

## AAPA National Proficiency Testing Round 2019/2020

### Instruction sheet for test stream 7: Polymer Modified Bitumen (A15E)

#### Description:

Samples of PMB (Class A15E) will be sent to the participating laboratories for PMB stream of the AAPA 2019/2020 Proficiency Testing Round.

Participants are encouraged to complete the following tests on polymer Modified Binder sample provided:

#### Test methods:

- Viscosity at 165 °C (Pa.s) AS/NZS 2341.4 or AGPT/T111
- Torsional recovery at 25 °C, 30 s (%) AGPT/T122
- Softening point (°C) AGPT/T131
- Stress ratio at 10 °C min. AGPT/T125
- Consistency 6% at 60 °C (Pa.s) min AGPT/T121
- Stiffness at 15 °C (kPa) max. AGPT/T121
- Segregation (%) max. AGPT/T108
- Loss on heating (% mass) max. AGPT/T103

To report the results, access the webform by clicking:

<http://www.123formbuilder.com/form-5319415/s7-pmb-tests>

Please note that you will need the **Laboratory ID Code**, which has been sent to you via e-mail to complete the webform.

**Submit results by 30 June 2020**

#### Procedure:

Binder samples will be sent to laboratories in 1 litre tin. The sample is A15E.

Each container has a unique sample number.

#### *Sample preparation:*

- Samples to be prepared in accordance with AGTP/T102 "Protocol for Handling Modified Binders in Preparation for Laboratory Testing"

#### *Reheating:*

- Set the fan-assisted oven to a temperature not exceeding 180 °C
- Remove the lid from the sample container and remove any rubber seal in the lid. Place the bulk sample in the oven with the lid loose - Samples of 1 L or less shall not be heated for more than 2.5 h.
- Prepare subsamples only when the bulk sample can be stirred freely and no unmelted lumps can be felt with the spatula
- A new subsample of binder should be used for testing if the initial binder sample has already been heated twice using the

#### Tests on **bitumen sample**

1. Viscosity at 165°C
2. Torsional recovery at 25 °C, 30 s (%)

3. Softening point (°C)
4. Stress ratio at 10 °C min.
5. Consistency 6% at 60 °C (Pa.s) min
6. Stiffness at 15 °C (kPa) max.
7. Segregation (%) max.
8. Loss on heating (% mass) max.

**Reporting:**

Use webform to report:

- Sample ID

**1. Viscosity at 165°C**

- Viscosity, in Pa.s
- Brookfield viscometer model.
- Spindle model number.
- Rotational speed.

**2. Torsional recovery at 25 °C, 30 s (%)**

- Torsional Recovery at 25 °C (%) – average result

**3. Softening point (°C)**

- Softening Point, in °C – average result
- Medium (water/glycerol)

**4. Stress ratio at 10 °C min.**

- Average of duplicate stress at 3 strain results, to the nearest 0.01
- Average of duplicate stress at 10 strain results, to the nearest 0.01
- Average of duplicate stress ratio results, to the nearest 0.01.

**5. Consistency 6% at 60 °C (Pa.s)**

- Consistency 6% in Pa.s – average result
- Sample mould

**6. Stiffness at 15 °C (kPa) max.**

- Stiffness at 15 °C (kPa) – average result
- Sample mould

**7. Segregation (%) max.**

- Segregation to the nearest 0.5%.

**8. Loss on heating (% mass) max.**

- Loss on heating result (%)