



DANGEROUS GOODS

PLEASE NOTE

THE MINIMUM AGE FOR A

DANGEROUS GOODS PrDP - D

IS

25

THIS MEANS THAT YOU CAN STILL LEGALLY DRIVE A VEHICLE UNDER 3.5 TONS (LDV) WITH THIS TRAINING CERTIFICATE

Unit Standard Assessed

UNIT STANDARD

123259

NQF LEVEL

3

TITLE

"Convey D/Goods By Road"

WHAT WILL OCCUR TODAY?

PowerPoint Presentation

Practice quiz after each chapter

Multiple Choice Assessment (TEST)

Assessment Method

TRUE / FALSE ANSWERS
MULTIPLE CHOICE ANSWERS

"OPEN-BOOK TEST"

75% MARK REQUIRED TO PASS ON FINAL ASSESSMENT ONLY

COURSE

THIS COURSE CONSISTS OF 13 CHAPTERS

- Introduction to dangerous goods
- The nine hazardous classes
- Packaging requirements
- Regulation of dangerous goods
- Placarding of vehicles
- Prescribed documents
- Consignor duties
- Qualified person duties
- Operator duties
- Driver duties
- Consignee duties
- Vehicle Compliance
- Firefighting & first aid

PARTONE INTRODUCTION TO DANGEROUS GOODS



WHAT ARE "DANGEROUS GOODS"

"GOODS CAPABLE OF POSING A SIGNIFICANT RISK TO **HEALTH, SAFETY, PROPERTY** OR ENVIRONMENT **DURING TRANSPORT**"



HEALTH

(toxins or diseases)



SAFETY



PROPERTY



ENVIRONMENT

OTHER NAMES FOR "DANGEROUS GOODS"

HAZARDOUS CHEMICAL SUBSTANCES
HAZARDOUS SUBSTANCES
HAZARDOUS MATERIALS
HAZCHEM
HAZMAT

HOW ARE "DANGEROUS GOODS" OFTEN IDENTIFIED?

By a DIAMOND-SHAPED label on

- an item
- a container
 - a building

To:

From:



Flammable Liquid, Toxic, N.O.S., 3, 6.1, UN1992, III (Contains Acetone)





4G/Z3/S/041 USA/LM0000

CONTAINERS



STORAGE AREAS

DUE TO THE RISK TO HEALTH, SAFETY PROPERTY & ENVIRONMENT, DANGEROUS GOODS MUST BE REGULATED

DANGEROUS GOODS ARE REGULATED BY THE NRTA **OTHER ACTS** NATIONAL STANDARDS MUNICIPAL BY-LAWS

NRTA SECTION 54

No person must, except as prescribed, offer for transportation in a vehicle, or transport in a vehicle, or accept after transportation in, on or by a vehicle, any prescribed dangerous goods.

ANY PERSON WISHING TO TRANSPORT ANY "GOODS" IN S.A. SHOULD ASK "ARE THE GOODS DANGEROUS GOODS"

WHO MUST IDENTIFY "DANGEROUS GOODS"?

THE CONSIGNOR

"PERSON WHO <u>OFFERS</u> D/G
FOR TRANSPORT IN A VEHICLE"

HOW ARE "DANGEROUS GOODS" IDENTIFIED?

IT STARTS WITH SANS 10228: 2012

SANS 10228: 2012

THE IDENTIFICATION AND CLASSIFICATION OF DANGEROUS GOODS FOR TRANSPORT BY ROAD OR RAIL MODES

HOW ARE "DANGEROUS GOODS" CLASSIFIED?

UN NUMBER PROPER SHIPPING NAME HAZARD CLASS / CLASSES PACKING GROUP

What is a UN NUMBER?

A SERIAL NUMBER THAT CONSISTS OF FOUR DIGITS, AND IS ASSIGNED TO D/G BY THE UNECE COMMITTEE **OF EXPERTS**

UN NUMBERS

RANGE FROM 0001 to 3506

SINGLE SUBSTANCES HAVE THEIR OWN NUMBER OR

GROUPS OF CHEMICALS
HAVE A COMMON NUMBER

PETROL?

UN NUMBER?

1203

SAME SUBSTANCE AS A SOLID OR LIQUID?

MAY RECEIVE DIFFERENT UN Numbers



CAUSTIC SODA FLAKES

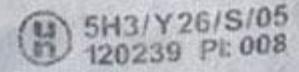
1823

NaOH : 99% MIN

NET : 25.0 KGS

GROSS: 25.16 KGS

MADE IN CHINA



PROPER SHIPPING NAME

Description used for dangerous goods in transport documentation, in the marking of packages, and in the placarding of containers and vehicles to ensure that goods can be readily identified during transport

ENAMEL PAINT?



Shipping Name? "PAINT, FLAMMABLE"

HAZARD CLASS

"dangerous goods are classified (placed in a Class or Division) according to their Primary Danger or Risk and are assigned standardised warning symbols / labels to identify the relevant class"



OXYGEN



PRIMARY HAZARD? "High Pressure / Cold"

SUBSIDIARY RISK CLASS

"A class assigned to a substance with more than one danger or risk, where the secondary (subsidiary) danger/s is/are significant enough to warrant further recognition of the additional hazard/s"

OXYGEN





SUBSIDIARY

RISK?
OXIDIZER

ACETONE, METHYL CHLORIDE



HYDRAZINE HYDRATE

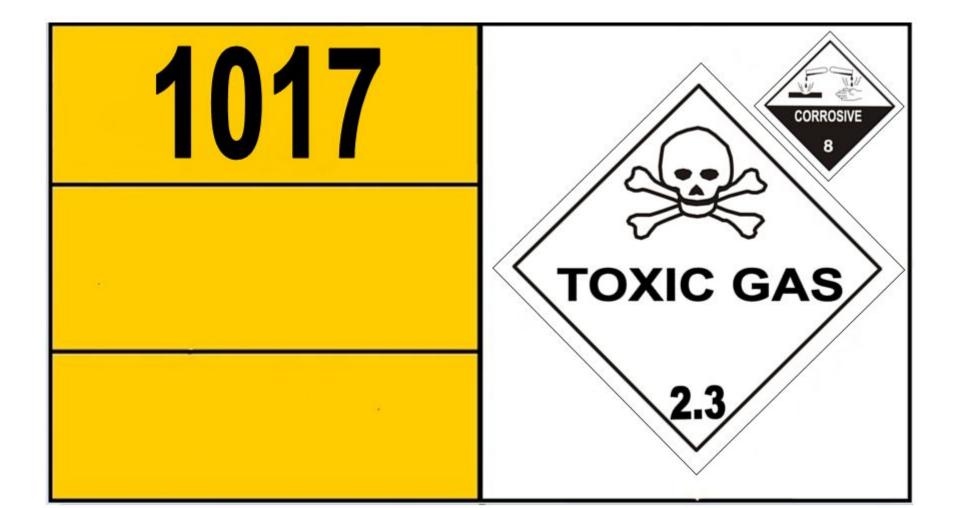








CHLORINE GAS PLACARD WITH S/RISK



PACKING GROUP

"A group symbol that indicates the degree of danger or hazard of the Primary Property of a specific substance"

PACKING GROUP

abbreviation

"PG"

PG I - EXTREME

PG II - MEDIUM

PG III - MINOR / MILD





METHANOL PETROL DIESEL

WHICH IS MOST FLAMMABLE?

WHICH IS <u>LEAST</u> FLAMMABLE?



>80% >50% >20%

WHICH IS MOST CORROSIVE?

WHICH IS LEAST CORROSIVE?

CLASS	CLASS NAME	PG
1	EXPLOSIVES	n/a
2.1	FLAMMABLE GASES	n/a
2.2	COMPRESSED GASES	n/a
2.3	TOXIC GASES	n/a
3	FLAMMABLE LIQUIDS	I – II – III
4.1	FLAMMABLE SOLIDS	I – II – III
4.2	SPONTANEOUSLY COMBUSTIBLE	
4.3	DANGEROUS WHEN WET	I — II — III
5.1	OXIDIZERS	I — II — III
5.2	ORGANIC PEROXIDES	l or II
6.1	TOXIC	I — II — III
6.2	INFECTIOUS	n/a
7	RADIOACTIVE	OPPOSITE
8	CORROSIVE	I — II — III
9	MISCELLANEOUS	1 – 11 – 111

PACKING GROUP

WHERE A SUBSTANCE HAS A
"NOT APPLICABLE"
PG, THEN YOU MUST APPLY

PACKING GROUP - I

PACKING GROUP RADIOACTIVES

"are labelled according to "emission" levels, where the levels work the

OPPOSITE

of Packing Groups."



EMISSION LEVEL

LOW MEDIUM HIGH









PART ONE INTRODUCTION TO DANGEROUS GOODS

CLICK ON THE TAB BELOW TO COMPLETE QUIZ

CHAPTER ONE QUIZ

PARTIWO THE NINE HAZARD CLASSES





1.1-1.6 EXPLOSIVES



2.1-2.3 GASES

2.1 Flammable Gases

2.2 Compressed Gases

2.3 Toxic Gases

[non-toxic non-flammable]







4 FLAMMABLE SOLIDS

2.2 Spontaneously Combustible 2.3 Dangerous when Wet 2.1 Flammable Solid



5.1 OXIDISERS



5.2 ORGANIC PEROXIDES



6.1 TOXIC



6.2 INFECTIOUS



7 RADIOACTIVE: I LOWEST, III HIGHEST



RADIOACTIVE







THE NINE **CLASSES**

CLASS 1 "EXPLOSIVES"



NAIL GUN CARTRIDGES



FIREWORKS: UN 0335



FLARES



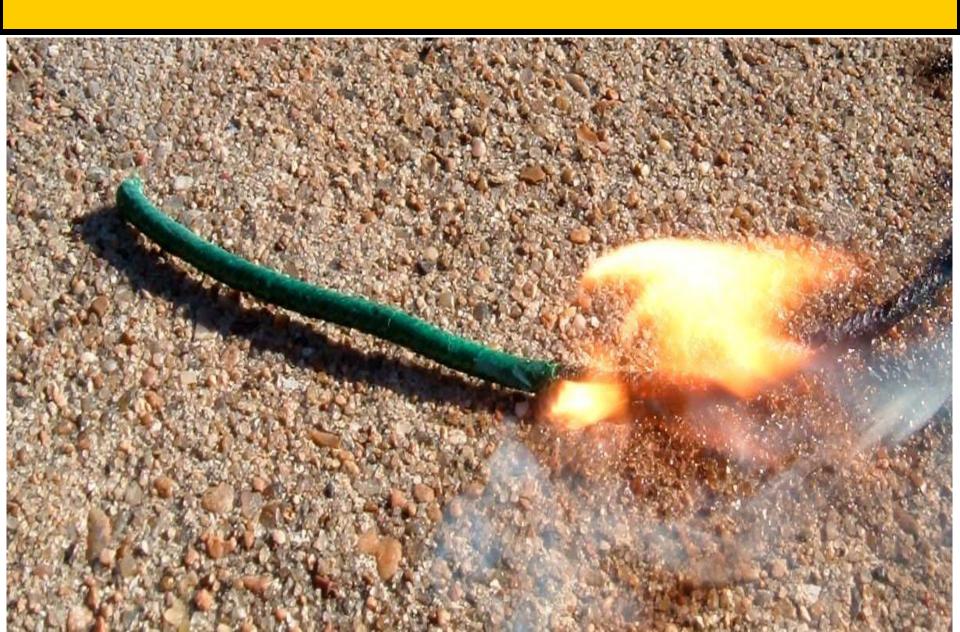
BLASTING CAPS



DETONATORS



FUSE



PRIMERS



EXPLOSIVE CHARGES



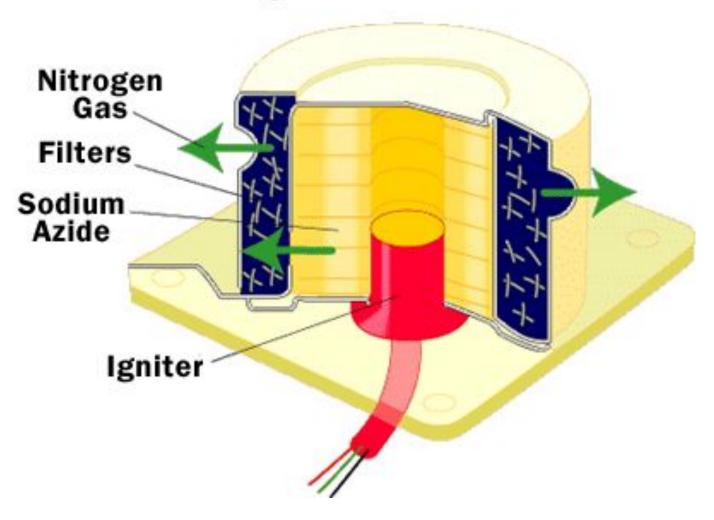
DETONATING CORD



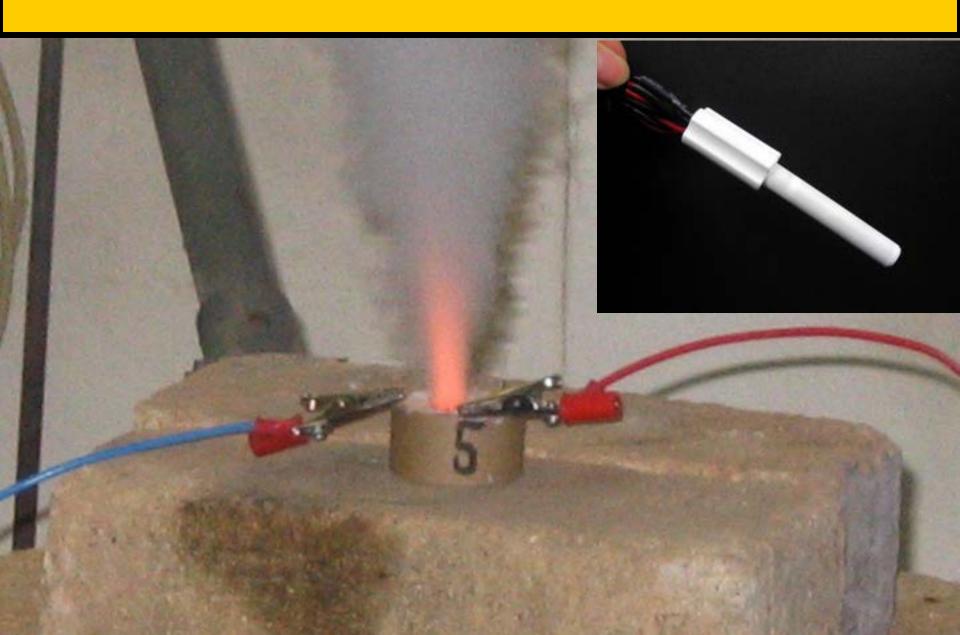


AIRBAG INFLATOR

Air Bag Inflation Device



IGNITERS



ROCKETS



TNT - TRINITROTOLUENE





RDX - Research Dept Expl



Pentaerythritol Tetranitrate (PETN),



DYNAMITE



MILITARY WEAPONS



MILITARY WEAPONS











HAZARDS / RISKS

Chemical Reaction

producing gases at temperatures, pressures and speeds that cause catastrophic damage through force

and/or producing

hazardous amounts of heat, light, sound, gas or smoke

CLASS 2: "GASES"



CLASS 2: "GASES"

RED DIAMOND:

2.1 Flammable Gas

GREEN DIAMOND
2.2 Non Flammable,
Non-Toxic Gas

BLACK DIAMOND 2.3 Toxic Gas



CLASS 2: "GASES"

ALL GASES IN CYLINDERS, CANS OR BOTTLES ARE UNDER

HIGH PRESSURE

(PACKING GROUP I)







EPIC FAIL





ACETYLENE EXPLOSION



CLASS 2.1 "FLAMMABLE GAS"

AEROSOLS, GAS CARTRIDGES, LIGHTERS, ACETYLENE, HYDROGEN, METHANE, PETROLEUM GAS, BUTANE, PROPANE, OIL GAS, ETHANE



AEROSOLS





UN: 1950

AEROSOLS

UN: 1950



GENERAL GASES



BUTANE GAS





PROPANE GAS – UN: 1978







ACETYLENE GAS – UN 1001



B.L.E.V.E.



