mm ² |
| Length: | | | Min. thickness: 0.15 mm | | Elongation: | | 2.5-5 % |
| Without outer case: | 480 ± 3 mm | | | | Thickness: | | 1.5-4.5 mm |
| With outer case: | 582.5 ± 3 mm | | | | | | |
| Empty weight | 5.2 ± 0.3 kg | | | | 1 | | |
| Thread | 25E (W 28.8) or other | | | | | | |
| Metal End Boss | | | | | | | |
| Material N | | Min. Yield Stress | | Min. Tensile Strength | | Min. Elongation | |
| 11SMn30+C EN 10227 245 | | 245 MP | а | 360 MPa | | 6 % | |

Validity conditions

This certificate is renewable upon request. The renewal is possible after the full revision and examination of conformity with the ADR/RID provisions applicable as of the date of renewal. The renewal is not permitted after the type approval is cancelled. Modifications of the existing type approval which appeared during the validity period (e.g. at pressure containers minor changes like adding other sizes and capacities which does not affect the conformity with regulations) do not extend or change the original validity of the certificate.

If the applicable ADR/RID technical requirements change during this period (including reference standards) and the approved type does not conform any more, the relevant organizations which issued the type approval shall terminate the approval and notify the type approval holder about the fact.

The TÜV SÜD Czech shall be immediately notified of any modifications of the pressure equipment compared to the certified design. This fact may cause the further continuation of the certificate dependent on an additional examination of conformity.

If the type approval expired or was cancelled, the production of the equipment according to the type approval is not allowed any more.

Necessary instructions for use and assembly shall be supplemented to every product.

Every product shall bear a visible reference to the manufacturer or importer and the type label to enable to identify the tested type with products put into circulation.

Rules for the manipulation with the Certificate:

The Certificate may be used only as a certificate for products which are specified on the first page. It also applies for the use in advertising, promotional and commercial materials.

The certificate shall only be reproduced complete. It is forbidden to change, amend or rewrite data in the certificate.

An unauthorized and deceptive use of the certificate may be subject to sanctions (Section 19, Act No. 22/1997 Sb. (Coll.), as amended).

The Certificate shall not be used as a certificate for products at which a change affecting the conformity with used regulations has been done without being approved by the TÜV SÜD Czech.

The certificate shall only promote its holder, the product and production places mentioned herein.

The transmission of this certificate to third parties is inadmissible as well as its use by third parties. It may be transferred to a third party only by the TÜV SÜD Czech.

Not specified items are governed by the General Terms and Conditions for Product Certification, as amended.

List of relevant parts of technical documentation:

- Drawings No. 9170, 9168,
- Composite cylinder LPGC24G1 project documentation,
- Reports of tests according to ISO 11119-3:2002.

This language version of the certificate is a translation of a Czech official version No. 08.488.297 issued on 29.10.2015, which is deemed the only one applicable in the event of legal disputes and was printed on 31.03.2016.