

# CERTIFICATE

## of Product Conformity (QAL1)

Certificate No.: 0000032300\_02

**Certified AMS:** VOC72M for Benzene

**Manufacturer:** ENVEA  
111, Boulevard Robespierre  
78304 Poissy Cedex  
France

**Test Institute:** TÜV Rheinland Energy GmbH

**This is to certify that the AMS has been tested  
and found to comply with the standards  
VDI 4202-1 (2010), VDI 4203-3 (2010), EN 14662-3 (2005),  
EN 15267-1 (2009) and EN 15267-2 (2009).**

Certification is awarded in respect of the conditions stated in this certificate  
(this certificate contains 8 pages).  
The present certificate replaces certificate 0000032300\_01 dated 05 March 2018.



Suitability Tested  
Complying with  
2008/50/EC  
EN 15267  
Regular  
Surveillance  
[www.tuv.com](http://www.tuv.com)  
ID 0000032300

Publication in the German Federal Gazette  
(BAnz) of 05 March 2013

German Environment Agency  
Dessau, 02 March 2023

This certificate will expire on:  
04 March 2028

TÜV Rheinland Energy GmbH  
Cologne, 01 March 2023



Dr. Marcel Langner  
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ppa. Dr. Peter Wilbring

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Test institute accredited to EN ISO/IEC 17025 by DAkkS (German Accreditation Body).  
This accreditation is limited to the accreditation scope defined in the enclosure to the certificate D-PL-11120-02-00.

|                               |  |
|-------------------------------|--|
| <b>Test report:</b>           | 936/21217807/A dated 16 August 2012  |
| <b>Initial certification:</b> | 05 March 2013  |
| <b>Expiry date:</b>           | 04 March 2028  |
| <b>Certificate:</b>           | Renewal (of previous certificate 0000032300_01 of 05 March 2018 valid until 04 March 2023) |
| <b>Publication:</b>           | BAnz AT 05.03.2013 B10, chapter IV No. 1.1   |

### **Approved application**

The tested AMS is suitable for continuous ambient air monitoring of Benzene (stationary operation).

The suitability of the AMS for these applications was assessed based on a laboratory test and a three-months field test.

The AMS is approved for an ambient temperature range of 5° to 35°C.

The notification of suitability of the AMS, performance testing and the uncertainty calculation have been effected on the basis of the regulations applicable at the time of testing. As changes in legal provisions are possible, any potential user should ensure that this AMS is suitable for monitoring the measured values relevant to the application.

Any potential user should ensure, in consultation with the manufacturer, that this AMS is suitable for the intended use.

### **Basis of the certification**

This certification is based on:

- Test report 936/21217807/A dated 16 August 2012 of TÜV Rheinland Energie und Umwelt GmbH
- Suitability announced by the German Federal Environment Agency (UBA) as the relevant body
- The ongoing surveillance of the product and the manufacturing process

Publication in the German Federal Gazette: BAnz AT 05.03.2013 B10, chapter IV No. 1.1,  
Announcement by UBA dated 12 February 2013:

**AMS designation:**

VOC72M for Benzene

**Manufacturer:**

Environnement S. A., Poissy, France

**Field of application:**

For continuous ambient air monitoring of benzene (stationary operation)

**Measuring ranges during the performance test:**

| Component | Certification range | Unit              |
|-----------|---------------------|-------------------|
| Benzene   | 0 – 50              | µg/m <sup>3</sup> |

**Software version:** 3.0.9

**Restrictions:**

The measuring system may only be operated in temperature ranges of 5°C – 35°C.

**Notes:**

1. Given the method used, the instrument does not provide a living zero.
2. The measuring system must be operated inside a lockable measurement container.
3. The test report on performance testing is available on the internet at [www.qal1.de](http://www.qal1.de).

**Test institute:**

TÜV Rheinland Energie und Umwelt GmbH, Cologne  
Report No.: 936/21217807/A dated 16 August 2012



Publication in the German Federal Gazette: BAnz AT 26.08.2015 B4, chap. V notification 45,  
Announcement by UBA dated 22 July 2015:

**45 Notification as regards Federal Environment Agency (UBA) notices  
of 12 February 2013 (BAnz AT 05.03.2013 B10, chapter IV number 1.1)**

The current software version of the VOC72M measuring system for benzene  
manufactured by Environnement S.A. is:

v3.3.8

The KNF PMF1476-86 sample gas pump was replaced by a sample gas pump type  
KNF PMF1559-86.

The KNF PML9399-NF25 pump used for cooling the separating column was  
replaced by a new pump type KNF PML10386-NF25.

Statement issued by TÜV Rheinland Energie und Umwelt GmbH  
dated 16 March 2015

Publication in the German Federal Gazette: BAnz AT 26.03.2019 B7, chap. IV notification 32,  
Announcement by UBA dated 27 February 2019:

**32 Notification as regards Federal Environment Agency notices  
of 12 February 2013 (BAnz AT 05.03.2013 B10, chapter IV number 1.1) and  
of 22 July 2015 (BAnz AT 26.08.2015 B4, chapter V notification 45)**

The current software version of the VOC72M measuring system for benzene  
manufactured by Environnement S.A. is:

v4.0.a.