HAZARDS & RISKS

Gases are capable of posing serious hazards due to their flammability,

```
Explosions,
Unconfined Vapour Cloud Explosions,
Boiling Liquid Expanding Vapour Explos,
Rocketing Gas Cylinders,
Asphyxiation, and
Toxic Effects on Humans/Animals
```

CLASS 2.2 "NON-FLAMMABLE / NON-TOXIC GAS"

FIRE EXTINGUISHERS, OXYGEN, NITROGEN,
HELIUM, CARBON DIOXIDE, COMPRESSED AIR
NEON, ARGON, FREON, KRYPTON



CLASS 2.2 "NON-FLAMMABLE / NON-TOXIC GAS"

COMPRESSED and/or **EXTREMELY** COLD





OXYGEN



UN 1072

FIRE EXTINGUISHERS



1,400 - 6,800 KPA

NITROGEN, REFRIGERATED LIQUID



NITROGEN



UN 1066



REFRIGERATED OXYGEN



PRESSURIZED GAS



FRIDGE GAS





UN 3159



Net Wt. 30 Lbs. (13.6kg)



1,1,1,2-TETRAFLUOROETHANE CAS 811-97-2 FOR HVAC



UN 3159

30

1:33 PM

STREET, STREET



UN 2187

HAZARDS AND RISKS

Gases are capable of posing serious hazards due to pressure and cold, pressure explosions, rocketing cylinders and frost bite effects on humans.

CLASS 2.3 "TOXIC GAS"

POISONOUS and/or CORROSIVE GASES



CLASS 2.3 "TOXIC GAS"

INSECTICIDAL GASES,
ETHYLENE OXIDE,
SULPHUR DIOXIDE,
HYDROGEN CYANIDE,
CHLORINE

Toxic Gases

F₂ & Cl₂ (Fluorine & chlorine gas)

HF_(g) Hydrogen Fluoride

HCI_(q) Hydrogen Chloride

H₂S Dihydrogen Sulfide

HCN - Hydrogen cyanide

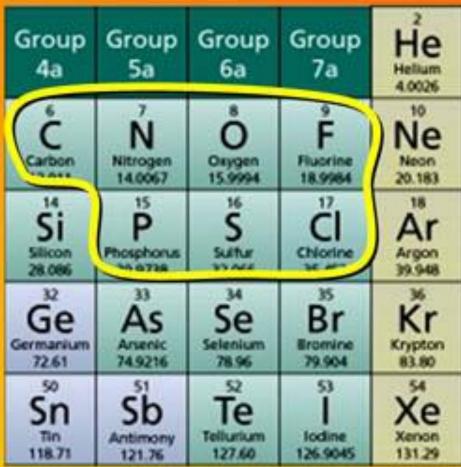
NO - NO₂- NO₃ - N₂O

Cl₂O dichlorine monoxide

NH₃ Ammonia

PCI₃ Phosphorus trichloride





ETHYLENE OXIDE



ETHYLENE OXIDE





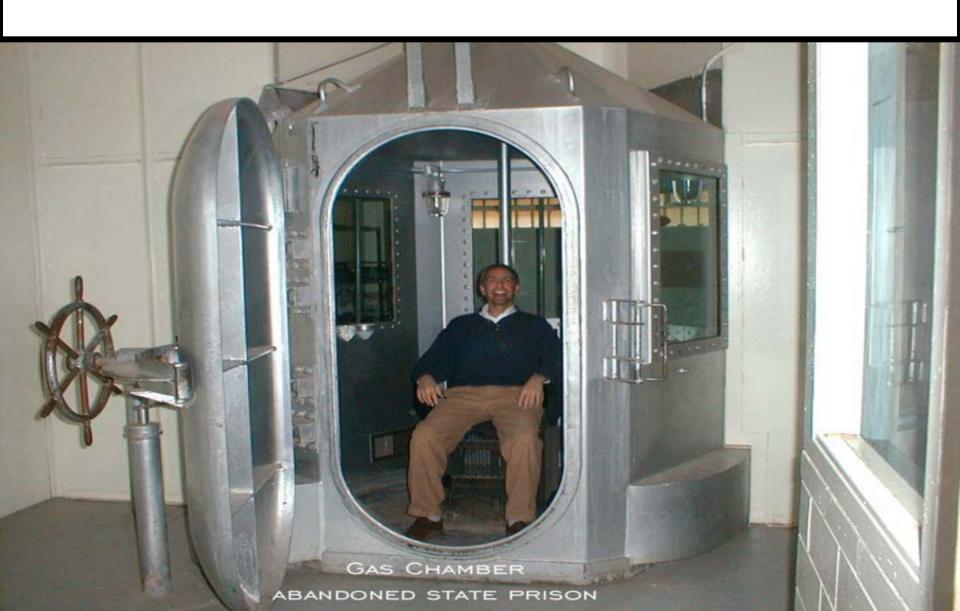


- PET (raw material for plastic bottles)
 - STERILISATION (Hospital Equipment)

HYDROGEN CYANIDE



HYDROGEN CYANIDE



HYDROGEN CYANIDE

is used to manufacture:

Potassium Cyanide (mining)
Sodium Cyanide (mining)

Pesticides
Chemical Weapons
Gas Chambers (USA)

CHLORINE GAS



CHLORINE GAS





is used:

in water purification to make disinfectants to make bleach

HAZARDS & RISKS

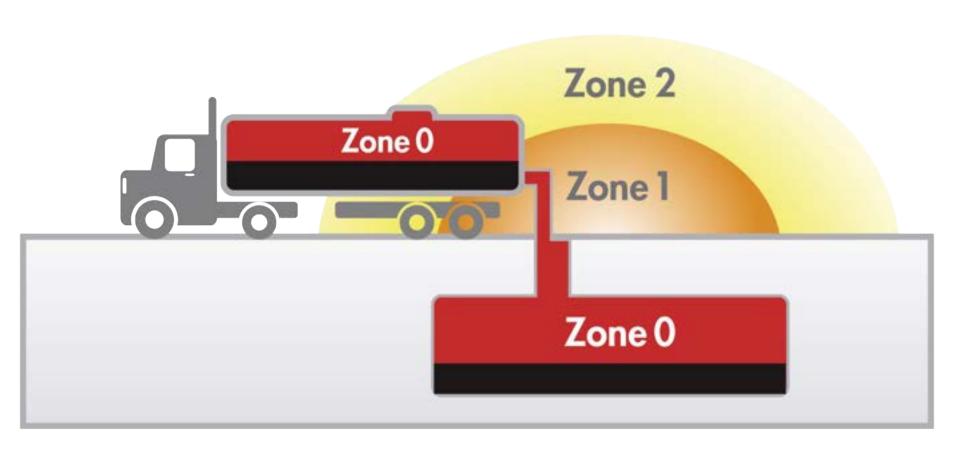
Gases are capable of posing serious hazards due to:

- pressure explosions,
- rocketing cylinders
- •toxic or
- corrosive effects

CLASS 3 FLAMMABLE LIQUIDS



VAPOUR CLOUDS



FUELS



ALCOHOLS un 3065



ALCOHOLS

3065

OPERATOR TEL ADVICE NUMBER

SPECIALIST TEL ADVICE NUMBER



ALCOHOLS

Table C.1 (continued)

1	2	3	4	5	6
UN No.	Proper shipping name	Class	Pack- ing group	Subs. risk	Ex- empt quan- tities
3056	n-HEPTALDEHYDE	3	III		1 000
3057	TRIFLUOROACETYL CHLORIDE	2.3		8	10
3064	NITROGLYCERIN, SOLUTION IN ALCOHOL with >1% <5% nitroglycerin	3	II		500
3065	ALCOHOLIC BEVERAGES, with >70% alcohol by volume	3	<u>II</u>		500
	ALCOHOLIC BEVERAGES, with >24% <70% alcohol by volume	3	(III)		1 000,

SOLVENTS









PERFUMERY



PAINT PRODUCTS





GLUES



UNCONFINED VAPOUR CLOUD EXPLOSIONS



HAZARDS AND RISKS

Flammable liquids are capable of posing serious hazards due to:

- their volatility (fumes)
- combustibility
- severe vapour cloud explosions

CLASS 4: FLAMMABLE SOLIDS



CLASS 4.1 - FLAMMABLE SOLIDS

- FIRE LIGHTERS
- SULPHUR
- CAMPHOR
- NAPHTALENE
- CANDLES
- MATCHES



FIRELIGHTERS & GELS



SULPHUR



CAMPHOR BLOCKS



NAPHTALENE



SAFETY MATCHES



HAZARDS AND RISKS

Flammable solids are capable of posing serious hazards due to their volatility, combustibility and potential in causing severe conflagrations (explosions)

CLASS 4.2 SPONTANEOUSLY COMBUSTIBLE

- WHITE, YELLOW PHOSPHOROUS
- LINSEED OIL
- CHARCOAL AND COAL
- SODIUM HYDROSULPHITE

PHOSPHOROUS



LINSEED OIL & VARNISH





CHARCOAL

1361





HAZARDS & RISKS

Are capable of posing serious hazards due to their:

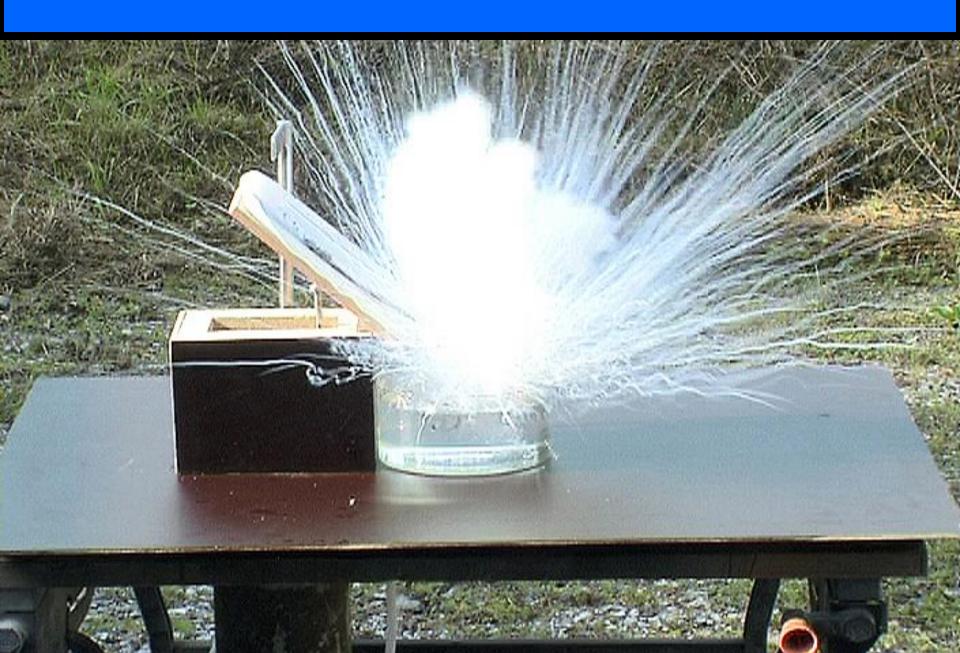
Volatility, Combustibility Heat up in confined spaces, and ignite fires in containers.

CLASS 4.3 "DANGEROUS WHEN WET"

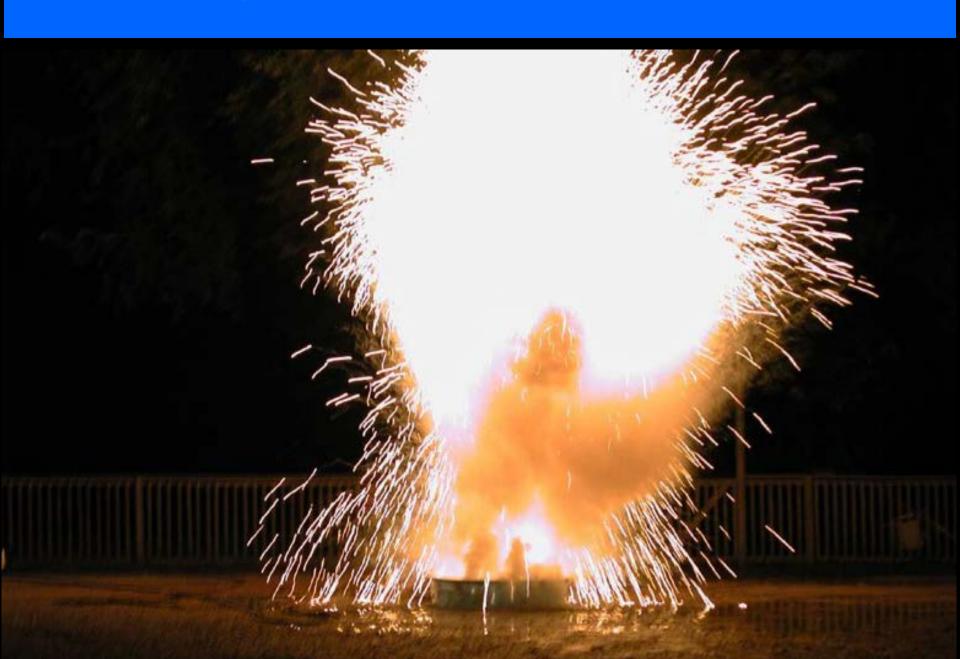
- SODIUM
- CALCIUM CARBIDE
- POTASSIUM
- LITHIUM
- CERIUM
- RUBIDIUM
- FRANCIUM
- CAESIUM



