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**Draft Zambian Standard**

**TRANSPORTATION OF PETROLEUM PRODUCTS:  
Operational Requirements for Road Tank Vehicles – Code of  
Practice**

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*This Draft Standard is for  
Public Comment **ONLY** and  
should **NOT** therefore be  
referred to as a Zambian  
Standard*

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A Zambian Standard does not purport to include all the necessary provisions of a contract. Users of Zambian Standards are responsible for their correct application.

## TECHNICAL COMMITTEE RESPONSIBLE

The preparation of this Zambian Standard was undertaken by the Transportation of Petroleum Products Technical Committee (TC7/7) upon which the following organization were represented:

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Department of Energy, Ministry of Energy  
ENAC Driver Training and Transport Consultancy  
Energy Regulation Board (ERB)  
Juba Transport Zambia Limited  
Ministry of Local Government and Housing – Fire Department (Lusaka and Ndola city councils)  
Puma Energy Zambia Limited  
Road Transport and Safety Agency (RTSA)  
Tazama Petroleum Products Limited  
Zambia Bureau of Standards (ZABS)  
Zambia Metrology Agency (ZMA)  
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## **FOREWORD**

This Zambian Standard has been prepared by the Technical Committee – Transportation of Petroleum Products (MMD TC 7/7), in accordance with the procedures of the Zambia Bureau of Standards (ZABS).

The review of the standard was necessitated by the shortcomings identified during implementation of the original standard ZS 372 of 2008. Further, there was a need to improve on operational efficiencies of road tank vehicle operators. The Technical committee was therefore reconstituted under the auspices of the Zambia Bureau of Standards and facilitated by the Energy Regulation Board.

Reference has been made to the following publication in the preparation of this standard:

SANS 10231: 2014      Transport of dangerous goods - Operational requirements for road vehicles

## **ACKNOWLEDGEMENT**

The Zambia Bureau of Standards would like to acknowledge the invaluable material and financial support of the Energy Regulation Board and all the institutions and stakeholders that contributed in the promulgation of this Standard.

**COMPLIANCE WITH A ZAMBIAN STANDARD DOES NOT OF ITSELF CONFER IMMUNITY  
FROM LEGAL OBLIGATIONS**

# ZAMBIA BUREAU OF STANDARDS

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## Draft Zambian Standard

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### TRANSPORTATION OF PETROLEUM PRODUCTS:

#### Operational Requirements for Road Tank Vehicles – Code of Practice

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## 0. INTRODUCTION

A substantial part of this standard deals with the roadworthiness of the conveying vehicle, the training of the driver and safe parking for road tank vehicles since these aspects are of utmost importance in the conveyance of petroleum products.

There is an economic limit to which the vehicle cargo can be protected against rupture on violent impact in an accident. Hence the main aim with respect to the safety aspects of conveying dangerous goods is to reduce the occurrence of such accidents to the lowest possible level. This can be achieved by adopting thorough preventive measures that cover all aspects of the working of the driver/vehicle combination and all stages of the conveyance, parking and loading operations. In addition all personnel involved should receive thorough training and be encouraged to be alert at all times to factors that affect safety.

This standard closely follows the work done by the United Nations Economic Commission for Europe (ECE) and published in the document, the European Agreement concerning the international carriage of Dangerous goods by Road (ADR).

The work of ECE is ongoing and amendments are continually being issued. Consequently and also as a result of newly acquired local experience this standard itself will be amended from time to time.

## 1. SCOPE

This standard establishes rules and procedures for the safe operation and handling of road vehicles that are used for the conveyance of petroleum products in excess of the exempt quantities (ZS 371) on any road (public or private).

The standard covers the following separate operations required for the transfer of petroleum products by road between two premises:

- i the loading of the petroleum products – responsibility of the consignor
- ii the driving of the vehicle that carries the petroleum products to its destination – responsibility of the Driver
- iii the movement of the vehicle that carries petroleum products to its destination - responsibility of the operator/transporter/consignor
- iv the safe parking of the vehicle that carries petroleum product at designated truck park/garages - responsibility of the operator/transporter/consignor

- v the operation of a truck parking facility/garage for petroleum tanker trucks – responsibility of the public /private operators/ transporters
- vi the unloading of the petroleum product responsibility of the consignee – operator

Each of the above operations is subject to agreement (s) between the relevant responsible parties and the needs to be carried out by qualified persons

## 2. NORMATIVE REFERENCES

The following standards contain provisions that through reference in this text constitute provisions of this standard. All standards are subject to revision and since any reference to a standard is deemed to be a reference to the latest edition of that standard. Parties to agreements based on this standard are encouraged to take steps to ensure the use of the most recent editions of the standards indicated below. Information on currently valid national standards can be obtained from Zambia Bureau of Standards.

ZS 371 Road Tank Vehicles for Petroleum based Flammable Liquids.

ZS 373 - 3 Portable Fire Extinguishers.

ZS 402 The classification of hazardous locations and the selection of Apparatus for use in such locations - Code of Practice

ZS 429 Part 4 The Handling, Storage, and Distribution of Liquefied Petroleum Gas (LPG) In Domestic, Commercial, and Industrial Installations  
Part 4: Transportation of LPG in bulk by road - Code of Practice

ZS 669 Road Vehicles- Vehicle Test Station Evaluation

Road Traffic Act No. 11 of 2002.

## 3. DEFINITIONS

For the purposes of this standard, the following definitions apply:

### 3.1 Accident

Any undesired circumstances which give rise to: ill-health or injury; damage to property, products or the environment; increased liabilities.

### 3.2 Authorised test station

An organisation whose function is to examine, measure or otherwise determine the roadworthiness of a vehicle.

**3.3 Consignee**

The person, company or organisation who accepts petroleum products that have been transported.

**3.4 Consignor**

The person or organisation who offers petroleum products for transport.

**3.5 Petroleum product**

Inflammable hydrocarbon.

**3.6 Emergency response centre**

An establishment, manned 24 hours per day, which provides emergency response action at the site of an incident (see 3.11) in its designated area.

**3.7 Emergency services**

Services that might be required at the scene of an incident (see 3.11) such as police, road traffic inspectors, ambulance, medical and fire teams.

**3.8 Dangerous goods placard (Hazchem)**

A system designed to enable emergency crews arriving on the scene of an incident (see 3.11) to determine from the Tremcard (see 3.18 and annex D 2) or manifest (see annex D.1), the identity of the cargo conveyed, the nature of the hazard presented and the emergency action to be taken to neutralize the danger.

