

Reference Material Certificate

ISSUED BY STANHOPE-SETA Richardson Laboratory

PRODUCTION DATE 2024-02-14 CERTIFICATE NUMBER 000163

Certificate Issued By:

SETA

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Approved By: Duncan Black Signature:

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Name of material: Small Scale Certified Flash Point Material

Product code: 99878-3 Batch number: 2402054001

Description of CRM: Liquid hydrocarbon mixture.

Method of Certification: This certified reference material is manufactured in conformance to ISO 17034. Certified values are the mean results obtained by a statistically significant number of participating laboratories following the relevant test method and meeting the requirements of ISO 17025 where available. This method of characterization of the material by multiple laboratories following standardised methods is a consensus standard and conforms to the

requirements in ISO 33405 (previously ISO Guide 35).

Uncertainty (\pm °C), k=2

Instructions for

handling of the CRM:

CRM must be stored in the original tightly closed bottle between 15-25 °C. This certificate is only valid for the first 50 % of the total volume. Do not

return removed aliquots to the bottle.

Hazards: Refer to SDS '99878-3, Small Scale Certified Flash Point Material'.

Certified Value:

| Test Method | ASTM D3278 | ASTM D3828 (Method B) | ASTM D7236 |
|--------------------------------------|------------|--------------------------|------------|
| Flash point (°C) | 76.1 | 76.4 | 77.1 |
| Uncertainty (± °C), k=2 | 0.9 | 0.5 | 0.5 |
| Test Method | ASTM D4052 | · | |
| Density at 15 °C(kg/m ³) | 808.7 | | |

The reported expanded uncertainty is based on a standard uncertainty multiplied by a coverage factor k=2, providing a level of confidence of approximately 95 %. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document applies.



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Page 2 of 2

Intended use: Certified reference material to be used in accordance with ASTM D3828

(Method B), IP523 (Procedure B and C), EN ISO 3679 (Procedure B and C), ASTM D3278, ASTM D8174, ASTM D7236 flash point methods and the ASTM

D4052 density method.

Commutability: ASTM D3828 (Method B), IP 523 (Procedure B), ISO 3679 (Procedure B) and

ASTM D8174 are commutable. ASTM D7236 and ISO 3679 (Procedure C) are

commutable.

Level of Homogeneity samples are selected by a random sampling procedure. It has homogeneity:

been demonstrated that this CRM batch is homogenous from inter-bottle

been demonstrated that this CRM batch is homogenous from inter-bottle testing. Stability is guaranteed during the whole shelf life provided the

solution is kept under the conditions specified.

Expiry date: 3 years from date of production. The certification is nullified if the material is

damaged, contaminated, otherwise modified, or used in a manner for which

it was not intended.

For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document applies.