SODIUM + WATER



SODIUM + WATER



CALCIUM CARBIDE

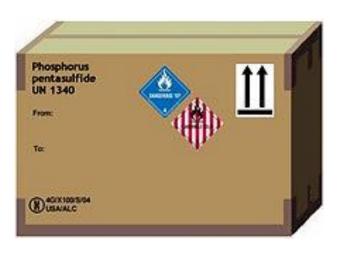


LITHIUM + WATER



PHOSPHOROUS PENTASULPHIDE





HAZARDS & RISKS

Produces Various Flammable And Toxic Gases When Wet:

Hydrogen Acetylene





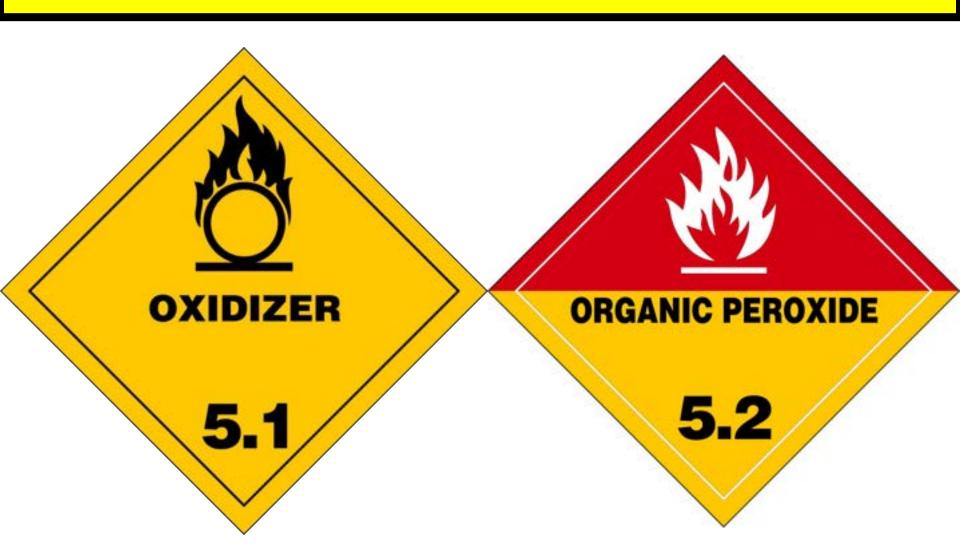


HAZARDS & RISKS

Are capable of posing serious hazards due to:

- Volatility
- Combustibility
- React violently with water,
- Emit hydrogen and toxic gases
- Ignite fires or cause explosions.

CLASS 5 "OXIDIZERS & ORGANIC PEROXIDES"



CLASS 5.1 "OXIDIZERS"

- CALCIUM HYPOCHLORITE (hth)
- AMMONIUM NITRATE
- HYDROGEN PEROXIDE
- POTASSIUM PERMANGANATE
- SODIUM NITRATE
- ALUMINIUM NITRATE
- SODIUM CHLORITE
- AMMONIUM PERCHLORATE



CALCIUM HYPOCHLORITE







AMMONIUM NITRATE



HYDROGEN PEROXIDE









POTASSIUM PERMANGANATE

30 Tablets 400mg for solution Permitabs[®] DO NOT PUT IN MOUTH **ENVIRONMENT** HARMFUL **OXIDIZING** Potassium Permanganate BP



SODIUM CHLORITE





CLASS 5.1 "OXIDIZERS"

Oxidizers, although not necessarily combustible in themselves, can yield oxygen and in so doing cause or contribute to the combustion of other materials.

CLASS 5.2 "ORGANIC PEROXIDES"

- BENZOYL PEROXIDE
- ACETONE PEROXIDE
- CUMENE HYDROPEROXIDE



BENZOYL PEROXIDE







ACETONE PEROXIDE

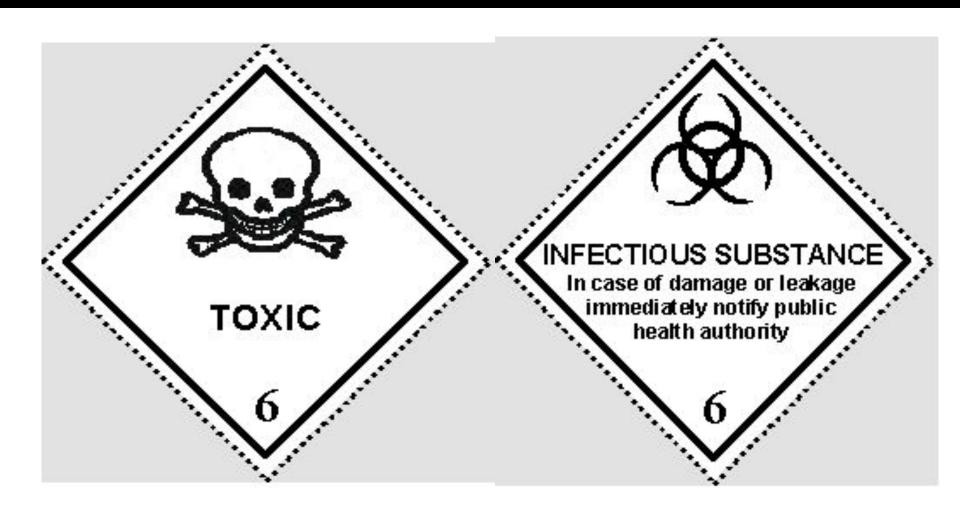


CLASS 5.2 "ORGANIC PEROXIDES"

Are thermally unstable and exude heat whilst undergoing decomposition.

Liable to explosive decomposition, burn rapidly, sensitive to impact or friction, react dangerously with other substances or cause damage to eyes.

CLASS 6 "TOXIC & INFECTIOUS SUBSTANCES"



CLASS 6.1 "TOXIC SUBSTANCES"

- DYES
- PESTICIDES
- ALKALOIDS
- CARBAMATE PESTICIDES
- ARSENATES & ARSENITES
- ANTI-FREEZE
- PHENOLS
- CYANIDES



INSECTICIDES





ETHYLENE GLYCOL





CHLOROFORM





PESTICIDES







CLASS 6.1 "TOXIC SUBSTANCES"

Pose significant health risks to humans and animals.

Can lead to fatalities or permanent ill health. Some toxins are cumulative, requiring repeated exposure. Other toxins may have delayed effect of days, weeks, months or even years.

CLASS 6.2 "INFECTIOUS SUBSTANCES"

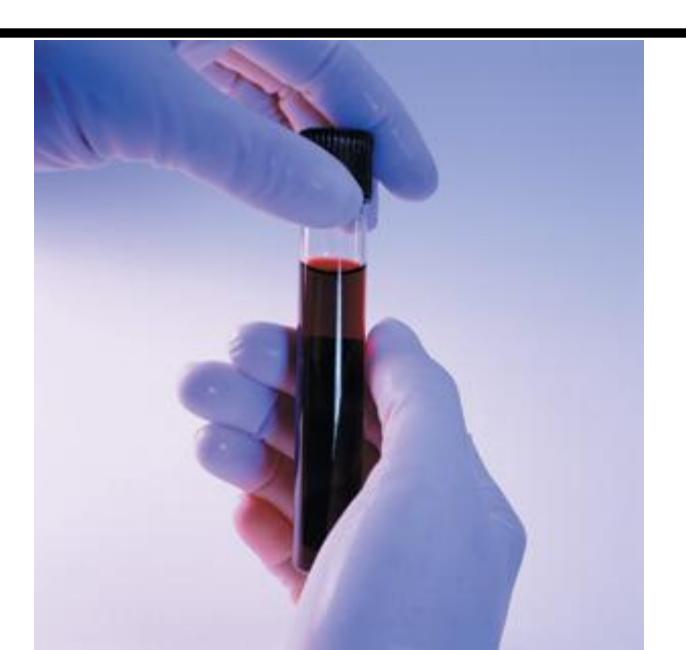
- **•CLINICAL WASTE**
- PATHOLOGY SPECIMENS
- HOSPITAL WASTE
- **•EXPIRED DRUGS**
- **•SCHEDULED MEDICINES**



INFECTIOUS SUBSTANCES



INFECTIOUS SUBSTANCES



INFECTIOUS SUBSTANCES



CLASS 6.2 "INFECTIOUS SUBSTANCES"

Pose significant health risks to humans and animals.

Can lead to fatalities or permanent ill health from exposure to bacteria, viruses and similar pathogens that cause diseases such as HIV, TB and Cholera.

CLASS 7: RADIOACTIVE

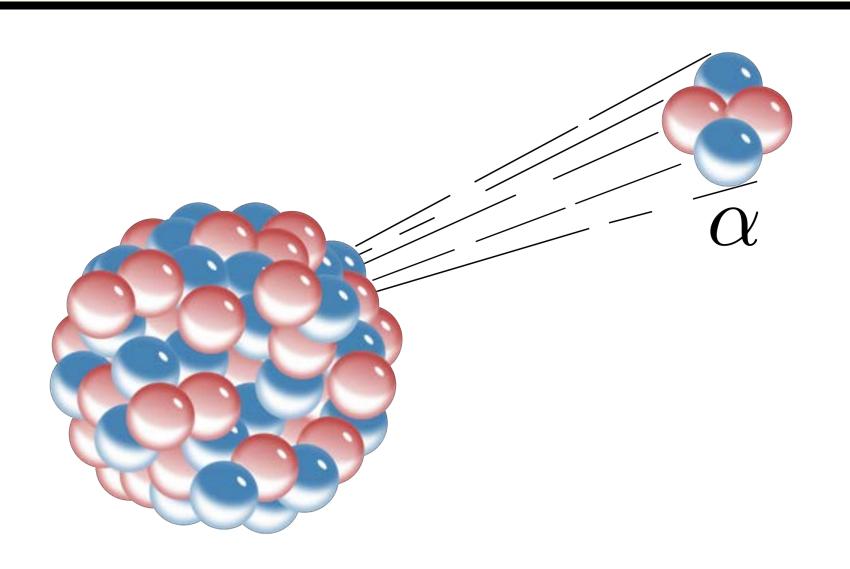


CLASS 7 RADIOACTIVE

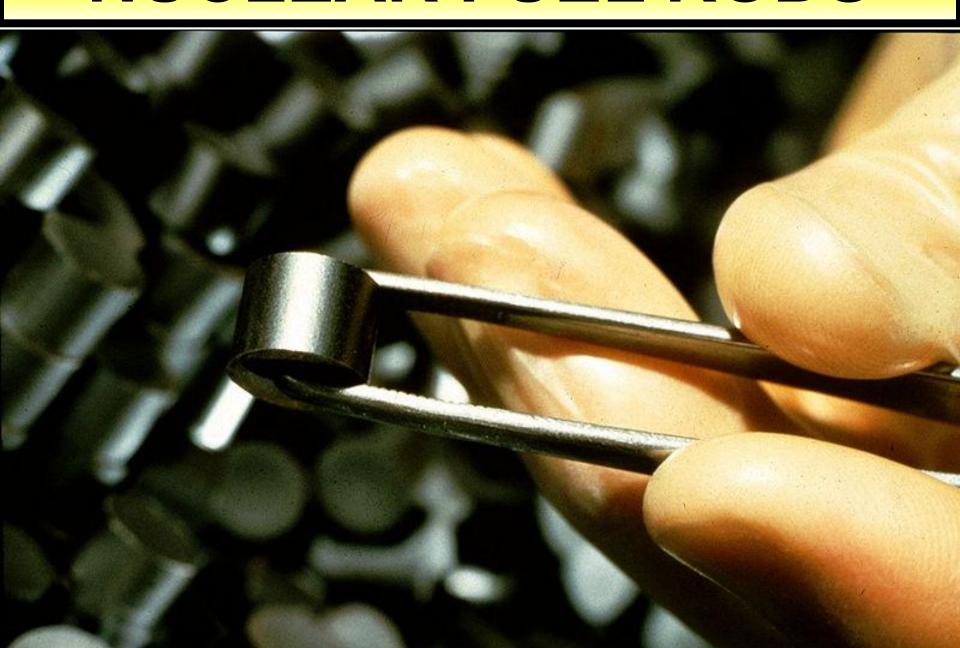
URANIUM PLUTONIUM RADIUM POLONIUM FRANCIUM ACTINIUM



CLASS 7: RADIOACTIVE



NUCLEAR FUEL RODS



Pu



94

244.

GAUTION

BADIGACTIVE FLUTONIUM -238

DESS THAN 3 CURIES 11973

DO NOT DISCARD, CONTACT

NUCLEAR BATTERY CORP.

BOLUMBIA, MARYLAND

DATE OF MANUFACTURE 1973

SERIAL 119, Acceptance

Plutonium



Actinium

Po



84

209.