**3.9 Heavy motor vehicle**

A goods vehicle with a gross vehicle mass (GVM) exceeding 3 500 kg or any other vehicle with a tare exceeding 3 500 kg.

**3.10 Truck Parks**

A truck park, also known as a truck stop or truck terminal, is a designated area where trucks and other commercial vehicles can park and rest.

**3.11 Incident**

An event that includes all undesired circumstances and “near misses” that could cause accidents.

**3.12 Manifest**

A document that identifies by name and UN number (see 3.18) the materials being transported and also the quantity of each of the materials carried in the cargo.

**3.13 Near miss**

Any form of incident that could have resulted in injury or loss but did not.

**3.14 Operator (owner)**

The person or organisation responsible for the use of a motor vehicle of any class contemplated in the Road Traffic Act 11 of 2002 (Operator fitness) and who has been registered as the operator of such vehicle.



### **3.15 Professional driving licence heavy goods vehicle**

A driving licence required (in terms of Road Traffic Act 11 of 2002) to be obtained by a driver to authorize the driver to drive a heavy motor vehicle conveying dangerous goods.

### **3.16 Professional driving permit conveying petroleum products**

A driving permit required (in terms of Road Traffic Act 11 of 2002) to be obtained by a driver to authorize the driver to drive a heavy motor vehicle conveying petroleum product.

### **3.17 Qualified person**

A trained person nominated by the contractually agreed responsible parties to control any specific task.

### **3.18 Stopping**

The temporary bringing to rest in a parked condition of a vehicle that would enable the driver to leave the cab for some purpose.

### **3.19 Substance identification number (S.I.N)**

The four-digit number allocated to a material in accordance with SABS 0228. The S.I.N is identical with the international UN number.

### **3.20 Transport emergency card (Tremcard)**

A document to be carried by the driver that lists the hazards and emergency information for a petroleum product that is being conveyed, for use by the driver during an incident or by the emergency services, if required. (See Annex D.2).

## **4. SYMBOLS AND ABBREVIATIONS**

**kPa** Kilopascal  
**Min** Minimum  
**Kg/m<sup>3</sup>** Kilograms per metre cubed

## **5. REGULATIONS**

The following Acts and their Regulations are relevant to the transportation of petroleum products:

- a) The Hazardous Substances Act, 1973 (Act 15 of 1973) and Regulations (in particular, Regulation R73, 11 January 1985 for road tankers as amended):
- b) The Energy Regulation Act, Cap 436
- c) The Factories Act Cap 441 of the Laws of Zambia
- d) The Road Traffic Act No 11 of 2002
- e) The Public Roads Act No 12 of 2002
- f) The Fire Services Act 1987 (Act 99 of 1987) as amended
- g) The Weights and Measures (Assize) Regulations, 1998 (The Laws of Zambia, Volume 23 Cap 403).
- h) The Occupational Health and Factories Act, Cap 441 of the Laws of Zambia

## 6. PROVISIONS

### 6.1 THE OPERATOR/TRANSPORTER

- 6.1.1** For the purpose of transporting petroleum products the operator shall be licenced by the Energy Regulations Board (ERB) as a petroleum products operator and shall be conversant with the provisions of this standard.
- 6.1.2** The owner of a motor vehicle is the operator/transporter thereof, unless he/she has concluded a legally binding agreement with another person or company in relation to the operation of the vehicle. In the case of such an agreement the person or company identified as such in the agreement is deemed to be the operator/transporter for the duration of that agreement.
- 6.1.3** The operator/transporter/consignor shall ensure that the vehicles used for the purpose of conveying petroleum based flammable liquids comply with the requirements of ZS 371 and ZS 429 Part 4.
- 6.1.4** A transportation contract covering the loading, transportation and unloading operations that relate to the transportation of petroleum products and covering all the aspects listed below shall be drafted by the supplier/consignor and signed by all the parties concerned to ensure that every person involved in the project is fully briefed before the start of the operation:
- a. The nature and quantity (mass or volume) of the substance(s) to be conveyed per consignment and in total
  - b. the type of vehicle and equipment to be used
  - c. the type and exact location of each petroleum storage facility
  - d. the timing schedule of the operation
  - e. the selection and designation of qualified persons to take charge of and to be responsible for the loading and unloading operations at each location
  - f. any special arrangement in deviation from normal practice that needs to be agreed upon for conveyance of the petroleum product
  - g. the need for any special permits to handle, transport or store the petroleum products.
- 6.1.5** The operator/transporter/consignor shall before transporting petroleum products inspect or obtain details of the loading and unloading facilities to be used (see 6.1.4 (c) in order to:
- a. ensure that the loading and unloading facilities for bulk cargoes, conform to the requirements
  - b. check the entry and exit space for his vehicle at each depot
  - c. satisfy himself that the facilities and safety standards at each depot are adequate and

- d. check where applicable the compatibility of the hose connections, loading ramps, height of facilities etc.

**6.1.6** The operator/transporter/consignor shall ensure that the vehicle to be used can be so loaded as to comply with the axle loading requirements of the Public Roads Act and he shall provide a valid calibration or verification certificate for loading to ensure that the loading operator can fulfil his obligation in this regard. In the case of bulk liquid cargo, the quantity to be filled shall not result in stability problems owing to excess ullage.

**6.1.7** The operator/transporter/consignor shall conduct periodic route risk assessments to identify possible road hazards. This is not necessary on a load-by-load basis if the traffic is regular. There will be cases, such as emergencies, when it will not be possible to do normal planning of the route, and these cases should be documented as such.

**6.1.8** The operator transporter/consignor shall before transporting petroleum products obtain the following from the consignor:-

- a. Full written details including medical information relating to the substance hazard and handling and the emergency action to be taken in the event of spillage and
- b. an appropriate Tremcard listing the above information and such written instructions as might be necessary for handing over to the vehicle driver

Furthermore, he shall ensure that the driver has understood the procedures and instructions fully and that he is capable of implementing them.

**6.1.9** The operator/transporter/consignor has the full set of obligatory dangerous goods placards (Hazchem placards) appropriate to the hazard in accordance with ZS 371. The consignor shall ensure that the placards are displayed at all times on the road tank vehicle.