Statement issued by TÜV Rheinland Energy GmbH dated 27 September 2018

Publication in the German Federal Gazette: BAnz AT 31.07.2020 B10, chap. II notification 25, Announcement by UBA dated 27 May 2020:

**25 Notification as regards Federal Environment Agency (UBA) notices of 12 February 2013 (BAnz AT 05.03.2013 B10, chapter IV number 1.1) and of 27 February 2019 (BAnz AT 26.03.2019 B7, chapter IV, notification 32)**

Environnement S.A., Poissy, France have changed their company name to ENVEA. The VOC72M measuring system for benzene manufactured by ENVEA is now equipped with a colour touch screen display for system control and for displaying the measured values and instrument parameters (with the electronic board ARM20).

Statement issued by TÜV Rheinland Energy GmbH dated 1 October 2019

Publication in the German Federal Gazette: BAnz AT 03.05.2021 B9, chap. III notification 24, Announcement by UBA dated 31 March 2021:

**24 Notification as regards Federal Environment Agency (UBA) notices of 12 February 2013 (BAnz AT 05.03.2013 B10, chapter IV number 1.1) and of 27 May 2020 (BAnz AT 31.07.2020 B10, chapter II notification 25)**

The latest software version of the VOC72M measuring system for benzene manufactured by ENVEA is:  
v4.0.g.

Statement issued by TÜV Rheinland Energy GmbH dated 9 September 2020

### Certified product

This certificate applies to automated measurement systems conforming to the following description:

The VOC72M ambient air monitor has been designed to analyse volatile organic compounds. The measuring principle relies on separating the measured compounds by way of gas chromatography and then using photoionization for detection.

Sampling is ensured via a gas trap filled with a specific adsorbent. The standard cycle takes 15 minutes.

The VOC72M measuring system entirely consists of a compact housing. The instrument can be operated via a display at its front panel. The user is able to check measurement data and instrument information, change parameters and check correct functionality of the AMS.

### General notes

This certificate is based upon the equipment tested. The manufacturer is responsible for ensuring that on-going production complies with the requirements of the EN 15267. The manufacturer is required to maintain an approved quality management system controlling the manufacture of the certified product. Both the product and the quality management systems shall be subject to regular surveillance.

If a product of the current production does not conform to the certified product, TÜV Rheinland Energy GmbH must be notified at the address given on page 1.

A certification mark with an ID-Number that is specific to the certified product is presented on page 1 of this certificate. This certification mark may be applied to the product or used in advertising materials for the certified product.

This document as well as the certification mark remains property of TÜV Rheinland Energy GmbH. With revocation of the publication the certificate loses its validity. After the expiration of the certificate and on requests of the TÜV Rheinland Energy GmbH this document shall be returned and the certificate mark must not be employed anymore.

The relevant version of this certificate and its expiration is also accessible on the internet: [qal1.de](http://qal1.de).



### History of documents

Certification of VOC72M is based on the documents listed below and the regular, continuous monitoring of the Quality Management System of the manufacturer:

### Initial certification according to EN 15267

Certificate No. 0000032300\_00: 22 March 2013  
Expiry date of the certificate: 04 March 2018  
Test report 936/21217807/A dated 16 August 2012  
TÜV Rheinland Energie und Umwelt GmbH  
Publication BAnz AT 05.03.2013 B10, chapter IV number 1.1  
UBA announcement dated 12 February 2013

### Notifications

Statement issued by TÜV Rheinland Energie und Umwelt GmbH dated 16 March 2015  
Publication BAnz AT 26.08.2015 B4, chapter V notification 45  
UBA announcement dated 22 July 2015  
(Soft- and hardware changes)

### Renewal of certificate

Certificate No. 0000032300\_01: 05 March 2018  
Expiry date of the certificate: 04 March 2023

### Notifications

Statement issued by TÜV Rheinland Energy GmbH dated 27 September 2018  
Publication BAnz AT 26.03.2019 B7, chapter IV notification 32  
UBA announcement dated 27 February 2019  
(Software changes)

Statement issued by TÜV Rheinland Energy GmbH dated 1 October 2019  
Publication BAnz AT 31.07.2020 B10, chapter II notification 25  
UBA announcement dated 27 May 2020  
(Hardware changes)

Statement issued by TÜV Rheinland Energy GmbH dated 9 September 2020  
Publication BAnz AT 03.05.2021 B9, chapter III notification 24  
UBA announcement dated 31 March 2021  
(Software changes)

