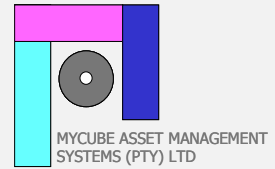




## Progress on TRH1 Prime Coats and Precoating Fluids

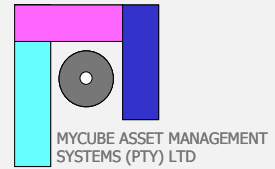
Gerrie van Zyl  
15 November 2107

# Scope of presentation



- **Background and Progress**
- **Content summary**
- **Highlights**
- **Feedback required**

# Background



- **TRH1: 1986 (Prime coats and curing membranes)**
- **SABITA Manual 26: 2006**
  - Interim guidelines for primes and precoating fluids
  - Need to omit Tar products
  - Included Precoating materials
  - Excluded Curing membranes
- **Decision 2017**
  - Update TRH1 (Manual 26 as starting point)

# Progress

- **First Draft Released (October 2017)**
- **Comments from TRH1 team**
- **Update and wider distribution for comments**
- **Final Draft TRH1 (March 2018)**
- **Main issues**
  - Should precoating be part of this document ?
  - Curing membranes definitely out



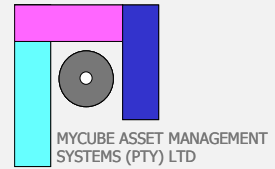
TRH 1

**Guidelines for primes and  
stone precoating fluids**

Version 1.0  
October 2017

Committee of Transport Officials

# Contents



## Preface

## Definitions

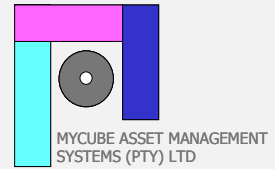
### 1 Introduction

- Background
- Overview of this Guideline

### 2 Priming of bases

- Functions of a prime
- Requirements of a prime
- When can a prime coat be omitted?

# Contents (Prime)



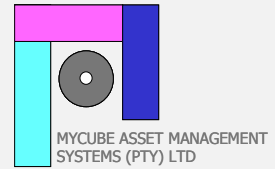
## 3 Types of prime

- Standard products
- Proprietary products

## 4 Selection criteria

- General guidelines
- Specific guidelines for on-site selection and appropriate application rates
  - a) Penetration
  - b) Drying time
  - c) Softening of the base
  - d) Permeability and carbonation

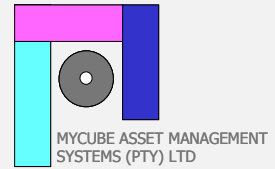
# Contents (Prime)



## 5 Construction considerations

- Preparation of the base
- Weather limitations and base moisture content
- Application of the prime
- Drying of the prime and opening to traffic
- Priming bases that contain soluble salts

# Contents (Precoating)



## **6 Stone precoating fluids**

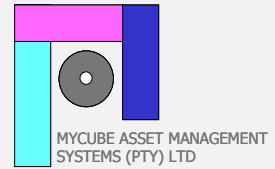
- Functions of a precoating fluid
- Factors dictating the need to precoat
- Requirements of a precoating fluid
- Selection of a precoating fluid
- Alternative construction techniques to the use of precoating fluids
- Application rates

## **7 Construction considerations**

- Procedures for precoating
- Dry versus moist precoating

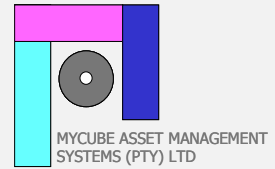


# Some highlights



- **Terminology**
- **When can we omit the prime coat**
- **Guidelines for selection of prime coats**
- **Should precoating be dry before seal ?**

# Terminology



- **Prime coat**

- A coat of suitable bituminous binder applied to a non-bituminous granular pavement layer as a preliminary treatment prior to the application of a bituminous base or surfacing.