**6.1.10** The operator/transporter/consignor shall ensure that his driver is in possession of a valid public service vehicle (PSV) class C or CE category D driving licence for conveying petroleum products (see 3.15) and that he has been competently trained in:

- a. driving the type of vehicle he is going to use
- b. dealing with the particular hazards and requirements of his intended load
- c. operating any special equipment provided on the vehicle including the fire extinguishers
- d. first aid training, and;
- e. the use of personal protective Equipment (PPE)

**6.1.11** The operator/transporter/consignor shall ensure that his driver is medically fit in accordance with the procedure laid down in 6.2.2 (f).

**6.1.12** The operator/transporter/consignor shall ensure that the driver undergoes training conducted by a registered training provider/local fire authorities in the following:

- i. defensive driving of petroleum road tank vehicles
- ii. wearing of protective clothing
- iii. handling of petroleum products in general
- iv. basic fire safety.

In addition such a training shall be given if a change is to be made with regard to a class of dangerous goods and it has not been covered in the annual refresher course.

- 6.1.13** The operator/transporter/consignor shall, upon being informed of an incident involving, one of their vehicles, ensure that the relevant emergency response centres and stakeholders such as the regulators and the police have been informed as soon as practically possible as but no later than 24 hours. If an injury, an explosion or a spillage has occurred, the operator shall avail a preliminary accident report and submit it to the Energy Regulation Board and to other relevant government departments such as the Zambia Environmental Management Agency (ZEMA), local authorities and the Water Management Authority, within 48 hours.
- 6.1.14** The operator on being informed of a breakdown of or an accident involving the vehicle en-route shall immediately:
- a. advise the emergency services, the police or the traffic police nearest to the breakdown and shall take any necessary steps to ensure that the vehicle is not left unattended
  - b. arrange for on-site repairs or
  - c. arrange for a replacement vehicle and shall ensure that such vehicle conforms to the appropriate standards for the cargo concerned. He shall provide any equipment necessary to effect the transfer of the cargo safely. The equipment should conform to the applicable standards given in 6.3.5 and 6.3.6. He shall also appoint a qualified person to supervise the operation and ensure compliance with the provisions of this standard. The Hazchem placards shall remain displayed on the vehicle that is being emptied and the operator shall provide a new set for the replacement vehicle, together with Tremcard (s) route instructions and manifest(s). These shall be handed over to the replacement driver who shall put them in the designated space in the cab. The driver of the replacement vehicle shall have been trained and licensed to the same standards as the driver he is replacing.
- 6.1.15** If a vehicle designed and registered as a petroleum product carrier is involved in an accident in which there is the possibility of damage to the cargo containment or in which the safety of the vehicle is impaired, depending on the nature of the damage, the operator shall submit that vehicle for examination and tests, to a Road Transport and Safety Agency, Zambia Compulsory Standards, Energy Regulation Board and Zambia Metrology agency registered test station in accordance with relevant standards or to a tank manufacturer or repairer before putting it back into service for the transportation of petroleum products.
- 6.1.16** The operator of a vehicle that conveys petroleum product shall on being informed that the vehicle has been detained owing to overloading;
- a. make arrangements for the vehicle to proceed under official escort to a designated area in terms of the provisions of the Public Roads Act; and

- b. transfer the excess load to another vehicle that complies with the unloading/loading provisions of this standard. The transfer of the excess loads shall not be done at the weighbridge and any other undesignated place. Further, on no account shall excess cargo be dump

**6.1.17** The operator shall schedule the use of the vehicle to enable periodic inspections and maintenance to be carried out.

**6.1.18** The operator shall ensure that the vehicle carries any valid road permit required by the Energy Regulation Board, Road Transport and Safety Agency, Zambia Metrology Agency or any other valid permits that might be required.

**6.1.19** Before dispatching a vehicle the operator shall ensure that:

- a. the vehicle meets the requirements provided in ZS 371 and has a valid certificate of fitness (COF), insurance, electrical certificate, identity certificate, Road Tax, ZCSA certificate of conformity, ZMA verification certificate .
- b. the vehicle is roadworthy and
- c. the vehicle has been prepared for the journey in accordance with suitable standard schedule laid down by the operator. A typical schedule is given in Annex C.

## **6.2 THE DRIVER**

**6.2.1** The driver of a petroleum products road tank vehicle shall have a valid public service vehicle (PSV) class C or CE category D driving licence for conveying petroleum products (see 3.15) and shall carry it on his/her person. To qualify for this class the driver shall have passed handling of dangerous goods training and shall be in possession of a PSV driving licence for the vehicle code that corresponds to the type of vehicle he intends to drive.

**6.2.2** The driver shall:-

- a. have minimum age of 25 years, with 4 years driving experience and holding a Public Service Vehicle driving licence as stipulated in 6.2.1.
- b. be fit to drive
- c. be able to interpret and implement the instructions on the Tremcard
- d. have received comprehensive theoretical and practical training relevant to the type of vehicle and Petroleum Products to which he will be assigned, including training in the Hazchem emergency response system and procedures specific to the cargo for example flammable liquid. Such training shall conform to the requirements of clause 6.1.12.
- e. hold a valid medical certificate (see B.1 of Annex B) for fitness to drive petroleum products and shall not
  - 1. suffer from any heart condition which causes disabling weakness or pain
  - 2. suffer from epilepsy

3. suffer from conditions causing loss of consciousness
4. suffer from addiction to drink or narcotic drugs
5. suffer from insulin dependent diabetes
6. suffer from mental or nervous disorders
7. have a history of sudden attacks of vertigo (dizziness)
8. have a history of coronary thrombosis
9. take hypertensive drugs for blood pressure treatment
10. eye sight,
11. hearing,
12. smell

The driver shall within the preceding 12 months have passed an examination by a medical practitioner registered with the Health Professions Council of Zambia (HPCZ) from a Government Hospital. If over 55 years of age, the driver shall undergo this examination every six months. Furthermore, whatever the age of the driver shall be required to pass this examination before he recommences his normal duties after a period of illness exceeding 30 days.

- f. licence holders (permit holders) should be able to read, in good daylight (with glasses or contact lenses, if worn) a motor vehicle number plate at 22 m if the symbols are 90 mm high or from 20m if the symbols are 80 mm high. It is an offence to drive with impaired eyesight. If the glasses or contact lenses are required to reach these vision standards, they must be worn at all times while driving. Licence holders with glasses or contact lenses should meet a standard of at least 6/9 in the better eye and 6/12 in the other eye and, without glasses, at least 3/60 in each eye separately.
- g. not drive the petroleum product road tank vehicle (loaded or empty) between 1800 hours and 0600 hours.