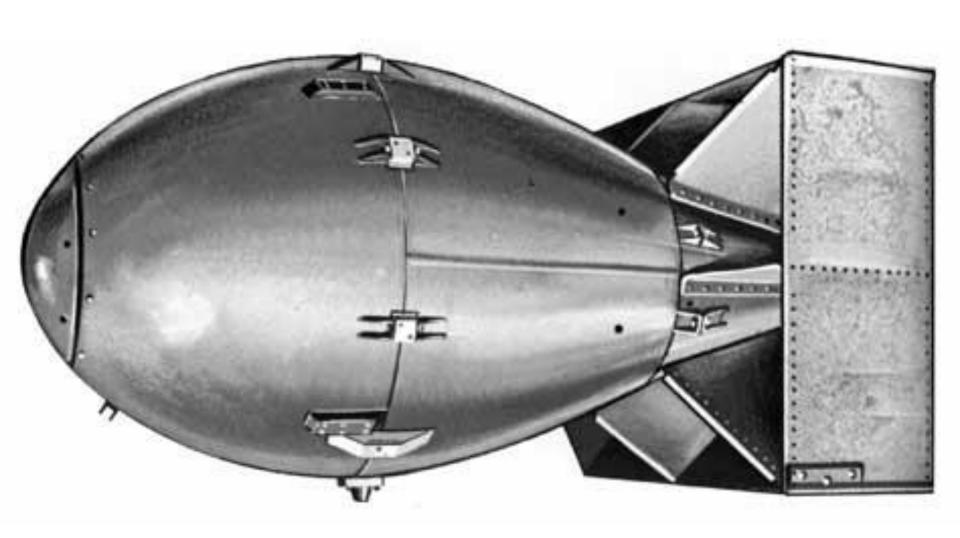


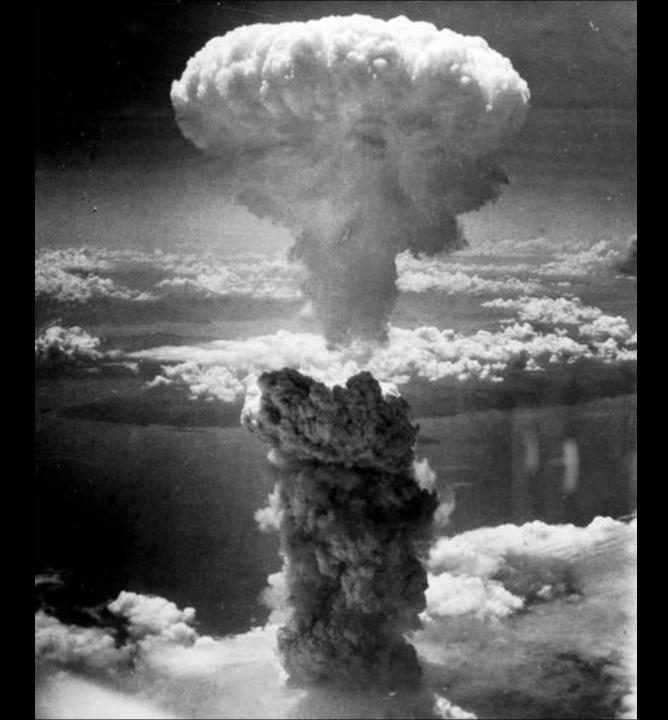
Polonium

ENRICHED URANIUM



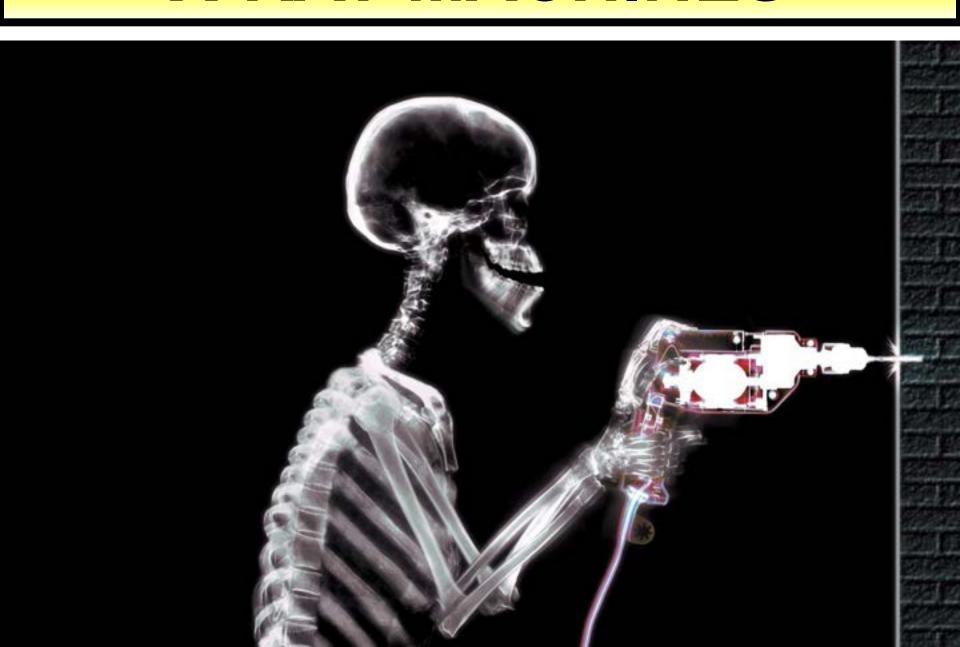
ATOMIC BOMBS







X-RAY MACHINES





CLASS 7 RADIOACTIVE

Whilst undergoing radioactive decay, radio-nuclides emit ionizing radiation which presents potentially severe risks to human health

ANY QUANTITY IS REGULATED

CLASS 8: CORROSIVES



CLASS 8: CORROSIVES

- ACIDS
- SULPHURIC <u>ACID</u>
- HYDROCHLORIC ACID
- PHOSPHORIC ACID
- CITRIC ACID
- BASES
- POTASSIUM HYDROXIDE
- SODIUM HYDROXIDE
- CAUSTIC SODA

SULPHURIC ACID



HYDROCHLORIC ACID



HYDROFLUORIC ACID







NITRIC ACID

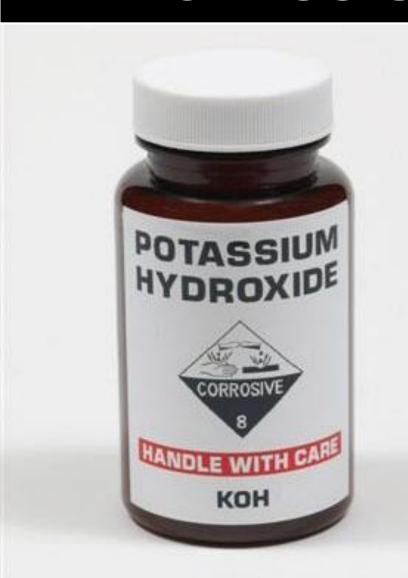


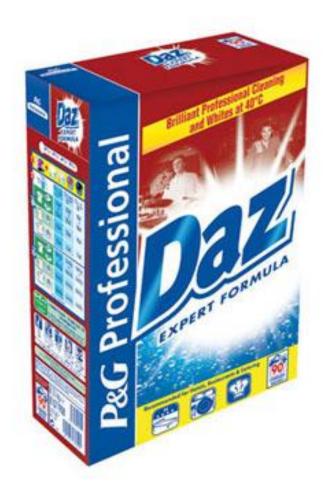


ALKALINE POTASSIUM HYDROXIDE



ALKALINE POTASSIUM HYDROXIDE





ALKALINE CAUSTIC SODA





ALKALINE SODIUM HYDROXIDE



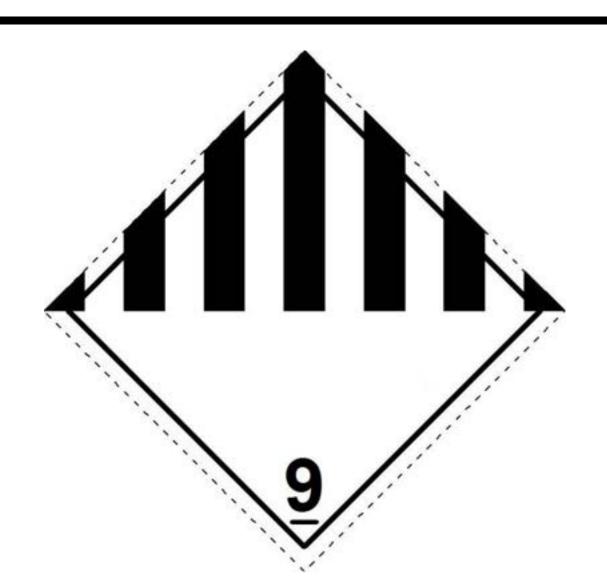


CLASS 8: CORROSIVES

Corrosives are substances which by chemical action degrade or disintegrate other materials upon contact.

Corrosives cause severe damage when in contact with living tissue or, in the case of leakage, damage or destroy surrounding materials.

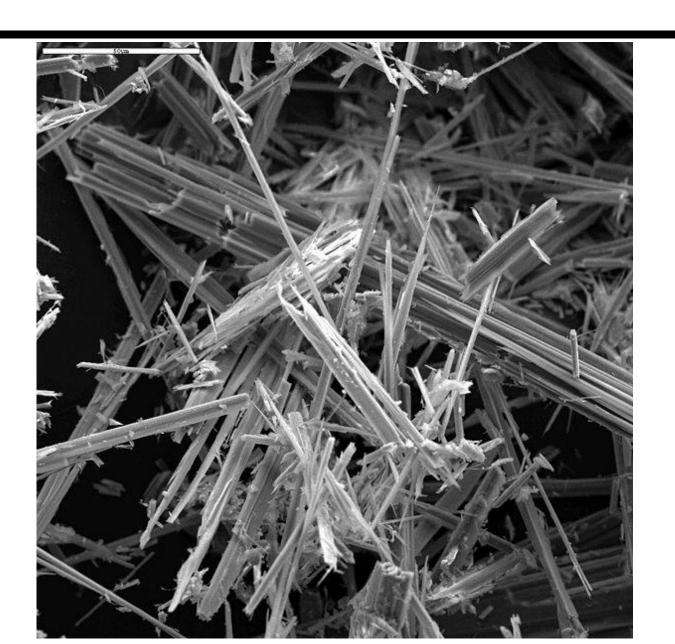
CLASS 9 "MISCELLANEOUS"



CLASS 9 MISCELLANEOUS

- ASBESTOS
- AIR BAG MODULES
- DRY ICE (air transport only)
- OILS POLYCHLORINATED BIPHENYLS
- •HOT LOADS > 100 DEGREES LIQUIDS
- •HOT LOADS > 240 DEGREES SOLIDS
- ENVIRONMENTALLY HAZARDOUS GOODS
- CASTOR BEAN PRODUCTS

ASBESTOS FIBRES



ASBESTOS - WHITE



ASBESTOS - BROWN



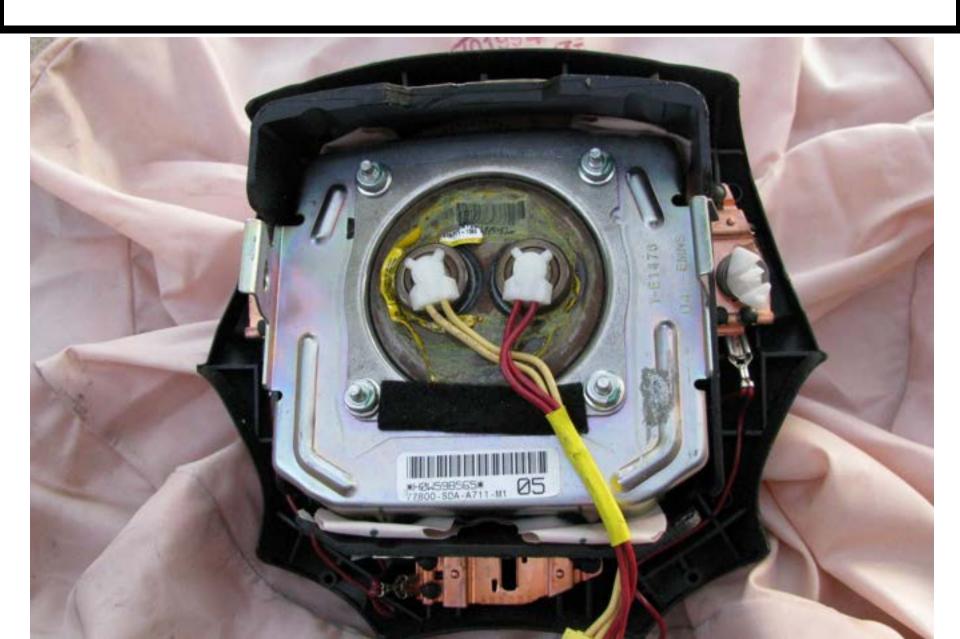
ASBESTOS - BLUE



OILS WITH P.C.B.'s



AIRBAG INFLATOR MODULE



CASTOR BEANS - UN 2969





PESTICIDES
FUNGICIDES
CASTOR OIL
BIO-DIESEL
CHOCOLATE

FISH MEAL – (FOR FISH FOOD)



BITUMEN- (HOT LOAD)



CLASS 9 HAZARDS

Miscellaneous dangerous goods present a wide array of potential hazards to human health and safety, infrastructure and/ or their means of transport.

Environmental Hazards, burns, chronic diseases, injuries to humans, cancer, birth defects, allergies, discomfort, etc

PART TWO THE NINE HAZARD CLASSES

CLICK ON THE TAB BELOW TO COMPLETE QUIZ

CHAPTER TWO QUIZ

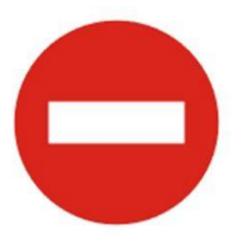
PART THREE

HEALTH & SAFETY LAW AND PACKAGING





STORAGE OF DANGEROUS GOODS



UNAUTHORISED ENTRY PROHIBITED

"DANGEROUS GOODS"

ARE USUALLY MANUFACTURED,
PACKAGED, HANDLED AND STORED
IN A REGISTERED WORKPLACE
SOMEWHERE IN SOUTH AFRICA

THIS MAKES THESE GOODS
SUBJECT TO
OCCUPATIONAL HEALTH AND SAFETY
REGULATIONS



labour

Department:
Labour
REPUBLIC OF SOUTH AFRICA



DUTIES OF: EMPLOYERS

TO PROVIDE A SAFE WORKPLACE
FOR ALL EMPLOYEES, VISITORS,
CONTRACTORS OR NEIGHBOURS

TO INFORM EMPLOYEES OF ALL HAZARDS AND RISKS, INCLUDING "DANGEROUS GOODS"







the doj & cd

Department:

Justice and Constitutional Development REPUBLIC OF SOUTH AFRICA

THE CONSEQUENCES:

CRIMINAL PROCEEDINGS CIVIL ACTIONS AND LAWSUITS REPUDIATED INSURANCE CLAIMS LOSS OF PRODUCTIVITY LOSS OF LIFE – (police / DoL) INJURIES AND LOST MAN HOURS **BAD PUBLICITY (news)**



OR JAIL...

...OR BOTH!

IDENTIFY & CLASSIFY? Same as for TRANSPORT: SANS 10228: 2012 UN NUMBER / HAZARD CLASS? HANDLING?

- Is the substance handled and stored as per the MSDS?
 - Is correct PPE used ?



MSDS?

MATERIAL SAFETY DATA SHEET



PPE?

PERSONAL



PROTECTIVE EQUIPMENT

EMPLOYERS MUST ENSURE:

that the HCS in storage or distributed are properly identified, classified and handled...

that a container or a vehicle in which an HCS is transported is clearly identified, classified and packed In UN-Approved Packaging...









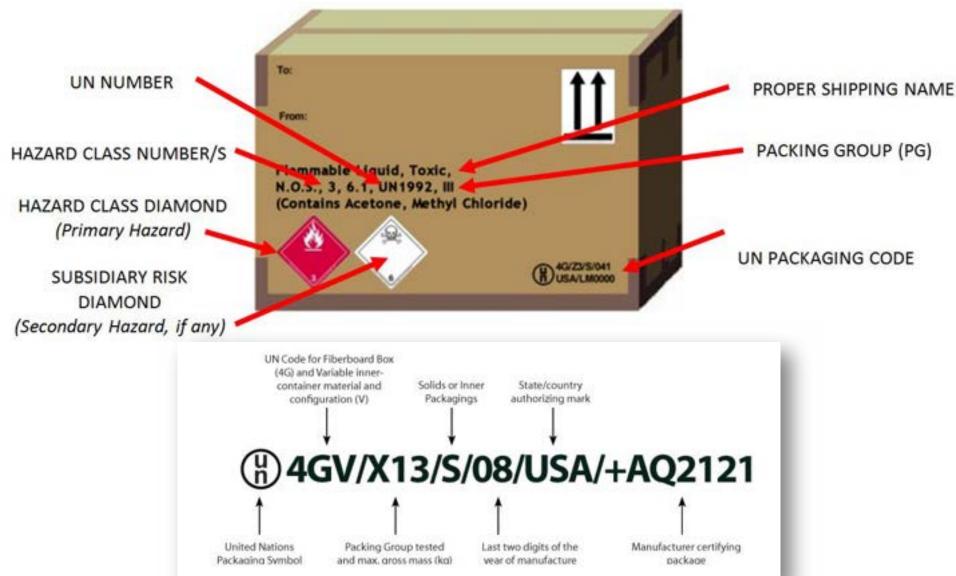
UN-APPROVED CONTAINERS IN SA?

