

# TEST REPORT: 7191098197-CHM14-03-TSL

Date: 08 OCT 2014

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Client's Ref:

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PSB Singapore

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## SUBJECT

Evaluation of Toxic Fumes Generated From Material Sample During Burning

## CLIENT

EGE Carpets Asia Pte Ltd  
10 Anson Road  
#13-16, International Plaza  
Singapore 079903

Attn : Ms Jermaine Ching

## SAMPLE SUBMISSION DATE

25 Sep 2014

## DESCRIPTION OF SAMPLE

A piece of material sample labelled as follows was received.

Sample Information		Figure of Sample
Brand Name :	Egetaepper a/s	
Model :	Highline 1100WT	
Type of Product :	Tufted cut pile carpet on woven textile	
Type of Material	100% Polyamide with Woven Textile Backing	
Nominal Density (g/cm <sup>3</sup> ):	0.155	
Nominal Thickness (mm):	8	

## DATE OF ANALYSIS

26 Sep 2014 – 08 Oct 2014



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## **METHOD OF TEST**

### **Analysis of Pyrolysis and Combustion Gases Generated From the Sample**

The test was conducted according to BS 6853:1999 Annex B, B.1 Mass Based Test Method - NF X 70-100 (2006) Method:

#### **1.1 Sample Preparation of Test Specimen**

The sample was conditioned at 23°C and 50% Relative Humidity for 48 hours and tested as whole for the following tests.

#### **1.2 Generation of Pyrolysis and Combustion Gases**

Approximately 1.0 g of the sample was then used for the test in a stream of air at the air flow rate of 120L/hr at 400°C for 20 minutes in a tube furnace. A further 20 minutes was used to air-flush the apparatus once residue sample was removed from tube furnace.

Toxic fumes collected during the burning were analysed by the following methods:

- a) Carbon Monoxide and Carbon Dioxide : Directly determined by Horiba Automotive Emission Analyzer
- b) Hydrogen Cyanide : By Pyridine – Pyrazalone Method
- c) Others ions: By Ion Chromatography

## RESULTS

Table 1: The Toxic Fumes Results For "Egetaepper a/s, Model: Highline 1100WT" Sample

Toxic Fumes Generated	"Egetaepper a/s, Model: Highline 1100WT" (mg/m <sup>3</sup> of Fire Effluents)	IDLH Values Limits <sup>a</sup> (mg/m <sup>3</sup> )
1. Carbon Dioxide, Average (Carbon Dioxide, maximum)	<200 358	73000 -
2. Carbon Monoxide, Average (Carbon Monoxide, maximum)	<200 <200	1400 -
3. Hydrogen Fluoride, HF	<5	25
4. Hydrogen Chloride, HCl	<5	76
5. Hydrogen Bromide, HBr	<5	101
6. Sulfur Dioxide, SO <sub>2</sub> <sup>b</sup>	<5	270
7. Nitrogen Dioxide, NO <sub>2</sub> <sup>c</sup>	<5	38
8. Hydrogen Cyanide, HCN	<5	56

<sup>a</sup> The values in Table 1 are the IDLH values of the listed gases (the concentration of the gas in the atmosphere which for an exposure time of 30mins is immediately Dangerous to Life or Health) given in the NIOSH Guide [1].

<sup>b</sup> Sulfur Dioxide includes Sulfur trioxide expressed as sulfur dioxide

<sup>c</sup> Nitrogen dioxide includes nitric oxide expressed as nitrogen dioxide

1. The above results from the analysis of the toxic fumes generated from the specimen were found to be below the IDLH Value of listed gases.
2. The weighted summation index, R, is less than 0.3.

## Remarks

The weighted summation index R for the sample tested was found to be within the requirement of 1.0 max when tested and assessed according to NF X 70-100 with R calculated in accordance with Annex B of BS 6853:1999.



MS TAN SER LING  
TECHNICAL EXECUTIVE



DR XIAO ZHOU  
PRODUCT MANAGER  
MICROCONTAMINATION DIAGNOSIS  
CHEMICAL & MATERIALS

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