**6.2.3** The driver before proceeding on the route shall ensure that:-

- a. the vehicle meets the requirements provided in ZS 371 or ZS 429 Part 4 and the Road Traffic Act.
- b. the vehicle is roadworthy
- c. the vehicle has been prepared for the journey in accordance with suitable standard schedule laid down by the operator. A typical schedule is given in Annex C.
- d. the Tremcard (s) and manifest (s) are in the document holder (see 5.8.6.2 of ZS 371) in the cab of the vehicle for the duration of the trip. These should, if asked for be made available to the emergency services, the police or the traffic police.
- e. he/she has taken full note of any instruction he has been given and kept in the document holder regarding the route to be taken, the locations of authorized stopping and parking places, the special hazards to be watched out for and the precautions to be taken en-route. These instructions should be in writing.
- f. emergency warning triangles, chock blocks and cones are stored in the vehicle for use in an emergency or during a breakdown.

- g. the orange warning diamond in the front of the vehicle and the Hazchem placards conforming to the requirements of ZS 371 are fitted and are the correct type for the load and are clean undamaged and clearly visible
- h. the type and number of fire extinguishers prescribed in ZS 371 are stowed on the vehicle
- i. the vehicle is free of any product likely to contaminate the load or create a safety hazard and
- j. the correct protective clothing and breathing apparatus as specified by the consignor have been stowed aboard the vehicle and are in good condition. The Personal Protective Equipment (PPE) shall be adequate to protect the driver and crew when they are engaged in or assisting with unloading operations or dealing with an emergency. The crew shall be trained in using PPE and breathing apparatus.

**6.2.4** The driver shall drive the vehicle to the point where the load is to be taken on and shall report to the qualified person.

**6.2.5** The driver shall not use cellular telephones during driving, loading and offloading operations.

## **6.3 THE LOADING OPERATION**

### **6.3.1 Control**

All loading operations shall be carried out under the supervision of the qualified person selected by the consignor or representative.

### **6.3.2 Clearance**

If for any reason the qualified person or the driver considers it unsafe to load a vehicle, loading shall not proceed until the non-conformity is resolved to the satisfaction of both the qualified person and the driver.

### **6.3.3 Responsibility**

The consignor is responsible for ensuring that the instructions provided to the operator regarding loading procedure are adhered to. The consignor is responsible for ensuring that the operator has been advised of the nature, quantities and the hazards relating to the goods to be carried and of the emergency response requirements. The consignor is also responsible for ensuring that the qualified persons supervising the loading have received training in the application of the requirements of this standard and in the necessary safety precautions required for the goods to be loaded.

### **6.3.4 Hazchem placards and Tremcards**

The operator/transporter/consignor shall ensure that the correct type and quantity of Hazchem placards for the consignment are installed and the correct Tremcard(s) and manifest(s) are stowed on the vehicle.

### **6.3.5 Before Loading**

Before permitting loading to start, the qualified person shall ensure that:

- a. the vehicle presented for loading conforms to the requirements of ZS 371 and is of correct capacity as agreed upon in the transportation contract;
- b. the vehicle is properly parked, engine switched off and master switch activated.
- c. the operation takes place in a licenced work place (licenced by relevant regulatory authorities) where all the necessary safety measures associated with the Petroleum Products being transported are observed and that it is equipped with the necessary safety equipment;
- d. the operation takes place in a correct, efficient and productive way with no risk of distraction caused by other operations taking place or by goods stored in the vicinity;
- e. if bulk gaseous and liquid substances (including flowable solids) are to be loaded in the capacity of the vehicle tank, is adequate to receive without overloading the volume of the Petroleum Products and that an ullage appropriate to the Petroleum Product(s) has been allowed for;
- f. before the loading of bulk gaseous and liquid substances (including flowable solids) begins, the tank vehicle either has been properly cleaned of any previous contents or has been certified to receive the same or any other compatible substance (except in the case of a local distribution operation where the product to be loaded is the same as that of previous loads).

**Note**

1. Petrol and Domestic Kerosene (DK) shall not under any circumstances be transported on the same vehicle irrespective of vehicle combination.
  2. Domestic Kerosene shall not be loaded in compartments previously used for petrol without employing appropriate flushing methods.
  3. Tankers with one loading coupler point shall not be allowed to load multiple products regardless of the number of compartments.
  4. kerosene can only be loaded with diesel on the same tanker in completely welded compartment
- g. if flammable liquids are to be transferred, earth-bonding wires must be correctly connected.
  - h. if flammable liquids are to be transferred by means of pump the operator shall insure that the pump is of the compression ignition type as specified in ZS 371, ZS 402 or any other relevant standard.
  - i. during fluid type transfers the driver remains in the vicinity of the flow control valves(emergency stop switch) where the driver can stop the transfer immediately in the event of a rupture, spillage or any other emergency.

### **6.3.6 After loading**

After loading has been completed the qualified person shall ensure that

- a. the load is secured by sealing off any outlets appropriately and seeing to it that the vehicle is washed free of any spillage
- b. the permissible vehicle and axle mass-loads for the loaded vehicle have not been exceeded



- c. the correct type and number of Hazchem placards have been provided by the transporter and that these have been properly installed and
- d. the consignor has provided the correct Tremcard (s) and manifest(s) and that the driver has placed these and any other necessary relevant written route instructions in the designated space in the vehicle cab referred to in 5.2.3(d)

## 6.4 BEHAVIOUR ON THE ROUTE

### 6.4.1 The driver shall when proceeding on the route;

- a. follow the route without deviation, unless ordered otherwise by the emergency services, the police or traffic inspectors;
- b. stop only in authorised pre-planned safe areas;
- c. not stop otherwise except during an emergency or for pre-planned stops made for the purpose of a delivery, or at scheduled intervals of 2 hours for the purpose of checking the vehicle and tyres. When the vehicle is stopped en route other than at an authorised stopping place for vehicle and tyre checks, the hazard warning lights shall be switched on as for an emergency or breakdown. The driver shall stop only in a safe area;
- d. not drive for longer than the period laid down in Annex A;
- e. not in any circumstances leave the vehicle unattended to in an unsupervised area;
- f. not permit unloading of (or if relevant decanting of) part of the load if he is detained en route because of axle overloading except in an authorized and properly equipped area under competent supervision and after the operator/transporter/consignor has been informed (see 7.1.15);
- g. observe good driving practice by the use of forethought to anticipate problems, for example, by driving in such a way that reversing or difficult or risky manoeuvres are avoided;
- h. in the event of unscheduled stop outside a safe area, switch on the vehicle hazard warning lights, place the warning triangles(s) on the road as specified in the Road Traffic Act and inform the relevant authorities and the operator without delay. The vehicle shall be equipped with a battery isolation switch and two portable intrinsically safe flashing hazard lights shall be provided where applicable;
- i. in the event of either an incident in which spillage occurs or any other occurrence which puts the cargo at risk, take action as in (h) above and shall consult the Tremcard and alert the emergency services and the Zambia Police Service/Road Transport and Safety Agency. (If means of remote communication is not available, the driver shall flag down passing travellers and request that this information be relayed to the nearest emergency service, Zambia Police Service/Road Transport and Safety Agency) and

