

# AFCAP



## AFCAP Ethiopia Workshop

### Wearing Course Specifications

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### Standards and Specifications for wearing courses



- Performance of wearing course – What is important?
- Grading – fine and coarse
- PI – quality of clay
- PP (Plasticity Product) =  $PI \times P_{0.075}$
- Gravel matrix (Grading) and binder (PP)
- Research work carried out in Mozambique, Ghana, Zimbabwe, Ethiopia, Lesotho and Uganda



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## Calculations



Where:

- $I_{p_{0.075}}$  = the Plasticity Index of the material passing the 0.075mm sieve
- Plasticity Product (PP) =  $I_{p_{0.075}} \times$  %age of material passing 0.075mm sieve

The preferred range is 280-480

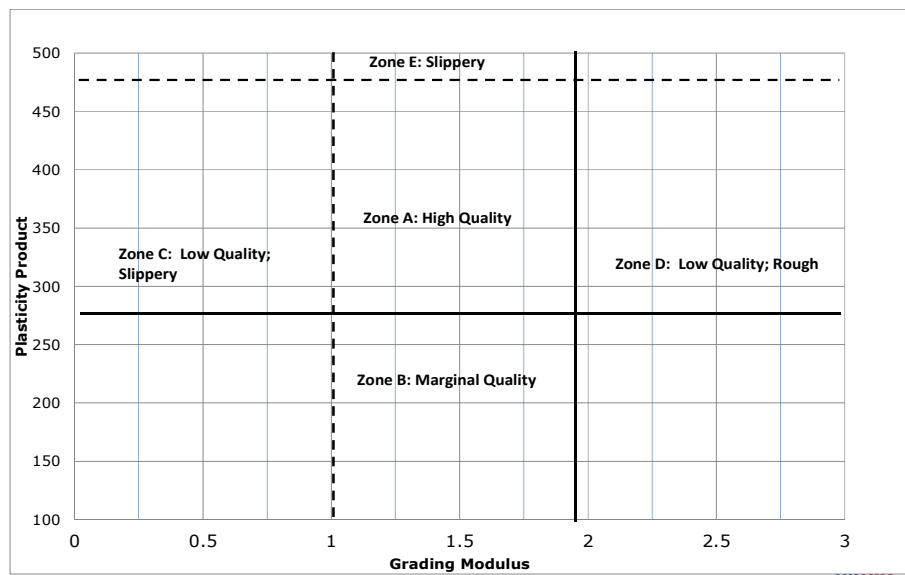
$$GM = 3 - \left( \frac{P_{2.36} + P_{0.425} + P_{0.075}}{100} \right)$$

- Where:
- $I_{p_{2.36}}$  = percentage passing 2.36 mm sieve
- $I_{p_{0.425}}$  = percentage passing 0.425 mm sieve
- $I_{p_{0.075}}$  = percentage passing 0.075 mm sieve
- The preferred range is 1.0-1.9



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## Components of a road pavement



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## Cumbana Chacane Road – Blending Before and after intervention



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## Results



- The specifications have been trialled in Ethiopia (6 months to 3 years)
- Mozambique ( 6 months to 5 years, no maintenance grading for 2 years)



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**Thank you**

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