Labelled and packed as per SANS 10229





UN PACKAGING CODE



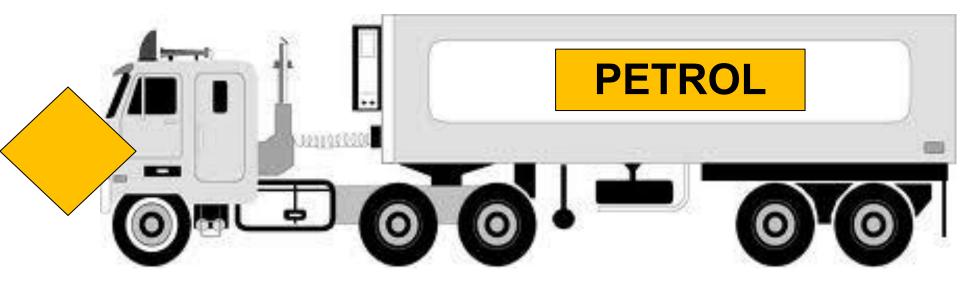


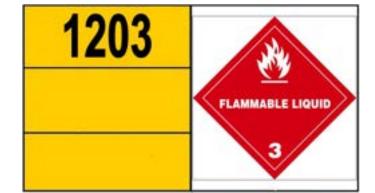
VEHICLES UNDER REGULATION 14:

OHS-HCS REGULATIONS

- Is the HCS handled as per MSDS?
- Is correct PPE used by Driver?







PART THREE PACKAGING REQUIREMENTS

CLICK ON THE TAB BELOW TO COMPLETE QUIZ

CHAPTER THREE QUIZ

PART FOUR REGULATION OF DANGEROUS GOODS

ATI	AS.	NO Eur	ZARE	or the promise and	Cons	distributed.	0818	EPTen	1502	11
A balance	7	HITE H	UNE	IN	LDV_		: Z	ST 23	325	P
Q	BEAT NO	of ENSye	DAW E TI	HAT:	us E	socos	Neg.			-
	,		Commercial	an arministra	or believe a second			5		
Deve	R H	AS PRO	P C	ATEG	iord (6) -	To T	RANA	00	Γ
Deie	R H	ts tro	060	ATEG S	y,	(0)	10 1	THE	6.	04
Deve	R H	ts fro	060	ATE C	y,		10 1	[m:]	6,	Q
Dejre	R H	ts fro	060	Box	y,	A GOURT		TME	(O.s.)	04
Deve On of The Date and place	R H	ts fro	nd place yo	Box	TOTOY (A GOURT		THE CONT	6.	04
Deve	R H	eous 6	nd place yo	Sor Bor	Win speed	A court made a court in a court i	a o belon P	TMC TOUT T		00

BEFORE ANYONE TRANSPORTS <u>ANY</u> GOODS:

The question to ask is:

Are the goods "listed" in SANS 10228 as being "DANGEROUS GOODS"

STEPS TO FOLLOW:

STEP ONE

DO THE GOODS HAVE A...

•UN NUMBER? PROPER SHIPPING NAME? • HAZARD CLASS? • SUBSIDIARY RISK CLASS? PACKING GROUP (PG)?

IF THE ANSWER IS "NO"

TRANSPORT THEM AS

"NORMAL GOODS"

(No Regulations Apply)

WHERE TO LOOK FOR THE INFORMATION?

- LABELS ON PACKAGES
 - MSDS SECTION 14
 - DELIVERY NOTES
 - INTERNET
- CONTACT SUPPLIERS OR MANUFACTURERS

LABELS ON PACKAGES

To:

From:

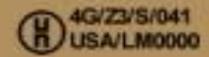
CANYOU MIDENTIFY?



Flammable Liquid, Toxic, N.O.S., 3, 6.1, UN1992, III (Contains Acetone, Methyl Chloride)







MSDS

SECTION 14

"TRANSPORT INFORMATION"

SECTION	14: Transportation
---------	--------------------

Shipping Name (CFR): Sodium cyanide, Solid

Hazard Class (CFR): 6.1

Additional Hazard Class (CFR): NA

Packaging Group (CFR):

UN ID Number (CFR): UN# 1689

Shipping Name (IATA): Sodium cyanide, Solid

Hazard Class (IATA): 6.1

Additional Hazard Class (IATA): NA

Packaging Group (IATA):

UN ID Number (IATA): UN# 1689

IF THE ANSWER IS "YES"

ESTABLISH:

HOW MANY UN No's?

HOW MANY UN NUMBERS? 1 > 1 (2+)

"SINGLE LOAD RULES" "MIXED
LOAD
RULES"

NOW GO TO
STEP TWO

STEP TWO

"SINGLE LOADS"

ONLY <u>ONE</u> UN NUMBER IS IDENTIFIED

TO BE TRANSPORTED

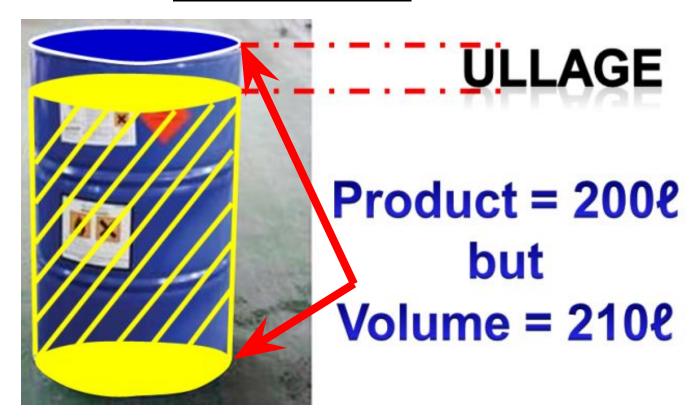
STEP TWO – (SINGLE LOADS) "QUANTITY"

MEASURED AS -

LIQUIDS: LITRES/VOLUME GAS/SOLIDS: KILOGRAMS

LITRES =

("FULL WATER VOLUME") OF THE WHOLE CONTAINER





ALWAYS USE THE <u>FULL</u> TANK SIZE FOR "LITRES"



NOTIONALLY EMPTY

empty but not clean, or not certified clean.

NOTIONALLY EMPTY

DRUMS, TANKS, CYLINDERS, CANS, BOTTLES **MUST BE TREATED AS** "FULL" WHEN ESTABLISHING

WHEN ESTABLISHING
THE QUANTITY OF GOODS

SINGLE LOADS

SO FAR, YOU HAVE PERFORMED 2 STEPS

- 1. GOODS IDENTIFIED / CLASSIFIED
- 2. QUANTITY (kg or litres/volume)

STEP THREE

"SINGLE LOADS"

Column "6"
SANS 10231: 2014

EXEMPT QUANTITY

"TABLE C.1"

1	2	3	4	5	6	7	8	9	10	11
UN	Duaman ahimuinan mana	Class	Pack- ing group	Subs. risk	Ex- empt quan- tities	F	P, B, L and O provisions			
No.	Proper shipping name						Р	В	L	0



EXEMPT QUANTITY

"Quantity of dangerous goods which, if not exceeded in the total load, is exempt from the requirements of this standard"

EXEMPT QUANTITY

"SULPHURIC ACID"

1	2	3	4	5	6	7	8	9	10	11
UN No.	Proper shipping name	Class	Pack- ing group	Subs. risk	Ex- empt quan- tities	F	P, B, L and O provisions			
							P	В	٦	0
1830	SULFURIC ACID with >51% acid	8	II		50	20				

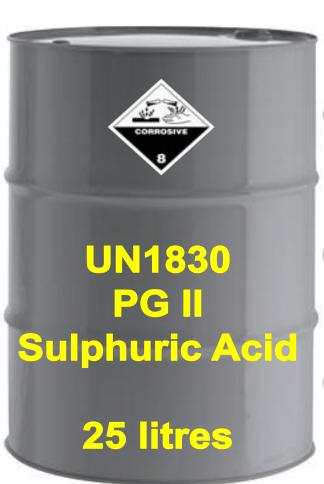
EXAMPLE SULPHURIC ACID UN 1830 – CLASS 8

QUANTITY 25 Litres/Vol

HOW MUCH IS EXEMPTED IN SANS 10231?



TOTAL QUANTITY (VOLUME)?







IS THIS A REGULATED DANGEROUS GOODS LOAD OR A NORMAL GOODS LOAD?

IS THIS A REGULATED DANGEROUS GOODS LOAD OR A NORMAL GOODS LOAD?

REGULATED

DOES A PLACARD APPLY TO THIS LOAD?

IF SO... WHICH PLACARD?

1830

011 123 4567

080 123 4567



STEPS TO FOLLOW:

MIXED LOAD RULES

STEP ONE:

IDENTIFY > 2 UN No

to be loaded in same vehicle

STEP TWO "MIXED LOADS"

ESTABLISH WHETHER THE DIFFERENT UN NUMBERS ARE FROM THE -

SAME CLASS





OR

DIFFERENT CLASSES





STEP TWO: "MIXED LOADS"

SAME CLASS:



e.g.



ARE COMPATIBLE

STEP TWO: "MIXED LOADS"

DIFFERENT CLASSES?





CHECK WHETHER "COMPATIBLE"

STEP TWO: "MIXED LOADS"

HOW DO WE CHECK IF DIFFERENT CLASSES ARE

"COMPATIBLE"?

WHAT IS THE GENERAL SEGREGATION SPACE BETWEEN COMPATIBLE GOODS?

STEP TWO – MIXED LOADS COMPATIBILITY

SANS 10231: 2014

CHECK WHETHER THE
PRIMARY HAZARD CLASSES
AND THE SUBSIDIARY RISKS
ARE COMPATIBLE

COMPATIBILITY

COMPARE PRIMARY CLASS (AND SUBSIDIARY RISK CLASS) AGAINST EACH OTHER ON THE COMPATIBILITY CHART

Note: BOTH CLASSES <u>AND</u> SUBSIDIARY RISK CLASSES MUST BE COMPATIBLE





PRIMARY & SUBSIDIARY

CLASS	81	2.1	2.2	2.3	3	4.1	4.2	4.3	5.1	5.2	6.1	6.2	7	8 acld	8 base	9
1																
2.1											A	A		A		
2.2													A	A		
2.3				95 5								e 25	A			
3									Α	A						
4.1									Δ	Δ						
4.2			7	I						Α						
4.3			7^{\prime}						-							
5.1			7		a		A						А			
5.2					A	A	Α	A						A		
6.1		A		20 33	250									A		3
6.2		Α												A		
7			A	A					А							
8 acid		Α	A							Α	Α	Α		S &	A	å - 3,
8 base												. 20		A		
9																

COMPATIBILITY CHART

Table "G.1" in SANS 10231

CLASSES ON THE LEFT (1 TO 9)

CLASSES ON THE TOP (1 TO 9)

CLASS	1	2.1	2.2	2.3	3	4.1	4.2	4.3	5.1	5.2	6.1	6.2	7	8 ackd	8 base	9
	+															
2.1											A	Α		A		
2.2								1						A		
2.3				8 9							8		A			
3									А	A						
4.1									A	A						
4.2									Α	A						
4.3									A	A						
5.1					A			A					A			
5.2					A	A	A	A						A		
6.1		Α												A		
6.2		Α												A		
7			A	A					Α							
8 acid		Α	Α							A	A	Α			A	
8 base														A		
9																

CLASS	.1	2.1	2.2	2.3	3	4.1	4.2	4.3	5.1	5.2	6.1	6.2	.7	8 acld	8 base	9
1																
2.1											A	A		Α		
2.2													A	А		
2.3				95 97									A			9
3									A	A						
4.1								0	A	(A	Λ				7,	
4.2			T					O	A	A						
4.3									A	A						
5.1						А	A	A	6						"	
5.2				N	A	A	A	A						Α		
6.1		Α			S 38					\wedge				^		
6.2		A								2			ر المال			
7			A	A					<u>~~</u> `0 ?!	306 €	W-	1		W6I 1€∑	W-	
8 acid	1	А	Α							CIDS		₹ C		ASE		
8 base										8/				8/		
9																

CLASS	.1	2.1	2.2	2.3	3	4.1	4.2	4.3	5.1	5.2	6.1	6.2	7	8 acld	8 base	9
1																
2.1					_	_			_		A	Α		Α		
2.2				Ĵ									A	A		
2.3												8 80	A			
3									Α	A						
4.1									A	Α						
4.2									A	А						
4.3					- 20				A	Α						3
5.1					A	A	A	A					A			
5.2					Α	A	A	A						A		
6.1		A		2 3	,									А		3.
6.2		A												A		
7			A	A					A							
8 acld		Α	A	6. J	8				9.5	Α	A	Α		53 .44	Α	å - S.
8 base												. 20		A		
9																

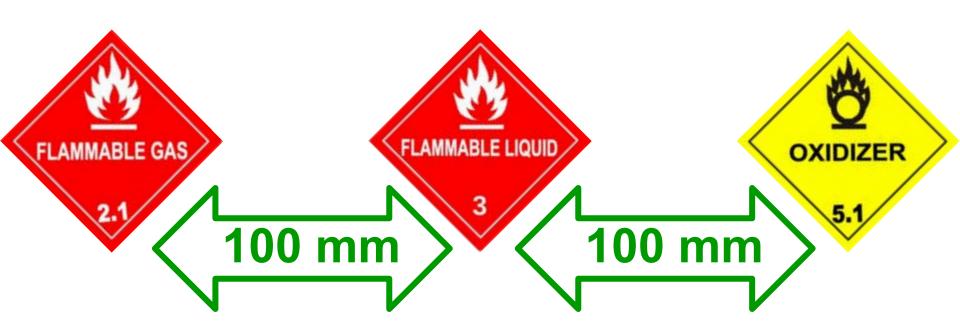
WHITE BLOCK = "COMPATIBLE"

CLASSES ARE ALLOWED
TOGETHER ON THE SAME
VEHICLE
(ONE DRIVER)

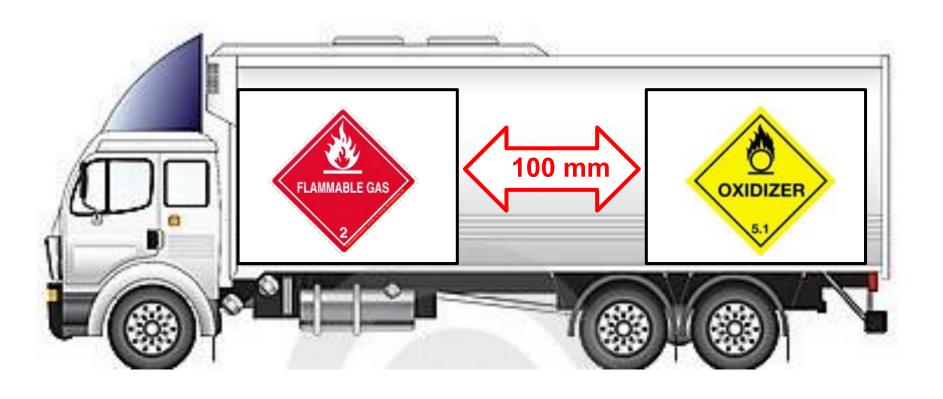
(NOTE: with <u>100mm</u> space)

