



# Fraunhofer

## TESTED<sup>®</sup> DEVICE

API Metrology  
API Radian PRO  
**Report No. AP 2601-1710**

DUPLICATE

Statement of  
Qualification

Single product  
Outgassing Behavior  
VOC/SVOC

# Statement of Qualification · Single product

**Customer**  
Automated Precision Europe GmbH  
Im Breitspiel 17  
69126 Heidelberg  
Germany

**Tested product**  
Category: Process Equipment  
Subcategory: Measuring Equipment  
Product name: API Radian PRO  
(manufacturing date: 9/2025; color: red/black; article number: 65194)

## Emission measurements with purge-and-trap thermodesorption method and gas chromatography combined with mass spectrometry (TD-GC/MS)

Standards/guidelines: ISO 14644-8, -15  
The norms stated generally refer to the version valid at the time of the tests.

Test equipment: Measuring station: ..... PerkinElmer Clarus 600, Clarus SQ8, ATD 650

Test procedure parameters:

- Retention range (VOC): ..... C6 to C16
- Outgassing test temperature: ..... 23 °C
- Duration of preconditioning: ..... 18h (> 10 x air exchange)
- Flow rate purge gas: ..... 0.1 m<sup>3</sup>/h
- Flow rate sampling gas: ..... 10l/h
- Duration of sampling: ..... 60 min
- Volume of the emission cell: ..... 0.1 m<sup>3</sup>
- Air change rate: ..... 1.0/h
- Emission cell material: ..... stainless steel

## Test result / Classification

The outgassing behavior of API Radian PRO at the stated temperature was investigated according to ISO 14644-15. Based on the outgassing rates determined for the specific equipment, the following classification was made for the corresponding Contaminant Category:

Contaminant Category (x)	SER <sub>u</sub> 23°C <sup>1)</sup> [g/(unit · s)]	ISO-ACC <sub>e</sub> Class (x)
VOC	6.9 x 10 <sup>-9</sup>	-8.2
SVOC <sup>2)</sup>	4.4 x 10 <sup>-11</sup>	-10.4
Sum of VOC and SVOC	7.0 x 10 <sup>-9</sup>	-8.2
Refractories <sup>3)</sup>	8.7 x 10 <sup>-11</sup>	-10.1
Siloxanes <sup>4)</sup>	6.5 x 10 <sup>-11</sup>	-10.2

<sup>1)</sup> The emission rate is calculated using the detected mass based on the response of the standard, the analyzed unit and the sampling duration.  
<sup>2)</sup> SVOC are airborne SVOC.  
<sup>3)</sup> Refractories are compounds containing elements other than C, H and O (for example S, P, N, Si, ...).  
<sup>4)</sup> Siloxanes and other Si-containing organic substances. Siloxanes also count as refractories.

The measuring devices used for the qualification tests are calibrated at regular intervals; their results can be traced back to national and international standards. In cases where no national standards exist, the test procedure implemented complies with the technical regulations and norms applicable at the time of the test. The relevant documentation can be viewed on request at any time.

Detailed information and parameters of the test environment can be found in the Fraunhofer IPA test report.

Fraunhofer Institute for Manufacturing Engineering and Automation IPA

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Business unit Testing and Certification

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Report No. current document

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on behalf of   
Dr.-Ing. Frank Bürger, head of business unit Testing and Certification