- j. regularly and at prescribed intervals, check all load indicators, such as pressure gauges for the correct readings.

**6.4.2** On reaching the destination, the driver shall report to the responsible party contractually agreed upon.

## **6.5 THE UNLOADING OPERATION**

### **6.5.1 Control**

All unloading operations shall be carried out under the supervision of the qualified person selected by the consignee or representative (see 6.3.1).

### **6.5.2 Clearance**

If for any reason, the qualified person or the driver considers it unsafe to unload a vehicle, unloading shall not proceed until the problem has been resolved to the satisfaction of both the qualified person and the driver.

### **6.5.3 Before unloading**

Before permitting unloading to start, the qualified person shall ensure that:-

- a. written confirmation is furnished that the vehicle presented for unloading is the correct vehicle and that it is carrying the correct goods as agreed upon in the transportation contract;
- b. the vehicle is properly parked and that the engine has been switched off and the Master Switch activated except where a running engine is required.;
- c. the operation takes place in an area where all the necessary safety measures associated with the material being transported are observed and that is equipped with the necessary safety equipment;
- d. the operation takes place in a correct, efficient and productive way with no risk of distraction caused by other operations taking place or by goods stored in the vicinity;
- e. in the case of bulk gaseous and liquid substances (including flowable solids), written confirmation is furnished that the capacity of the depot receiving tank is adequate to receive the volume of substance to be unloaded allowing for ullage where appropriate ;
- f. before the unloading of bulk gaseous and liquid substances (including flowable solids), written confirmation is furnished that the depot receiving tank either has been properly cleaned of any previous contents or has been certified fit to receive the vehicle load; and
- g. during fluid type transfers the driver remains in the vicinity of the flow control valves (Emergency stop switch), where he can stop the transfer immediately in the event of a rupture, spillage or any other emergency.

#### **6.5.4 After unloading**

- 6.5.4.1 After unloading has been completed the qualified person shall ensure that the fluid tanks are securely closed and washed free of any spillage and that the shut off valves are closed to prevent possible hazards.

The unloaded vehicle (bulk carrier) that carried Petroleum Products shall be maintained under full Hazchem placarding until such time as it is cleaned of the petroleum product and has been certified to that effect.

### **6.6 SAFE TRUCK PARKING**

#### **6.6.1 General Requirements**

A "Safe Truck Parking Standard" typically refers to guidelines or regulations aimed at ensuring that parking facilities for trucks carrying dangerous goods are secure, well-maintained, and equipped with necessary amenities to support the safety and comfort of truck drivers. These standards can vary depending on the jurisdiction and the specific needs of the trucking industry, but shall generally include the following elements.

- 6.6.1.1 security: Adequate lighting, surveillance and secure fencing to prevent theft and ensure the safety of both drivers and cargo.
- 6.6.1.2 accessibility: Convenient access to major highways or routes, allowing for easy ingress and egress for trucks.
- 6.6.1.3 amenities: Facilities such as restrooms, showers, vending machines, and possibly repair services to support drivers during their rest periods.
- 6.6.1.4 regulatory Compliance: Adherence to local zoning laws, environmental regulations, and safety codes to ensure the facility meets legal and technical requirements.
- 6.6.1.5 maintenance: Regular upkeep of the parking area to prevent hazards and maintain cleanliness.
- 6.6.1.6 capacity: Sufficient space to accommodate a reasonable number of trucks, preventing overcrowding and allowing for safe manoeuvrability.
- 6.6.1.7 signage: Clear signage indicating the location of the parking area and any specific rules or regulations drivers need to follow.

#### **6.6.2 Specific Requirements**

These standards are crucial for promoting road safety, preventing fatigue-related accidents among drivers, and supporting the efficient operation of the logistics and transportation industry. They may be established by government agencies, industry associations, or private entities involved in managing truck parking facilities.

### 6.6.2.1 Site/Location

Truck parks shall only be approved if they meet the following conditions:

- a. located in a designated industrial area and along the highway;
- b. at least 500 meters away from the boundary of any residential dwelling and crowded facility/social amenity
- c. location with a clear view when joining the roadway to ensure safety of vehicles exiting the facility.
- d. Are not adjacent to existing gas stations, Unless there is a distance of at least 15 meters between the boundary of the fuel service station and the nearest parking bay for the truck park. Further, separate access roads shall be provided for entrance to truck park for easy access and manoeuvring of trucks without interfering with any traffic meant for the fuel service station;

### 6.6.2.2 Security

- a. **Perimeter Security** - The facility shall have a minimum of a 4m concrete wall fence around the periphery to curb intrusion.
- b. **Access Control** - The facility shall implement an access control system that monitors/manages authorized entry and exist in and out of the facility and keep/maintains the following minimum records: Name of Driver, Company represented, vehicle registration, Name and quantity of Product carried, Load point and destination, time of entry and exit.
- c. **Personnel Security** -The owner of the facility shall ensure availability of adequate and competent security personnel to guard the facility 24hrs.
- d. **Surveillance system**-The owner of the facility shall ensure installation of security surveillance systems that monitor the entry and exit points of the facility and provides adequate surveillance of parking yards.