CLASS	.1	2.1	2.2	2.3	3	4.1	4.2	4.3	5.1	5.2	6.1	6.2	7	8 acld	8 base	9
1																
2.1			_		_				-		A	A		A		
2.2													Α	A		
2.3													A			
3									Α	A						
4.1									A	Α						
4.2									Α	Α						
4.3					200				A	A						3
5.1					A		A	A					A			
5.2								A				M		А		
6.1		Α			1	1						1	9			3 3
6.2		A										7	4			
7			A	FLA	MM	ABL	E GA	AS/	A		OX	IDI	ZEI	R /		
8 acid		Α	A				/			A					A	à - 5.
8 base						2.1						5.1		A		
9												\				

SEGREGATION SPACE



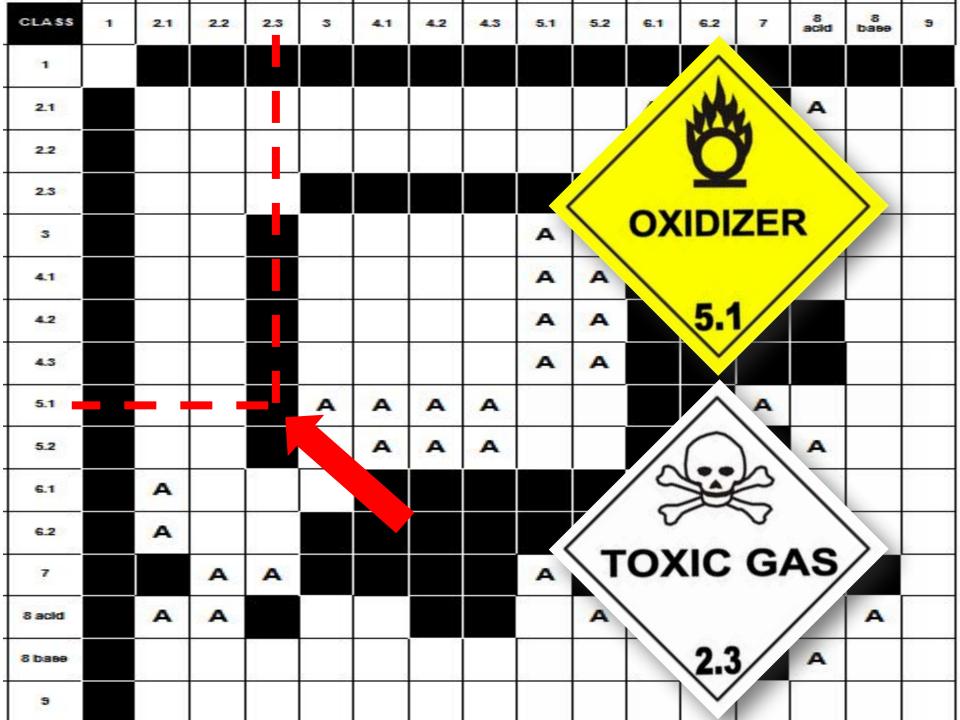
WHITE BLOCK "COMPATIBLE"



BLACK BLOCK = "NOT COMPATIBLE"

CLASSES ARE <u>NOT</u>
ALLOWED TOGETHER ON
THE SAME VEHICLE,

= TWO SEPARATE DRIVERS



BLACK BLOCK "NOT COMPATIBLE"

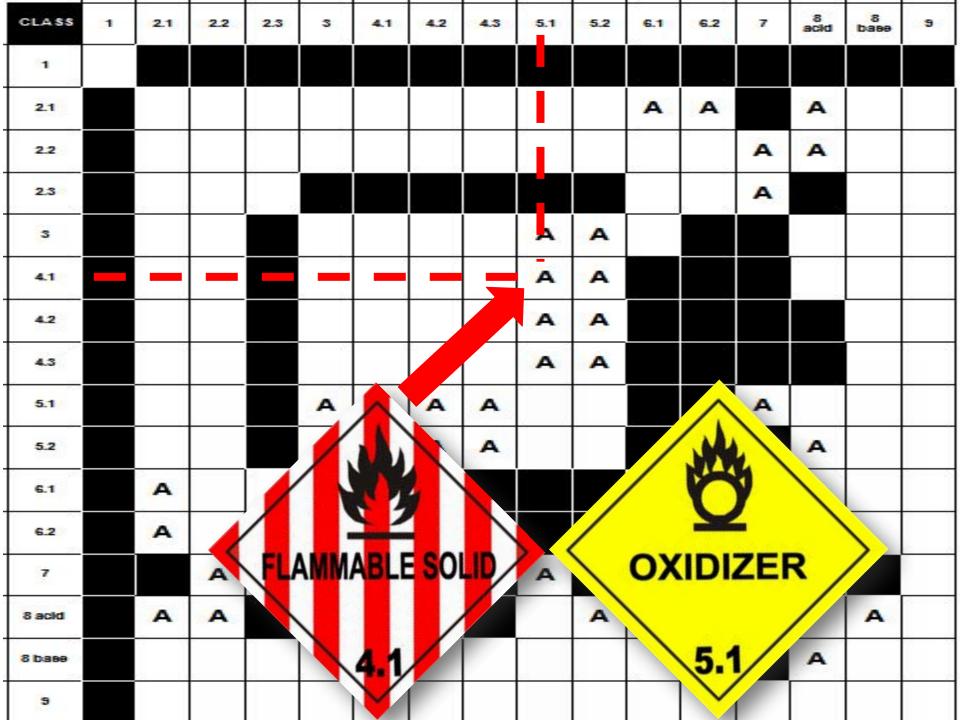




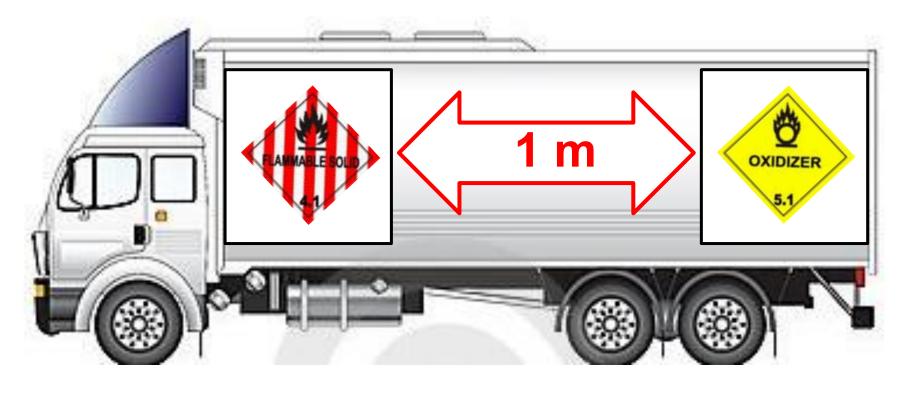
"A" INSIDE WHITEBLOCK "SEPARATE BY 1m"

CLASSES <u>ARE</u> ALLOWED TOGETHER ON THE SAME VEHICLE, BUT 1 m SPACE

= ONE DRIVER



WHITE BLOCK "A" COMPATIBLE, SEPARATE 1m



CLASS	<u>.</u> 1	2.1	2.2	2.3	3	4.1	4.2	4.3	5.1	5.2	6.1	6.2	7	8 acld	8 base	9
1																
2.1											A	A		Α		
2.2													A	A		
2.3												8 80	A			
3									A	A						
4.1									A	A						
4.2									A	Α						
4.3		8 - 6			- 20				A	A						S - S
5.1					A	A	A	A					A			
5.2					Α	A	A	A						A		
6.1		Α		2 3										A		3.
6.2		Α												A		
7			A	A					A							
8 acid		Α	A	30 D	8				9.5	Α	A	A			A	å - 3.
8 base												6 - 23e		A		
9																

STEP THREE – (MIXED LOADS) "QUANTITY"

MEASURED AS -

LIQUIDS: LITRES/VOLUME SOLIDS: KILOGRAMS

STEP FOUR

"MIXED LOADS"

"CALCULATE"



MIXED LOAD "1000" FORMULA

A = Q X F

A is the "ANSWER"

Q is the "QUANTITY"

F is the "FACTOR"

(Table C.1 - SANS 10231: 2010)

THE "FACTOR

"TABLE C.1"

1	2	3	4	5	6	7	8	9	10	11
UN No.	Proper chinning name	Class	Pack- ing group	Subs. risk	Ex- empt quan- tities	F	P, B, L and O provisions			
	Proper shipping name						P	В	L	0

DO THE EXERCISE ON PAGE 34 OF THE TEST

CLASS EXERCISE

Page 36 of MANUAL

UN No	1944	1823	1202
SHIPPING NAME	MATCHES	SODIUM HYDROXIDE	DIESEL
CLASS	4.1	8	3
CLASS NAME	FLAMMABLE SOLID	CORROSIVE	FLAMMABLE LIQUID
PG	III		III
QUANTITY	150	15	450

1	2	3	4	5	6	7	8	9	10	11	
UN	Proper chinning name	Class	Pack-	Subs.	Ex- empt	F	P, B, L and O provisions				
No.	Proper shipping name	Class	group	risk	quan- tities	5	Р	В	L	0	
1944	MATCHES, SAFETY (book, card or strike on box)	4.1	III		500	2					
1823	SODIUM HYDROXIDE, SOLID	8	II		50	20	11				
1202	GAS OIL or DIESEL FUEL or HEATING OIL, LIGHT, flash point <60,5°C c.c.	3	III		1 000	1			5	2	
	GAS OIL or DIESEL FUEL or HEATING OIL, LIGHT, flash point >60,5°C c.c.	3	III		1 000	1					

		Q	Χ	F			Q	χ	F			Q	Χ	F
A1	=		X		A2	=		X	30 30	А3	=		X	

$$A1 = 150 \times 2 = 300$$
 $A2 = 15 \times 20 = 300$
 $A3 = 450 \times 1 = 450$

= 1050

IF THE SUM IS > 1000 THE LOAD IS A "MIXED LOAD"

MIXED LOAD

082 255 8401

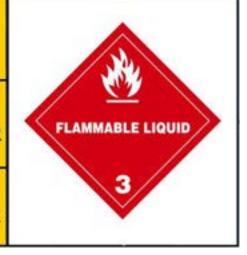
084 810 6984



MIXED

OPERATOR TEL ADVICE NUMBER

SPECIALIST TEL ADVICE NUMBER



ANSWER = "1050"

(Remember the "1000" Rule)

IS THIS A <u>REGULATED</u>

SINGLE LOAD

OR A REGULATED

MIXED LOAD?

IS THIS A REGULATED DANGEROUS GOODS LOAD OR A NORMAL GOODS LOAD?

POWERS AND DUTIES OF INSPECTORS – D.O.T.



transport

Department: Transport REPUBLIC OF SOUTH AFRICA







EVALUATE ALL ROLE PLAYERS

INVESTIGATE PROCEDURES
FOLLOWED BY PERSONS TO
COMPLY WITH REQUIREMENTS
FOR THE TRANSPORT OF
D/GOODS

KEEP A DATABASE RECORD OF:

- ALL INCIDENTS INVOLVING D/GOODS
- WHICH GOODS ARE REGULATED AND QTY
- FREQUENTLY USED ROUTES
- OPERATORS
- OFFENCES COMMITTED iro D/GOODS

MAY ENTER ANY VEHICLE
OR PREMISES WHEREIN IT IS
SUSPECTED THAT D/GOODS
ARE TRANSPORTED:

- SEARCH VEHICLES
- EXAMINE, EXTRACT, TAKE SAMPLES
- OPEN OR HAVE CONTAINERS OPENED
- QUESTION OPERATORS
- DETAIN NON-COMPLIANT VEHICLES

TRAFFIC OFFICERS







MAY ENTER ANY VEHICLE
OR PREMISES WHEREIN IT IS
SUSPECTED THAT D/GOODS
ARE TRANSPORTED:

- DEMAND ANY PRESCRIBED DOCUMENT FROM DRIVER, OPERATOR, CONSIGNOR
- DEMAND INFORMATION ON SUBSTANCES
- WEIGH, COUNT OR MEASURE GOODS
- MARK OR SEAL PACKAGES OR VEHICLES
- EXAMINE OR COPY LOAD DOCUMENTS
- DEMAND EXPLANATION OF DOCUMENTS
- **INSPECT ANY D/GOODS OPERATION**
- DEMAND INFORMATION ON OPERATIONS
- SEIZE ANY SUBSTANCE OR ITEM THAT MAY BE USED AS EVIDENCE OR PROOF

TRAFFIC OFFICERS

- DEMAND ANY PRESCRIBED DOCUMENT FROM DRIVER, OPERATOR, CONSIGNOR
- DEMAND INFORMATION ON SUBSTANCES
- WEIGH, COUNT OR MEASURE GOODS
- EXAMINE OR COPY LOAD DOCUMENTS

MUST PRODUCE HIS / HER APPOINTMENT CERTIFICATE ON DEMAND OF ANY AFFECTED PERSON PRESENT

INSPECTORS – D.O.T. MAY NOT

- •OPEN DANGEROUS GOODS PACKAGES
- UNLOAD OR DECANT D-GOODS,

UNLESS...

- THE OPERATOR IS DULY NOTIFIED,
- AUTHORISED BY LOCAL AUTHORITY,
- QUALIFIED PERSON SUPERVISES

TRAFFIC OFFICERS MAY NOT

- •OPEN DANGEROUS GOODS PACKAGES
- UNLOAD OR DECANT D-GOODS,

UNLESS...

