

4 mm Update

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Task Force Activities

1. Sample preparation – new procedures are needed to ensure adhesion between plates and binder
2. Machine compliance correction – fixture-specific machine compliance is needed for low-temperature testing
3. Ancillary activity – verification of time required for specimen thermal equilibrium
 - ✓ Incorporated in forthcoming update of DSR test method

Working drafts received limited circulation now ready for general distribution to ETG and beyond



Products

- ❑ Two protocols appear to give similar results
 - ✓ Draft protocol is available for general distribution
- ❑ Equilibrium occurs rapidly – within few minutes
 - ✓ Time to equilibrium is not an issue
- ❑ Physical hardening is binder dependent as expected
 - ✓ Can be significant/Binder dependent
 - ✓ Test protocol needs to account for physical hardening
 - ✓ If unaccounted for test variability may be unacceptable
- ❑ Depending on purpose of testing, physical hardening may be an issue.



Issues Remaining

- ❑ Specifying linear region
 - ✓ Broader than first expected
- ❑ Testing sequence
 - ✓ Increasing or decreasing temperature steps
 - ✓ Increasing or decreasing frequency
- ❑ Consideration of physical hardening
 - ✓ Test sequence?
 - ✓ Data correction by extrapolation to zero time?
- ❑ Ruggedness testing
- ❑ Training and subsequent Round robin testing
 - ✓ Need supplier and user labs with proper training before RR!
- ❑ Algorithms for specification use



Conclusion.....

- ❑ All test data for main experiment is complete
 - ✓ Data mining essentially complete
 - ✓ Need to document work in comprehensive final report
- ❑ Original goals of task force on 4mm are essentially complete
 - ✓ Have protocol that can be used by researchers and that can form basis of ruggedness and round robin testing
 - ✓ Consensus is that while useful tool that should be promoted replacement for BBR as specification tool is doubtful
 - ✓ Need funding to continue work
- ❑ Focus on 8 mm repeatability
 - ✓ Also charge of group