### 6.6.2.3 Safety/ Fire Fighting

The truck parks shall meet the following safety, fire prevention and protection requirements:

- a. **Fire Prevention:** Shall include Paved or gravel surfaces to minimize fire risk from hot surfaces, sparks, or leaks. Minimum clearance of 30 meters between parked trucks and any buildings or structures. Access roads and maneuvering space sized for fire truck access to all areas and Restrictions on idling engines, smoking, and other potential ignition sources;
- b. **Fire Extinguishers:** Shall include Placement of portable fire extinguishers and hose reels every 22.9-30 meters throughout the parking area, Extinguishers rated for Class A, B, and C fires (minimum 9 kg capacity), Extinguishers mounted on walls or posts, with clear visibility and accessibility and Extinguishers quarterly and serviced annually;
- c. **Fire Hydrants and Water Supplies:** Shall provide Fire hydrants or standpipes located within 20 to 30 meters on fire ring of all parts of the parking area, Adequate water supply minimum 420,000 litres storage and pressure to support fire department operations and

Minimum flow rate of 2,250 LPM for 2 hours. This requirement is optional to commercial garages located in industrial zones provided with municipal firefighting systems.

- d. **Sand or Dry Earth:** Shall Maintain a supply of at least three thousand nine hundred and two (3,902) kilograms of sand or dry earth.
- e. **Automatic Fire Sprinklers:** May be Required for any enclosed or multi-story truck parking structures, Sprinkler system designed and installed, and Adequate water supply, pump capacity, and backup power for the system;
- f. **Fire Alarm and Detection:** May provide for Smoke detectors, heat detectors, and manual call points throughout the facility, Alarm system linked to a central monitoring station and local fire department and Emergency lighting and exit signs to clearly mark paths of exit,
- g. **Signage and Markings:** Shall Clearly post signage for fire equipment, emergency procedures, and prohibited activities, Painted lines, reflectors, and barriers to designate traffic flow and parking spaces;
- h. **Maintenance and Inspections:** Shall Regularly maintain and test all fire protection equipment systems and Promptly repair any and damaged or deficiencies that could compromise safety. Refer to ZS 373: Portable Fire Extinguishers
- i. **Traffic Management:**  
The operator shall:
  - Designate specific traffic lanes and direction
  - Use traffic cones or barriers to guide vehicles
  - Implement a one-way traffic flow to reduce congestion
  - Post signage and 10km/hr speed limit
- j. **Parking and Storage:**  
The operator shall:
  - Designate specific parking areas for different types of vehicle cargos
  - Ensure adequate space between vehicles for safe maneuvering as below:
  - Store flammable liquids and hazardous materials in designated areas
- k. **Emergency Preparedness:**  
The operator shall:
  - Develop an emergency response plan with procedures for fires, spills, and accidents
  - Conduct regular drills and training for staff
  - Ensure first aid kits and fire extinguishers are easily accessible
- l. **Training and Supervision:**  
The operator shall:
  - Provide yearly training for staff on safety procedures and equipment usage
  - Ensure staff are aware of potential hazards and know how to respond

- Supervise staff regularly to ensure compliance with technical and safety protocols

#### **6.6.2.4 Engineering Design- Accessibility**

The facility shall be designed to meet the following conditions:

- a. Accessibility to the facility- There should be a well-maintained access road leading to the facility with sufficient space and clearance. The entrance into the facility should have a visible and clearly labelled site map indicating the location of infrastructure and fire fighting equipment available within the facility.
- b. The entry/exit gate should have a minimum of 4m to accommodate standard truck width and a minimum height of 4m.
- c. The parking facility surface should have a concrete impermeable surface that is capable of withstanding spillages and weight of the trucks.
- d. The surface should be designed not to allow accumulation of water by ensuring installation of effective drainage system that connect to an oil interceptor.
- e. Each parking slot should have a minimum of 16.8X2.7m.
- f. In an enclosed facility, the minimum vertical clearance should be 4.27m
- g. There should be sufficient clearance between adjacent parking slot to allow easy accessibility of the parked trucks
- h. The minimum width of the driveway should be 15m.
- i. The parking facility should have adequate space to allow for easy and safe maneuverability.
- j. The minimum distance from parking trucks to buildings within the parking facility should be 30m.
- k. The facility should have sufficient lighting installed.

#### **6.6.2.5 Environmental Protection**

During the operation of the truck stop for petroleum tanker trucks, the major environmental and social considerations are management of oil spills, wastewater management, solid waste management and employee welfare. The operator or owner of the facility shall ensure that mitigation measures are implemented for all potential impacts, in accordance with the applicable legal requirements.

#### **6.6.2.6 Management of petroleum/oil Spills**

- a) The operator/ owner of the facility shall report any major spills to the relevant authorities and institute remediation actions.
- b) The operator/ owner shall enter into an agreement with ZEMA licensed emergency spillage response and management companies.
- c) The operator or owner shall provide the appropriate oil/ water separators

#### **6.6.2.7 Oil or petroleum drips or leaks from parked large and small vehicles**

The operator/ owner of the facility shall provide absorbent material and spill kits to clean up oil or petroleum leaks/ spills from parked large and small vehicles for safe disposal.

### **6.6.5.3 Contaminated wastewater from wash bays and paved area**

- a) The operator/ owner of the facility shall ensure all wash bays designed with U-shape concrete floors to allow draining of wastewater towards treatment point. All paved areas to be fitted with drainages to allow channel flow of water to treatment point prior discharge or re use.
- b) Car wash areas and other places handling oil activities within the site should be well managed and drains from these areas controlled and inspected regularly for blockages.
- c) Oil interceptors should be installed along the drains leading prior to discharge to the natural environment. Oil interceptors should be regularly maintained to remove accumulated oily residues and debris for safe disposal.
- d) Before discharge to natural environment, treated water can be reused for dust suppression and watering.

### **6.6.5.4 Contamination of adjacent soils from repairs and maintenance of buildings and other infrastructure onsite**

The operator/ owner of the facility shall ensure any maintenance works are carried out in a designated area (protected service bays) and where oil spills are completely restrained from reaching the ground and adheres to local legal requirements.

### **6.6.5.5 Solid waste generation**

- a) The operator/ owner of the facility shall set up waste bins for solid waste collection at various points.
- b) Establish waste separation protocols to ensure separate handling and management
- c) Engage local authorities or private ZEMA licensed companies on waste management.

### **6.6.5.6 Training**

The operator/ owner shall ensure that all staff are trained in management of oil and petroleum spillages, wastes and emergency response procedures and maintain records on site.