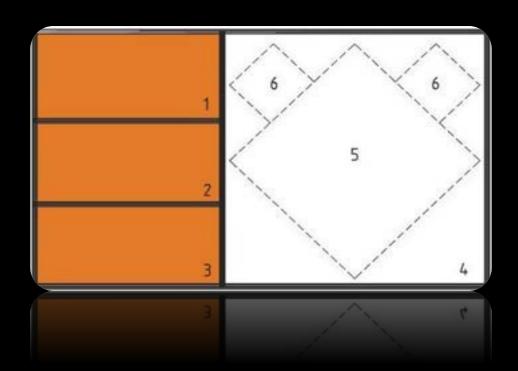
- THE OPERATOR IS DULY NOTIFIED,
- AUTHORISED BY LOCAL AUTHORITY,
- QUALIFIED PERSON SUPERVISES
- D/GOODS INSPECTORATE NOTIFIED

PART FOUR REGULATION OF DANGEROUS GOODS

CLICK ON THE TAB BELOW TO COMPLETE QUIZ

CHAPTER FOUR QUIZ

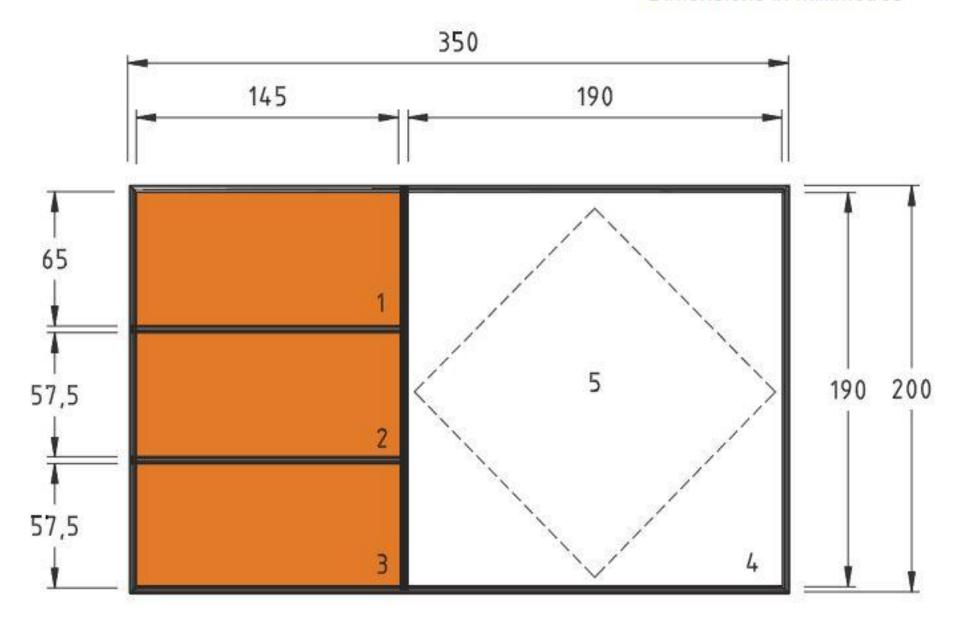
PART FIVE PLACARDING OF VEHICLES



MINIMUM SIZE OF PLACARDS?

VEHICLES UNDER 3.5 TONS

Dimensions in millimetres

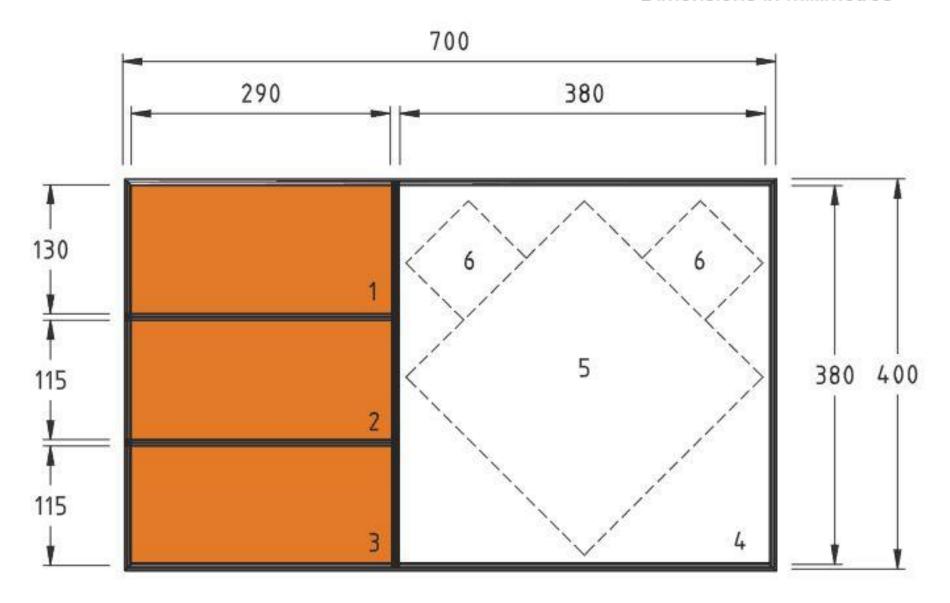




MINIMUM SIZE OF PLACARDS?

VEHICLES OVER 3.5 TONS

Dimensions in millimetres



MORE THAN 1 HAZARD CLASS





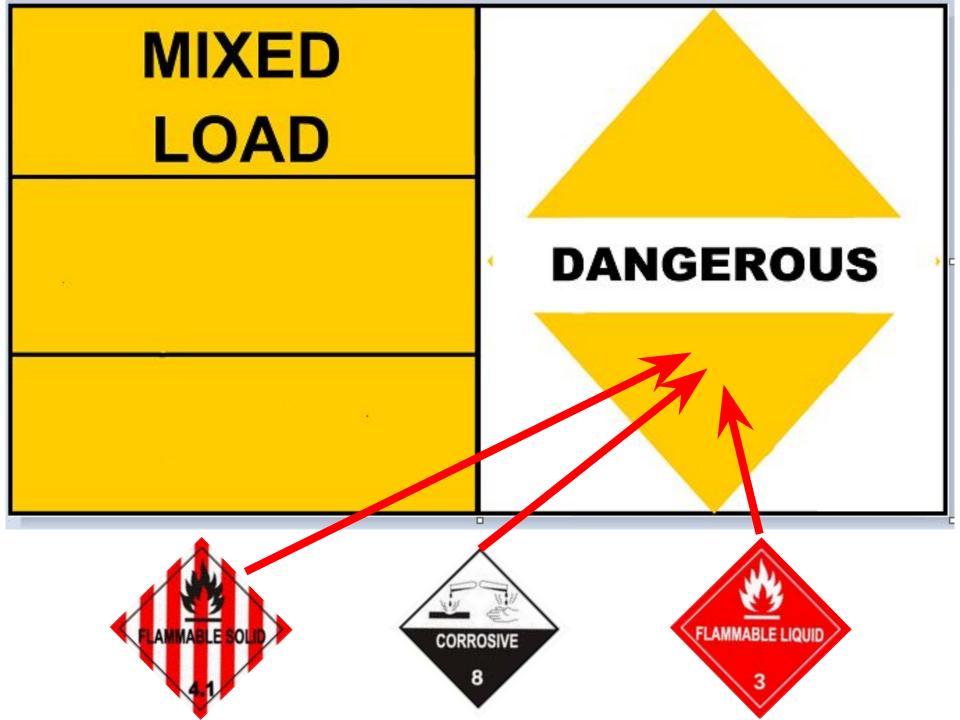


1208 CLASS 3





1340 CLASS 4.3



2012 EMERGENCY RESPONSE GUIDEBOOK

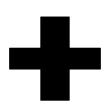
A Guidebook for First Responders During the Initial Phase of a Dangerous Goods/ Hazardous Materials Transportation Incident



ID No.	Guide Name of Material No.	ID Guide Name of Material No. No.
1203		1228 131 Mercaptans, liquid, flammable,
1204	127 Nitroglycenn, solution in alcohol, with not more than 1% Nitroglycerin	toxic, n.o.s. 1229 129 Mesityl oxide
1206		1230 131 Methanol
1207	130 Hexaldehyde	1230 131 Methyl alcohol
1208		1231 129 Methylacetate
1208	128 Neohexane	1233 130 Methylamyl acetate 1234 127 Methylal
1210	129 Ink, printer's, flammable	1234 127 Methylal 1235 132 Methylamine, aqueous solution
1210		1237 129 Methyl butyrate
1210	129 Printing ink related material	1238 155 Methyl chloroformate
1212	129 Isobutanol	1239 131 Methyl chloromethyl ether
1212	129 Isobutyl alcohol	1242 139 Methyldichlorosilane
1213	129 Isobutyl acetate	1243 129 Methyl formate
1214	132 Isobutylamine	1244 131 Methylhydrazine
1216	128 Isooctenes	1245 127 Methyl isobutyl ketone
1218 1218	130P Isoprene, inhibited 130P Isoprene, stabilized	1246 127P Methyl isopropenyl ketone, inhibited
1219 1219		1246 127P Methyl isopropenyl ketone, stabilized
1220	129 Isopropyl acetate	1247 129P Methyl methacrylate monomer, inhibited
1221 1222		1247 129P Methyl methacrylate monomer, stabilized
1223	128 Kerosene	1248 129 Methyl propionate

SAME CLASS & ERG, MOST HAZARDOUS







1208 ERG 128

PG III

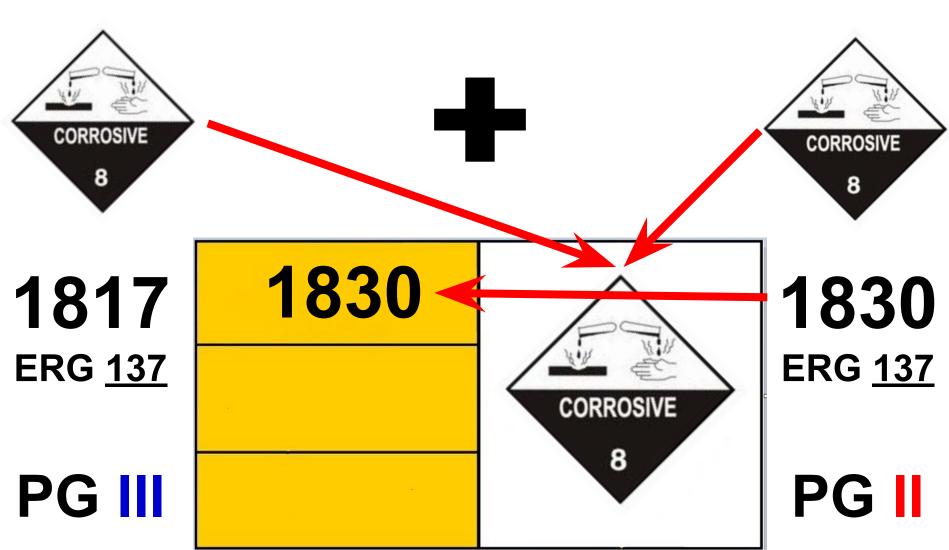
1203



1203 ERG 128

PG II

SAME <u>CLASS & ERG</u>, MOST HAZARDOUS



SAME CLASS, <u>DIFFERENT</u> ERG No







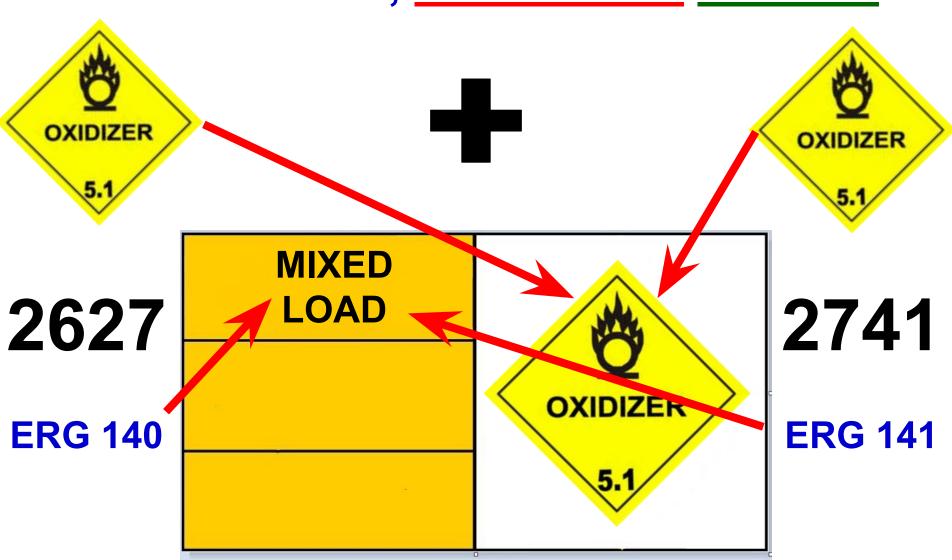
1090 ERG 127 MIXED LOAD



1230

ERG 131

SAME CLASS, <u>DIFFERENT</u> <u>ERG No</u>



INCIDENTS

vital that the first responder to a dangerous goods incident is able to quickly identify the load on a vehicle, so as to pass on accurate information to other responders (EMS).

PLACARDS (HAZCHEM BOARDS)

THREE TYPES:

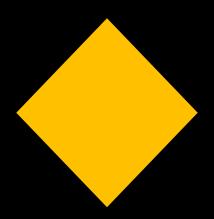
- D/GOODS PLACARDS
- DANGER WARNING DIAMOND
- SPLIT PLACARDING

DANGEROUS GOODS PLACARD



A board with separate, delineated zones for goods identification, telephonic advice numbers and the appropriate hazard class diamond

DANGER WARNING DIAMOND



An orange diamond that is displayed on the front of the vehicle

(loaded with dangerous goods).

SPLIT PLACARD

system of placarding where a rectangle that contains the UN number and a hazard class diamond are affixed in close proximity, as required for freight containers in accordance with the IMDG regulations











GENERIC PLACARDS

ANY / COMBINATIONS OF PETROLEUM-BASED PRODUCTS

un 1202 DIESEL

1203 PETROL (PG II)

1863 AVIATION FUEL

1223 PARAFFIN

ERG 128

1203

FLAMMABLE LIQUID

3

CLASSIFIED WASTE PLACARDS



OFFENCES

THE CURRENT TREND?

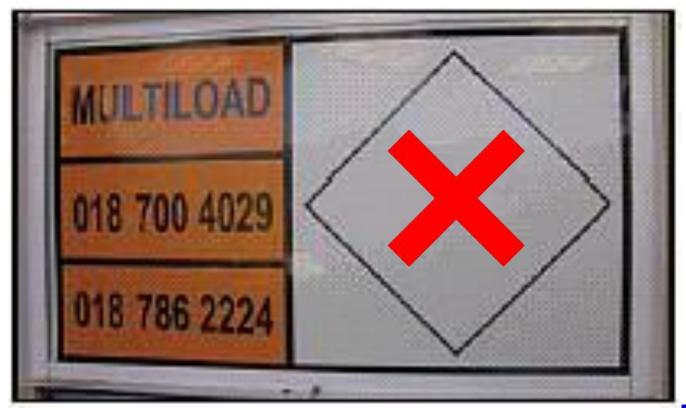
MIXED LOAD

082 255 8401

084 810 6984

FOR ANY LOAD!!!

DO NOT USE THE OLD "MULTILOAD PLACARDS!



IS ILLEGAL AND NO LONGER IN USE FOR PAST 7 YEARS +

OFFENCES

FAIL TO DISPLAY ACCURATE PLACARDS THAT MATCH LOADS

FAIL TO DISPLAY PLACARDS IF GOODS OVER EXEMPT QTY

TO DISPLAY ANY PLACARDS WHEN VEHICLE IS EMPTY

WHICH TYPE OF D/GOODS VEHICLES DO NOT REMOVE PLACARDS AFTER **OFFLOADING?**



4.5 WHEN MUST D/GOODS VEHICLES DISPLAY OR REMOVE SIGNAGE?

DRIVERS MUST DISPLAY PLACARDS

WHEN LOADED WITH D/GOODS

- SINGLE LOADS <u>EXCEED</u> EXEMPT QTY
- MIXED LOADS EXCEED "1000"

DRIVERS MUST REMOVE PLACARDS

WHEN ALL GOODS OFFLOADED

S / LOADS <u>UNDER</u> EXEMPT QTY

MIXED LOADS ARE <u>UNDER</u> "1000"



HOW MANY PLACARDS MUST BE DISPLAYED?