- **Tack coat**

- First spray of bituminous binder applied during the sealing process

- **Bond coat**

- A coat of suitable bituminous binder applied to a primed or bituminous surface to promote adhesion between the existing and a new asphalt pavement layer

# To Prime or not to Prime ?

- **Old debate**

- Lessons learnt
- Always prime



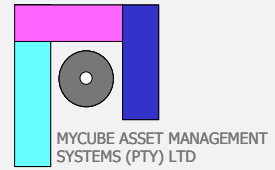
- Exceptions

- BSM layers ?
- Otta seals
- Other...



M Pinard


# Guidelines for Prime Selection



- **On site evaluation (Different products applied)**
  - Penetration
  - Drying time
  - Softening of the base
  - Permeability (in case of stabilised layers)
  - Carbonation (in case of stabilised layers)

# Guidelines for Prime Selection

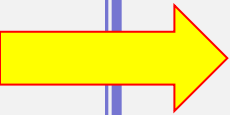
- **On site evaluation (Different products applied)**

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  - Drying time
  - Softening of the base
  - Permeability (in case of stabilised layers)
  - Carbonation (in case of stabilised layers)

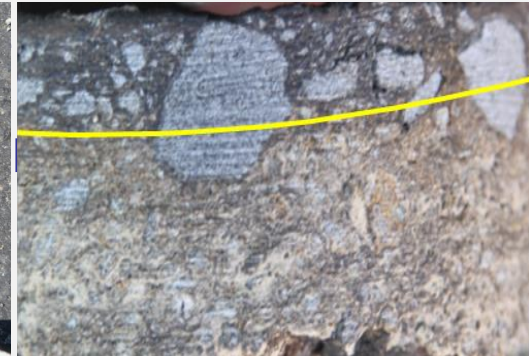
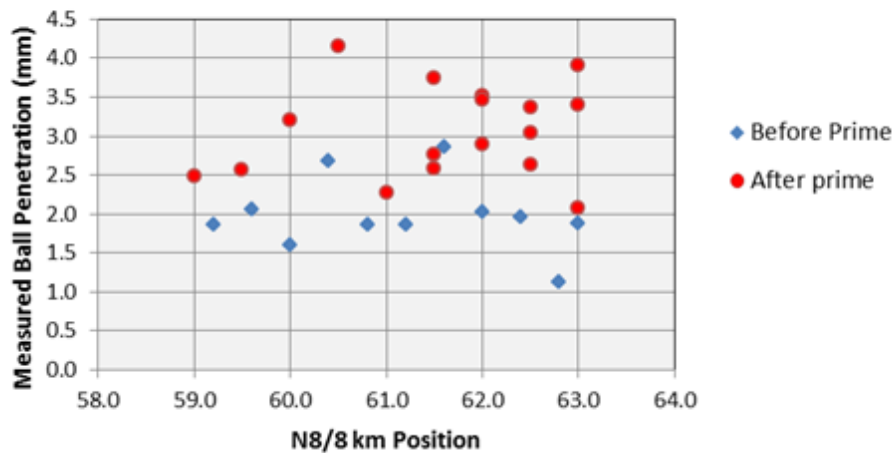


# Guidelines for Prime Selection

- **On site evaluation (Different products applied)**
  - Penetration
  - Drying time
  - Softening of the base



**Increase in Ball Penetration after Prime**



# Guidelines for Prime Selection

- **On site evaluation (Different products applied)**
  - Penetration
  - Drying time
  - Softening of the base
  - Permeability (in case of ...)
  - Carbonation (in case of stabilised layers)

Not the purpose of the prime,  
but could have an effect



S Kotze/ J Muller

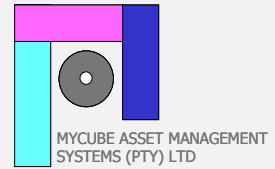
# Precoating (Yes/No) (Dry/Moist) ?

- **Different opinions**
- **Situations, seal binders, products and effects discussed – Guidelines provided**
- **Lessons learnt from Winter seal project**





# Your comments are valuable !



- **Should precoating be omitted**
  - Dealt with in new TRH3 ?

# END