### **6.6.5.7 Risk to health and safety of workers**

- a) The operator/ owner of the facility shall ensure that First Aid Kits are provided within the site and should be fully equipped with essential First Aid supplies.
- b) Provide employees with personal protective clothing where possible in accordance with specific designated tasks.
- c) At least one to two employees trained in First Aid to handle minor incidental cases.
- d) Ensure timely access to local or regional health facility for cases beyond first aid level. Encourage regular health check-ups for employees at local clinic to establish health status. Where possible put in place emergency measures for possible pandemic.

## **6.6.6 Amenities- Drivers Welfare**

Truck stops provide everything drivers need to remain prepared for their trip – providing basic amenities and resources to ensure they deliver their products efficiently. To make sure drivers always operate at complete efficiency, they need to stop to take regular breaks to refuel, inspect vehicle parts, and recharge. They are safe places where drivers are able to inspect their vehicles and cargo, eat some food, relax and attend to other needs executing their duties. There are three types of Truck parks categorized as follows;

1. Transporter Truck (Garage, Operations and Administration)
2. Loading and Offloading Sites (Focus; Driver Amenities)
3. Transit or Truck Stops (Focus; Driver Amenities)

Truck stops shall have the following conditions

#### **6.6.6.1 Showers and Convenience Rooms**

All truck parks, shall provide sanitary convenience facilities which at basic includes toilets and showers.

#### **6.6.6.2 Laundry (Local Scenario)**

Truck stops shall offer laundry services to drivers as they pass through. These units are designed to be fast and efficient, allowing drivers to quickly get their items washed and get back on the roadway without wasting too much time.

#### **6.6.6.3 Driver Lounge**

Trucks stops shall have a lounge to allow Drivers to stretch out with comfortable chairs or couch. Lounge may also have a TV, that allows drivers to catch up on the latest news, catch a few minutes of a game or sit back and enjoy a snack in the quiet.

#### **6.6.6.4 Abundant Food Options/Restaurants**

Truck parks/stops shall provide restaurants/catering that meets the requirements of the local authority health department providing options for quality foods to drivers.

#### **6.6.6.5 Additional Services**

Truck stops may provide additional services like barber services, movie theaters, workout rooms, game rooms and massage services, gift shops, and more make life on the road that much easier.



## **Annex A**

### **(Normative)**

#### **TIME LIMITS FOR DRIVING**

**A.1** The time limits in respect of a driver of a petroleum product motor vehicle who is not accompanied by a person authorised and qualified to drive such vehicle, shall be as follows:-

- a) for driving,
  - 1 a maximum of 5 hours of continuous driving time and
  - 2 a maximum total of 10 hours of driving time in a period of 24 hours and
- b) for resting from driving
  - 1 a minimum period of 15 minutes
  - 2 a minimum total of 30 minutes accumulated during a period of 5 hours 30 minutes and
  - 3 a minimum continuous period of 9 hours in a period of 24 hours

**A.2** The limits in respect of a driver of a petroleum product road tank vehicle who is accompanied, by a person authorised and qualified to drive such a vehicle and who alternately drives such a vehicle, shall be those contemplated in A.1 excluding the provisions of A.1 (b) (3), plus the following:

- a) such driver shall not alternately drive such motor vehicle and rest from such driving for continuous period that exceeds 30 hours and
- b) where the period contemplated in (a) above
  - 1 exceeds 15 hours but does not exceed 20 hours such period shall be followed by a period of unbroken rest of 10 hours and
  - 2 exceeds 20 hours such periods shall be followed by a period of unbroken rest of 12 hours

A vehicle that is being driven by two drivers in terms of this sub clause shall where period contemplated in (a) above exceeds 15 hours be provided with adequate sleeping accommodation.

**Annex B**  
**(Normative)**

**B.1**

Medrep

M2196/85 2B  
Form DL 6  
Stocked by Govt. printer

**REPUBLIC OF ZAMBIA**  
**THE ROADS AND ROAD TRAFFIC (Driving Licence) Regulations**  
**(Regulation 5)**  
**MEDICAL CERTIFICATE**

**APPLICANT FOR PUBLIC SERVICE VEHICLE DRIVING LICENCE**

I CERTIFY that I .....  
of .....(address)  
(qualifications) .....  
have today personally examined .....  
of (address) .....  
an applicant for a licence to drive a public service vehicle, with the results noted below. I further certify that I  
have explained the contents of subjoined "Declaration by Applicant" to the applicant and that his signature/thumb  
mark thereto has been affixed in my presence.

- (a) Apparent age.....
- (b) Vision without glasses ... R..... L.....  
with glasses (if worn) ... R..... L.....
- (c) Colour perception:  
(1) State whether normal by Ishihara Pseudo-isochromatic Platte test  
(2) If not, test for signal red, signal green and amber by a suitable lantern  
  
1 .....  
2 .....
- (d) Hearing.....
- (e) Limbs (state whether unrestricted use of all limbs or otherwise)  
.....
- (f) Is he/she free from suspicion of being intemperate or addicted to drugs? .....
- (g) General health (state whether reactions normal and whether free of any disease, temporary or otherwise,  
which would induce faintness or undue fatigue when driving long distances).  
.....  
.....  
.....  
.....

As a result of my examination I am/am not\* satisfy  
ied that applicant is medically fit person to drive a public service vehicle.

Date:.....

Registered Medical Practitioner

NOTE- A registered medical practitioner may alter the certificate to meet special circumstances.

\* Delete as ,necessary

## B.2 ACCIDENT REPORT

An example of an accident report form is given below.

Accident arising from the conveyance of Petroleum Products

1. Name of Company.....
2. Date and time of accident .....
3. Location of accident .....
4. Brief description of accident .....
5. Cause of accident .....
6. Number of casualties: Fatalities..... Injuries .....
7. Name (s) of product(s) involved .....
8. Brief details of any damage to property caused by nature of petroleum product(s) involved  
.....
9. Approximate quantity of Petroleum Product spilled .....
10. Was petroleum product or container (or both) involved in fire?  
Petroleum product  Container  Both  Neither
11. Brief details of any emission of fumes (direction of travel and area affected)  
.....
12. Type of container involved  
Single load tank  Multicompartment tank  Other (specify).....
13. Name and address of company whose products are involved .....
14. Details of (Hazchem) markings on product  
Correct  Not correct  None
15. Written instructions accompanying product  
Tremcard Yes  No  Other (specify).....
16. Was specialist assistance requested? YES/NO
17. If Yes to 16 from where was the advice obtained? .....
18. Details of response to request for specialist assistance .....