### Renewal of certificate

Certificate No. 0000032300\_02: 02 March 2023  
Expiry date of the certificate: 04 March 2028

| Standard uncertainty for the laboratory test |   | Device 1     | Device 2     |   | related concentration |        |
|--|---|--------------|--------------|---|-----------------------|--------|
|  |   | SN 005       | SN 006       |   | SN 005                | SN 006 |
| Uncertainty of test gas                      | $u_{span}$ [ $\mu\text{g}/\text{m}^3$ ] | 0,1230       | 0,1230       | $c_{Benz}$ [ $\mu\text{g}/\text{m}^3$ ] | 5,00                  | 5,00   |
| Lack of fit                                  | $u_{fit}$ [ $\mu\text{g}/\text{m}^3$ ]  | 0,0280       | 0,0200       | $c_{Benz}$ [ $\mu\text{g}/\text{m}^3$ ] | 5,00                  | 5,00   |
| Repeatability standard deviation             | $u_r$ [ $\mu\text{g}/\text{m}^3$ ]      | 0,0200       | 0,0100       | $c_{Benz}$ [ $\mu\text{g}/\text{m}^3$ ] | 5,00                  | 5,00   |
| Interference of H2O                          | $u_{rh}$ [ $\mu\text{g}/\text{m}^3$ ]   | 0,0060       | 0,0140       | $c_{Benz}$ [ $\mu\text{g}/\text{m}^3$ ] | 35,00                 | 35,00  |
| Coefficient of sample pressure               | $u_p$ [ $\mu\text{g}/\text{m}^3$ ]      | 0,0380       | 0,0080       | $c_{Benz}$ [ $\mu\text{g}/\text{m}^3$ ] | 35,00                 | 35,00  |
| Coefficient of surrounding temperature       | $u_{Ts}$ [ $\mu\text{g}/\text{m}^3$ ]   | 0,0087       | 0,0135       | $c_{Benz}$ [ $\mu\text{g}/\text{m}^3$ ] | 35,00                 | 35,00  |
| Coefficient of electrical voltage            | $u_v$ [ $\mu\text{g}/\text{m}^3$ ]      | 0,0172       | 0,0058       | $c_{Benz}$ [ $\mu\text{g}/\text{m}^3$ ] | 35,00                 | 35,00  |
| Standard uncertainty $u_{c/c}$               |   | <b>2,56%</b> | <b>2,50%</b> |   |                       |        |
| Expanded uncertainty $U_{c,rel}$             |   | <b>5,11%</b> | <b>5,00%</b> |   |                       |        |

| Standard uncertainty for the field test |   | Device 1     | Device 2     |   | related concentration |        |
|---|---|--------------|--------------|---|-----------------------|--------|
|   |   | SN 005       | SN 006       |   | SN 005                | SN 006 |
| Uncertainty of test gas                 | $u_{span}$ [ $\mu\text{g}/\text{m}^3$ ] | 0,1230       | 0,1230       | $c_{Benz}$ [ $\mu\text{g}/\text{m}^3$ ] | 5,00                  | 5,00   |
| Lack of fit                             | $u_{fit}$ [ $\mu\text{g}/\text{m}^3$ ]  | 0,0280       | 0,0200       | $c_{Benz}$ [ $\mu\text{g}/\text{m}^3$ ] | 5,00                  | 5,00   |
| Reproducibility in field                | $u_{rf}$ [ $\mu\text{g}/\text{m}^3$ ]   | 0,0250       | 0,0250       | $c_{Benz}$ [ $\mu\text{g}/\text{m}^3$ ] | 1,43                  | 1,40   |
| Interference of H2O                     | $u_{rh}$ [ $\mu\text{g}/\text{m}^3$ ]   | 0,0060       | 0,0140       | $c_{Benz}$ [ $\mu\text{g}/\text{m}^3$ ] | 35,00                 | 35,00  |
| Coefficient of sample pressure          | $u_p$ [ $\mu\text{g}/\text{m}^3$ ]      | 0,0380       | 0,0080       | $c_{Benz}$ [ $\mu\text{g}/\text{m}^3$ ] | 35,00                 | 35,00  |
| Coefficient of surrounding temperature  | $u_{Ts}$ [ $\mu\text{g}/\text{m}^3$ ]   | 0,0087       | 0,0135       | $c_{Benz}$ [ $\mu\text{g}/\text{m}^3$ ] | 35,00                 | 35,00  |
| Coefficient of electrical voltage       | $u_v$ [ $\mu\text{g}/\text{m}^3$ ]      | 0,0172       | 0,0058       | $c_{Benz}$ [ $\mu\text{g}/\text{m}^3$ ] | 35,00                 | 35,00  |
| Long term drift                         | $u_d$ [ $\mu\text{g}/\text{m}^3$ ]      | 0,2300       | 0,2500       | $c_{Benz}$ [ $\mu\text{g}/\text{m}^3$ ] | 35,00                 | 35,00  |
| Standard uncertainty $u_{c/c}$          |   | <b>3,14%</b> | <b>3,15%</b> |   |                       |        |
| Expanded uncertainty $U_{c,rel}$        |   | <b>6,28%</b> | <b>6,30%</b> |   |                       |        |