



What You Should Know About PG Binder Technician Certification

Michael T. Beavin, Technical Training Coordinator
Asphalt Institute



Let's Begin With a Quiz!

asphalt | institute

- What is variability?
 - Can you eliminate variability with practice?



Variability

- What is Variability?
 - The standard error that occurs in any process that makes one sample different to some extent from another sample
- What are the Sources of Variability?
 - Materials
 - Sampling
 - Testing



Repeatability and Reproducibility

- Repeatability
 - Single operator precision
 - How similar are test results run on the same sample in the same lab on the same equipment?
- Reproducibility
 - Multi-laboratory precision
 - How similar are test results run on the same sample in different labs?



AASHTO T315 – DSR

asphalt | institute

Condition	Coefficient of Variation (1s%)	Acceptable Range of Two Results (d2s%)
-----------	--------------------------------	--

Single Operator Precision:

Original $G^*/\sin \delta$ (kPa)	2.3%	6.4%
RTFO $G^*/\sin \delta$ (kPa)	3.2%	9.0%
PAV $G^*\sin \delta$ (kPa)	4.9%	13.8%

Multilaboratory Precision:

Original $G^*/\sin \delta$ (kPa)	6.0%
RTFO $G^*/\sin \delta$ (kPa)	7.8%
PAV $G^*\sin \delta$ (kPa)	14.2%

Is this really
Acceptable?

17.0%

22.2%

40.2%



State/State Endorsed Certifications

asphalt | institute

Several excellent programs

- Conducted at top-notch facilities by experienced instructors
- May be state specific or satisfy minimum state requirements
- None maintain regional/national reciprocity
 - Differences in program content (review)
 - Differences in certification requirements (exams)

What about reciprocity?



Regional Certification/The NETTCP

asphalt | institute

Formed in 1995 as cooperative effort within the NEAUPG to:

- Increase the knowledge of production and field technicians
- Reduce the problems associated with test result differences
- Eliminate individual state certification programs and the issue of reciprocity
- Move forward in standardization of test methods and test procedures used by the North Eastern states



Multiple Certifications

asphalt | institute

Confusing

Expensive

Time-consuming

VARIABLE!

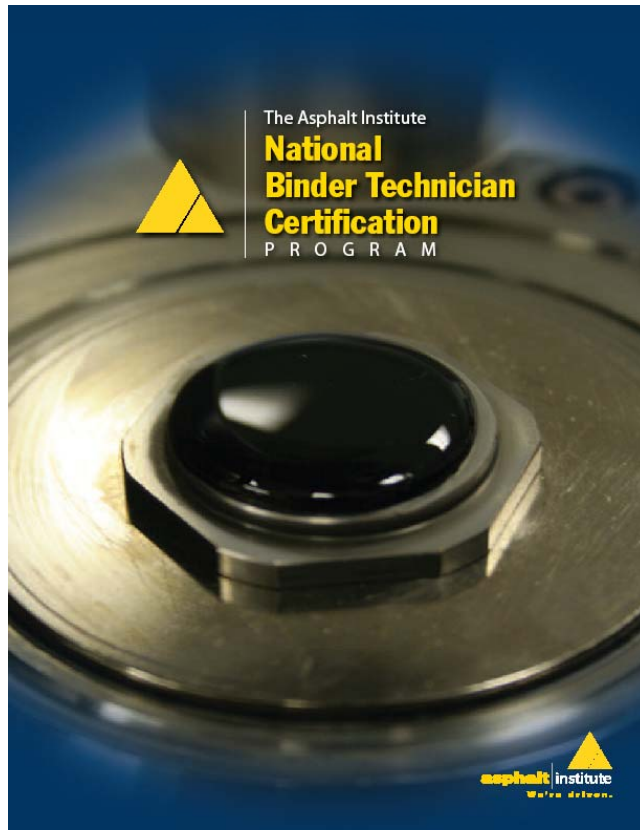


Consistency Reduces Variability!

asphalt | institute

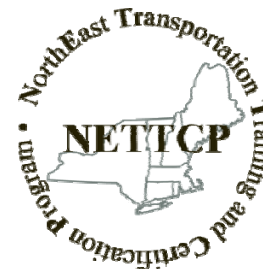
The Asphalt Institute, in cooperation with the North East Transportation Training and Certification Program (NETTCP) and working with the AASHTO Materials Reference Lab (AMRL) and industry leaders, has developed one consistent, national PG binder technician certification.





