



**TITLE** : Fire Tests on Conveyor Belts used underground.

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## 1. INTRODUCTION

A technical committee for mining standards decided that the British Coal Board Standard test method be adopted, more details on the tests required can be found in **Section 2**. Testing Dynamic Gas Analysis is optional but will provide more details on actual combustion product emissions during the conveyor belt test.

## 2. SCOPE OF TESTING

### 2.1. TESTS DONE AT FIRELAB

#### **SANS 10177 – 9 Small-scale vertical fire propagation test**

A 1.5 m long by 150 mm wide sample of belting is required for this evaluation, while a single roller unit would also be used for this test. The flame spread properties in a vertical orientation will be assessed.

#### **DEFSTAN (NES 713) Toxicity of gases released upon heat exposure/combustion**

The toxicity index for gases released upon the combustion of the material will be determined during this evaluation. A sample size of 5 g is needed but this can be scavenged from the small-scale fire propagation test samples.

#### **SANS 340 Ignitability (Finger test)**

10 fingers of 25 mm wide by 150 mm long are cut in a longitudinal direction of the belt and 10 across or perpendicular to the belt. This is to determine the ignitability of the belt with and without cover.

### 2.2. TESTS DONE AT KLOPPERSBOS BUT CONDUCTED BY FIRELAB

#### **High energy Propane burner test (BC Spec 158)**

A 4 m long sample of normal width is required for this evaluation. The sample can be delivered to **FIRELAB**, who will arrange for the test to be performed at Kloppersbos. CSIR will charge **FIRELAB** a fee for the use of their facilities and this is included in the test cost detailed below.

## 2.3 DYNAMIC GAS ANALYSIS

Smoke and combustion gas samples taken at intervals during the test and a GCMS analysis done at an independent laboratory on behalf of **FIRELAB**

### 3. DURATION AND SCHEDULE

Once the sample, deposit, and all supporting documentation have been received, arrangements will be made with **Kloppersbos** for a test date. The report will be available within four weeks after completion of all of the tests, and will only be released once the balance of the total invoice has been settled in full.

### 4. TERMS AND CONDITIONS

Samples should be delivered to **FIRELAB**, Building 28, CSIR Pretoria Campus, Meiring Naudé Road, **BRUMMERIA**, Pretoria, South Africa, 0184.

A deposit is payable upfront in order to secure the **Kloppersbos** Facility. The facility price may change during the course of the year as we rely on the CSIR for this price.

If the samples are not prepared as per the guidelines in the scope of testing in **Section 2** an additional fee will be charged for **FIRELAB** to prepare these samples.

**FIRELAB** would require a purchase order and all the relevant test specimen information prior to scheduling the facility or commencement of testing. The purchase order will serve as an acceptance of this proposal.

You will be invoiced upon completion of the project and once payment has been received, the report will be released.