## Annex C (Informative)

### TYPICAL DAILY PRE-TRIP INSPECTION SHEET

An example of a typical daily pre-trip inspection sheet should include but not be restricted to the following:

**Date of Inspection:**

**Registration Number of Horse:**

**Registration Number of Trailer(s):**

#### **1 When you approach the vehicle**

- a) Look for water, oil, fuel and other leaks and for bodywork damage at the front of the vehicle.
- b) Look for any other obvious faults.

#### **2 Check the condition at the front of the vehicle**

- a) Windscreen
- b) Windscreen wiper arms and blades
- c) Rear view mirrors
- d) RH and LH front white reflectors
- e) Headlamps
- f) Lamp and indicator lenses
- g) Number plate licence and permit disc present on the screen

#### **3 Enter the cab and while seated:**

- a) Check that there are no loose items in the cab
- b) Check the parking brake: has it been applied and does it work?
- c) Check the oil and water levels (on some vehicles this is done from outside)
- d) Start the engine : check the reading of the oil pressure gauge, is there any unusual engine noise?
- e) Check the reading of the air pressure gauge:
- f) Check the build-up time of the air pressure;
  - i) Max 12 minutes in the case of a drawing vehicle and
  - ii) Max 8 minutes in the case of other vehicles
- g) Check the gauge and warning lights for correct operation
- h) Depress the service brake a couple of times until the warning buzzer sounds where applicable
- i) Check for functionality of the brakes
- j) Stop the engine: keep the service brake pedal depressed and check for leaks of air system
- k) Check the operation of the clutch pedal and the horn; check the steering for free play
- l) Check the tachograph for damage and insert the correct chart
- m) Check that the warning triangle(s) are stowed in the cab
- n) Check for cab fire extinguisher
- o) Check that seat belts are functional
- p) Switch on all the lights and leave the cab

#### **4 Walk - around inspection**

- a) Check the RH and LH front tyres and the wheel nuts: check that the fifth wheel is properly locked, (applies to articulated vehicles only)
- b) Make sure that the pump meter on RH side of the vehicle is secured. Inspect the pump hose and nozzle stowed on the tank top on rigid units for damage
- c) Make sure that all manhole lids are correctly closed and locked: check for obvious damage
- d) Check the condition of the air reservoirs and operate the drain valves
- e) Make sure that the yellow side reflectors are fitted and are undamaged
- f) Check the RH and LH rear tyres and the wheel nuts (applies to rigid vehicles, tractors and semi-trailers): check the mudguards for damage.
- g) Make sure that the two wheel chocks are properly stowed on the rigid chassis of the semi-trailer frame
- h) Make sure that all the lights are operative and that the reflectors and the chevron are not damaged; check the rear bumper for damage and make sure that the registration plate light is operative
- i) Check the stowage of the gravity hose and check for obvious damage (fraying etc)
- j) Check the security of the fuel filler cap and make sure that the tank is properly filled
- k) Make sure that the gravity meter is secure
- l) Make sure that the control box for the pneumatic system is secure
- m) Check the locks of the manifold valves, especially for leaks
- n) make sure that the fire extinguisher is correctly fitted and check it for obvious damage. Is the inspection date overdue?
- o) Make sure that all the front lights are operative
- p) Make sure that the RH and LH front and rear indicators are working (get assistance if possible to look at the rear indicators)
- q) Enter the cab and switch off all the lights
- r) Make sure that the brake lights are operative (get assistance to depress the service brake pedal and check if the lights are operative)
- s) Fill in the logbook and faults book

**Name of Driver:**

**Signature of Driver:**

## Annex C (Informative)

### MANIFEST AND TREMCARD

#### D.1 MANIFEST

The manifest contains information needed to identify the material(s) involved. The manifest contains the name of the material(s), the UN number and when applicable, reportable quantity notation for use in reporting spill incidents.

An example of a typical manifest is given below:

<b>CONSIGNMENT NOTE</b>			
<b>Issued in accordance with Article 18 of the Road Transport Agreement among the Democratic Republic of Congo, the Government of the Republic of Namibia and the Government of the Republic of Zambia</b>			
<b>COMPLETE IN PRINT</b>			
Name of Permit Holder:			
Permit Number:			
Journey Number on Permit:			
	<b>INWARD</b>	<b>RETURN</b>	
Vehicle Registration Number:			
<b>ROUTE DESCRIPTION (Key Town/City Names</b>	<b>Town/City Name</b>	<b>Payload (Tons)</b>	<b>Commodities Transported</b>
From			
Via			
To			
Return Via			
To			

Name	Signature	Date	

## D.2 TREMCARD

A separate Tremcard is required for each Petroleum Product in a load. It shall be printed on A4 white 120g/m card paper with red side borders. This shall be the standard format in Zambia.

An example of a Tremcard is given below.

### TRANSPORT EMERGENCY CARD – TREMCARD

#### CARGO

##### AUTOMOTIVE GAS-OIL

- a) Liquid-perceptible odour
- b) Immiscible with water

##### NATURE OF HAZARD

- a) Containers could explode when heated
- b) Highly flammable: Easily ignited by heat; sparks or flames
- c) Vapour could form explosive mixture
- d) Vapour could travel to source of ignition and flash back

##### BASIC PERSONAL PROTECTION

- a) Goggles giving complete protection to eyes
- b) Plastic or rubber gloves
- c) Eyewash bottle with clean water
- d) Safety shoes
- e) Safety work suit

##### IMMEDIATE ACTION BY DRIVER - Notify police and fire brigade

- a) Stop the engine
- b) No naked lights. No smoking
- c) Mark roads and warn other road users
- d) Keep public away from danger area

##### SPILLAGE

- a) Stop leaks if without risk
- b) Prevent liquid entering sewers, basements and work gates
- c) Contain or absorb leaking liquid with sand or other suitable material
- d) If petroleum product has entered a water course or sewer or been spilt on soil or vegetation, inform relevant Authority

##### FIRE

- a) Keep container(s) cool by spraying with water if exposed to fire

- b) Extinguish with water spray foam or dry chemical
- c) Keep upward

**FIRST AID**

- a) If substance has got into the eyes immediately wash out with plenty of water. Continue, treatment until medical assistance provided
- b) Remove contaminated clothing immediately and wash affected skin with plenty of water.

Date:

Expiry date:

**Note: any industry standard tremcard shall be acceptable, the tremcard has to be revised every 12 months.**

DRAFT FOR PUBLIC COMMENT ONLY