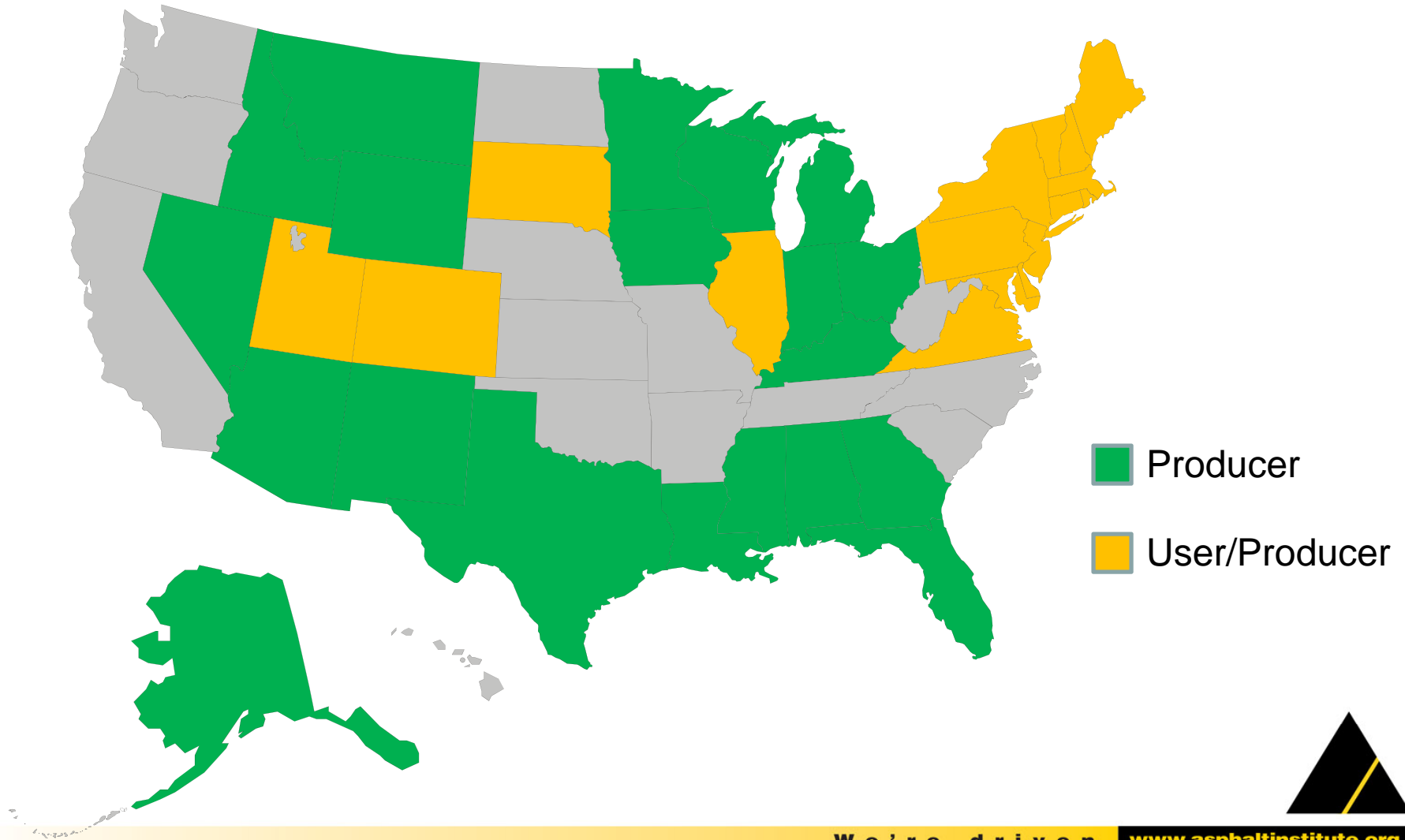
National Binder Technician Certification Program

Reciprocal with the
NETTCP binder program



Are Your Technicians Nationally Certified?

asphalt | institute



NBTC Mission

The National Binder Technician Certification program was developed to address a need recognized by our membership to reduce variability in PG binder test data. The NBTC will achieve this goal by promoting a standard laboratory best-practice and ensuring that asphalt binder technicians are knowledgeable and fully qualified to produce valid specification compliance and quality assurance data.



Reciprocity

- 1990s- The NETTCP binder technician program was formed as a cooperative effort within the NEAUPG.
- 2008- Asphalt Institute launched the NBTC.
 - Work began in early 2000s
- The programs share the same text, lecture and examinations.
- Fully reciprocal



What about AMRL?

- AMRL certifies the laboratory
- The NBTC certifies the technician

The Asphalt Institute is working closely with AMRL to standardize both programs wherever appropriate



Certification Process (Application)

asphalt | institute

NBTC Certification Application

- Verify required work experience. Two options:
 - Sixty days under NBTC certified technician
 - Six months performing AASHTO M 320 tests.




Certification Process (Course Format and Attendance)

asphalt | institute

Course Format

- One and one half days lecture
 - 30-60 min/chapter
- Review sessions
 - End of lectures
 - Before written exam
- Practical Examination
- Written Examination



Must attend
ENTIRE
program and
pass exams
To achieve
Certification



Certification Process (Exams)

Written Exam

- Multiple choice, grading problems
 - Two hours/Open book, note
 - Minimum 70% in each of four sections
 - Minimum 80% aggregate

Practical Exam

- Elements: DSR, BBR, optional DTT
 - 40-45 minutes per element
 - 85% passing score per element
 - Closed book/note



Certification Process (Retesting)

asphalt | institute

Retesting

– Written Exam

- Pass practical exam
- Within six months
- One retest

– Practical Exam

- Pass written exam
- Same day
- One retest

On-line retest
option only if
pass practical



Certification Process (What to expect if Passing/Failing)

asphalt institute

If Passing

- NBTC Certificate
- ID card
- PDH certificate

If Failing

- PDH certificate
- On-site retest
- On-line retest option



Recertification Process

Recertification

- 5 year cycle
- Notification
- Review course
- Review exams
- Shorter course



Asphalt Institute welcomes host facilities!

- Sends clear message that accuracy is your priority
- Reduces travel costs
- Pursue certification at your own facility on familiar equipment



Not National Yet?

AI welcomes state certification programs to join the Asphalt Institute in conducting the NBTC at their facilities

- Instructor training
- Consistent review course/examinations
- Administered by AI
 - Periodic program reviews
 - Exam grading
 - Issues Certificates
 - Recertification notices



Is The Problem Real?

“Different agencies within the conference
have different methodologies for some
parts or entire procedures”

UPG

END

Questions/Comments?

For more information, contact Mike Beavin
mtbeavin@asphaltinstitute.org

