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**UNIVERSITI TEKNOLOGI MARA**

**AN EVALUATION OF SAFE  
TRANSPORTATION OF  
DANGEROUS GOODS BY ROAD IN  
MALAYSIA**

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Thesis submitted in fulfilment  
of the requirements for the degree of  
**Master of Science**

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## ABSTRACT

In Malaysia, as a result of her rapid expansion in the manufacturing sectors to accommodate the country's moving towards developed nation by year 2020, saw the increase in interstate shipments of dangerous goods by road in Malaysia. Although there has been no major accidents involving transportation of dangerous goods by road in Malaysia, the high rate of road accidents concerning motor vehicles has led to the increase concern on the risk of transporting the Dangerous Goods by road in Malaysia. This thesis aimed at investigating the factors that leads to safe transportation of Dangerous Goods in Malaysia and how far these factors has been practiced while transporting them. Survey as well as interview method had been used to investigate these factors on Dangerous Goods transporters and manufacturers in Malaysia. The thesis concluded that that factors affecting safe transport of dangerous goods by road in Malaysia includes 1)Adequate and effective training provided to all personnel handling, storing and transporting Dangerous Goods 2)Correct and Adequate consignment procedures 3)Adequate enforcement and legal requirement being practice and 4)Correct setting of route for Dangerous Goods shipments.

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# **CHAPTER ONE**

## **INTRODUCTION**

### **1.0 INTRODUCTION**

This chapter describes the overview of the study, justification of the study, objectives of the study, significance of the study, scope and limitation of the study. The chapter begins with the explanation on the increase in the transportation of dangerous goods in and out of Malaysia through port, increase in interstate movement of Dangerous Goods in Malaysia coupled with the increase in road accidents in Malaysia has raised concern on the increase risk of exposure of Dangerous Goods to people property and the environment in Malaysia. Although there has been no major accidents involving Dangerous Goods by road in Malaysia, the high rate of road accidents concerning motor vehicles has led to the increase concern on the risk of transporting the Dangerous Goods by road in Malaysia.

### **1.1 BACKGROUND OF THE STUDY**

#### **1.1.1 What is Dangerous Goods?**

International standard term for goods covered under the 'UN Recommendation On The Transport Of Dangerous Goods' defines 'dangerous goods' as articles or materials capable of posing significant risk to people, health, property or environment when transported in quantity.(UN recommendation on transport of Dangerous Goods, 17<sup>th</sup> Edition, 2011).

It includes common items used such as aerosol, perfumes and paints. Although most transport regulations are now closely aligned with the UN Recommendations, the regulations for air, road, rail, and sea transport are not identical. Major international agreements ruling transportation of dangerous goods include IATA Dangerous Goods Regulations, ICAO Technical Instructions, International Carriage Of Dangerous Goods By Road and International Maritime Dangerous Goods Code , Business Dictionary (2010).