- = THREE
 (Per Vehicle)
- 1 LEFT
- 1 RIGHT
- 1-REAR/BACK

REMEMBER!!!!

REVERSE OR REMOVE PLACARDS AND ORANGE DIAMOND (FRONT)

- WHEN OFFLOADED, OR
- GOODS ARE UNDER EXEMPT QTY

NOTE:
DOES NOT APPLY TO TANKERS



















CONTRACTOR TO LEGISLATION ASSESSMENT

0118273151

THE PERSON AND PERSONS ASSESSED.

0833029167





DANGEROUS



WARNING

It is not only a criminal offence to use inaccurate placards, but the practice also endangers emergency services response teams and the public when incorrect response measures are applied to an incident.

This may result in serious injury or fatalities due to incorrect application of fire-fighting techniques and spill recovery measures.

DO NOT USE THIS AS THE ANSWER FOR ALL LOADS!



IS ILLEGAL, IRRESPONSIBLE, AND INACCURATE

PLACARD ZONES

ZONE A

ZONE B

ZONE C

ZONE D

ZONE - A

ZONE A

GOODS
IDENTIFICATION
ZONE

ZONE – "A" SINGLE LOADS

UN NUMBER

ZONE A

ZONE - "A"

MIXED LOADS - SAME ERG

UN NUMBER OF STRONGEST

ZONE A

ZONE – "A" MIXED LOADS

MIXED LOAD

ZONE — "A" CLASSIFIED WASTE LOADS

WASTE 1830

ZONE "B"

24 HOURS, 7 DAYS A WEEK, 365

ZONE B

OPERATOR
TELEPHONIC
ADVICE
ZONE

ZONE "B"

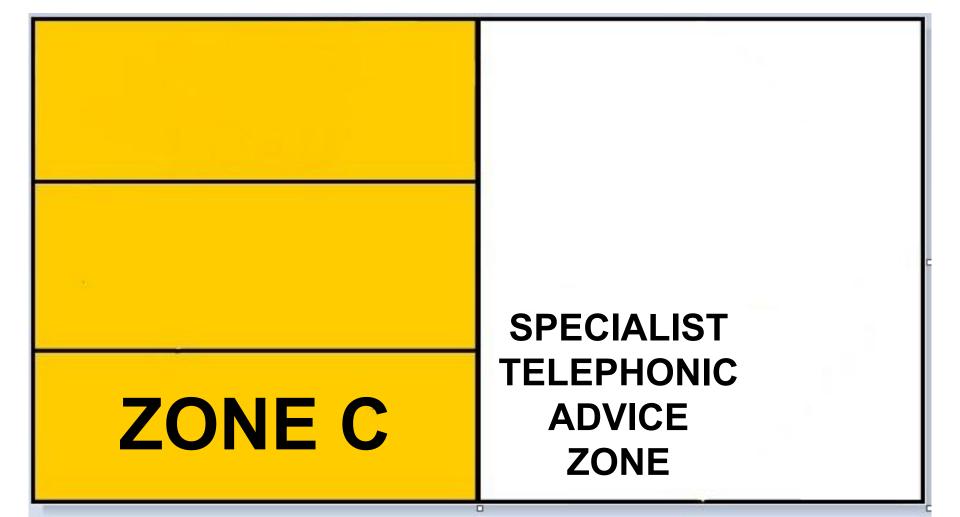
24 HOURS, 7 DAYS A WEEK, 365

1 OR 2 NUMBER/S 1 MUST BE LANDLINE OPERATOR
TELEPHONIC
ADVICE
ZONE



ZONE "C"

24 HOURS, 7 DAYS A WEEK, 365



ZONE "C"

24 HOURS, 7 DAYS A WEEK, 365

SPECIALIST TELEPHONIC 1 OR 2 NUMBER/S **ADVICE** 1 MUST BE LANDLINE ZONE

ZONE "D"

SINGLE LOADS

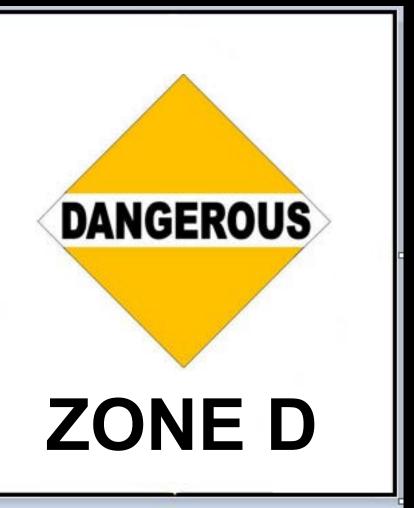
HAZARD CLASS
DIAMOND
ZONE



ZONE "D"

MIXED LOADS

HAZARD CLASS
DIAMOND
ZONE



PLACARD "RULES"

- PLACARDS & DOCUMENTS MUST
 ALWAYS BE ACCURATE
- •FULL PLACARD, INCLUDING THE BLACK BORDER VISIBLE
- DIRECTLY FIXED OR SUPPORTED BY A PERMANENT FRAME

PLACARD "RULES"

- •CLEAN, LEGIBLE AND NOT DEFACED AT ALL TIMES
- •THREE PLACARDS PER VEHICLE
- AFFIXED AS FOLLOWS:
 - 1 REAR
 - 1 RIGHT
 - 1 LEFT

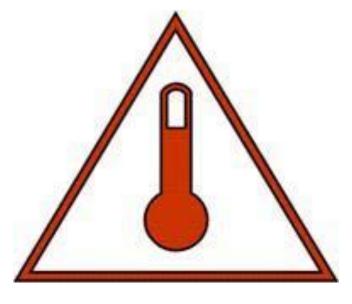
CLEARLY VISIBLE – ROAD-SIDE





ELEVATED TEMPERATURE LOADS

LIQUIDS HOTTER THAN 100° Celsius SOLIDS HOTTER THAN 240° Celsius



LEFT, RIGHT AND REAR



PART FIVE PLACARDING OF VEHICLES

CLICK ON THE TAB BELOW TO COMPLETE QUIZ

CHAPTER FIVE QUIZ

PART SIX PRESCRIBED DOCUMENTS



card that lists the hazards and emergency information for a material being transported and that is intended for use by the driver during an incident, or by emergency services, if required.

IS VALID FOR

3 YEARS

FROM DATE OF ISSUE

ABBREVIATIONS

TREC - SANS 10232-4

South African Bureau of Standards

TREMCARD - ®CEFIC

European Council of Chemical Manufacturers Federation

MUST BE KEPT IN THE

DESIGNATED SPACE

ONLY WHEN LOAD IS ON VEHICLE

TREMCARD / TREC

GENERAL INFORMATION:

DRIVERS MUST UNDERSTAND
THE INFORMATION AND
INSTRUCTIONS ON THE
TRANSPORT EMERGENCY CARD

DRIVERS MUST READ CARDS

Ceffic Tremcard - Instructions in Writing

Flammable liquid (flash point less than 23°C or boiling point not exceeding 35°C)

Name of substance(s): STOFLEX

- Colourees Touch or packs.
- Drugly with perceptible octoor.
- Macible with water

NATURE OF DANGER

- littly form suplosive micrors with air, particularly to emply unabserved receptacies.
- Niles avaporate pubMs.
- Produce will counter profession risks, somewhate of burnting and subsequent population.
- The vigour is honor than air and spreads along ground
- The uppour train be invisible
- The visious may have narrollic effect
- The vapour may have intact effect or eyes, skin and air passages.

PERSONAL PROTECTION

- Peticive lower.
- Executed bottle with deen water

INTERVENTION EQUIPMENT

- Boars.
- Sand or other absorbers
- Attenuatively, appropriete spill kit.

GENERAL ACTIONS BY THE DRIVER

- Mark roads with soft-standing warning signs and warn other road users or passent-by
- Yang public away from danger area. Kang-upwind Notify police and fire brigade at soon or possible.

ADDITIONAL AND/OR SPECIAL ACTIONS BY THE DRIVER

- July active only I without semonal risk.
- Sop leats Faither risk.
- Contain or absorb leaking liquid with sand or earth or rother suitable material
- Avoid direct contact with substance,
- TODGE May cleak exploses attrouphers
- Audid making sparks.
- Provent legacs entering water countes, severs, becominds and workpts.
- If substance has entered a water course or sewer or been spill on soll or vegetation, letters police.
- Warn everybody: Explicitor hisrard.

FIRE dinformation for the driver in case of fire)

Do not adverge to out with any fire involving the load.

FIRST AID

- If substance has put into the over, immediately wash out with planty of water. Continue treatment until medical assistance is provided
- Remove contaminated clothing immediately and ween affected all n with scap and water.
- Sees medical trachest when anyone has symptoms apparently due to inhalation, awaitining or contact with slot or eyes. Purpose who have missed the furnes produced in a this may not alread exhibiting symptoms.
- in case of burns immediately cool effected skin as long as possible with sold water.

SUPPLEMENTARY INFORMATION FOR EMERGENCY SERVICES

- Keep containeds) and by spraying with water if exposed to line.
- Extrepuels with waterspray or preferably with foom or dry offention. Do not use water jet.
- Sewers must be covered and besements and workpits evacuated. Use low-sperking handtools and explosion-grapf electrical insulpment.

Additional information PHILAGRO SA (PTY) LTD P G 80X 36713 MENLOPARK 6083

EMERGENCY TELEPHONE: 0800 00 881T

Cefic Revision 61/0006 Innue: ADR 2007/3

G Calls Prepared by Calls from the best immediate modalities no reoppositivity is accepted that the information is sufficient or correct in all cases

APPLIES ONLY SURING ROAD TRANSPORT. ENGLISH Caffic TEC(F) - 30GF14+H

2009-02-14

TRANSPORT EMERGENCY CARD - Road Transport In accordance with SANS 10232-4

PROPER SHIPPING NAME

DIESEL FUEL

UN No.	1202		
Class	3		
Subsidiary risk			
Packing Group	81		
ERG No.	128		

APPEARANCE

Liquid; Light brown; Strong odour

DANGER

 Highly flammable: Easily ignited by heat, sparks or flames.
 Vapour could form explosive. mixture with air . Containers could explode when heated . Vapour explosion hazard indoors. outdoors and in sewers . Vapour could travel to source of ignition and flash back.

PERSONAL PROTECTIVE EQUIPMENT

 Protective gaggles or face shield *Protective gloves *Protective shoes *Eyewash bottle with clean water

EMERGENCY RESPONSE EQUIPMENT

Dry chemical or CO2 •Shovel •Sand or other absorbent

DRIVER FIRST ACTIONS - Only if it can be carried out without personal risk

No smoking allowed. *Warn road users and passers by to keep away from danger area. *Keep.

DRIVER SPECIAL/ADDITIONAL ACTIONS - Only if it can be carried out without personal risk

 Avoid sparks. *Warn all persons not to touch damaged packages or spilled material. *Warn all. persons of explosion hazard *Prevent runoff from entering water courses, sewers and basements

DRIVER ACTIONS IN CASE OF FIRE - Only if it can be carried out without personal risk

Do not attempt to deal with any major fire that involves the load. *Use fire extinguisher on. small fire only if it can be done without personal risk.

FIRST AID

. Move victim to fresh air. . Apply artificial respiration if victim is not breathing. . In case of contact with material, immediately flush skin or eyes (or both) with running water for at least 20 minutes. •Remove and isolate contaminated clothing and shoes.

SPECIAL INFORMATION FOR EMERGENCY SERVICES

 Use water spray, fog or alcohol-resistant foam . Do not use straight streams. maximum distance or use unmanned hose holders or monitor nozzles. «Always stay away from ends of tanks

ADDITIONAL INFORMATION

EMERGENCY TELEPHONE NUMBERS (applicable numbers to be printed here) PREPARED BY (Company Name to be printed here)

from the best knowledge currently available; no guarantee is provided that the information is sufficient or correct under all circumstances.

Date: 2010-01-20

Reference: 182-1202-M0012

TRANSPORT EMERGENCY CARD - Road Transport

In accordance with SANS 10232-4

PROPER SHIPPING NAME

DIESEL FUEL

APPEARANCE

Liquid; Light brown; Strong odour

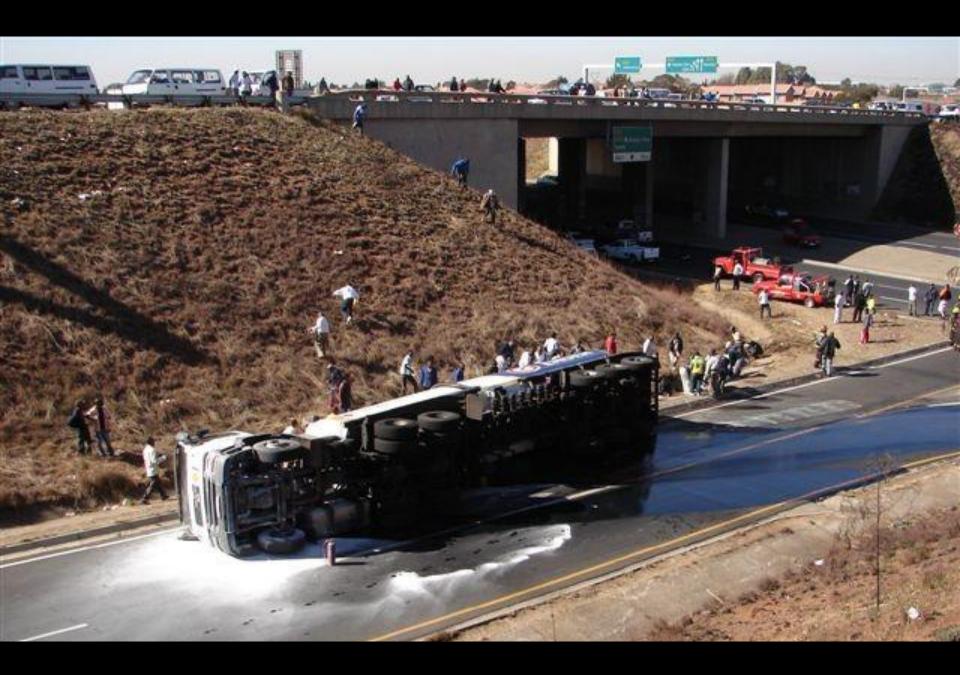
1202		
III		
128		



DANGER

Highly flammable. Easily ignited by heat, sparks or flames

 Vapour could form explosive mixture with air
 Containers could explode when heated
 Vapour explosion hazard indoors, outdoors and in sewers
 Vapour could travel to source of ignition and flash back



PERSONAL PROTECTIVE EQUIPMENT

 Protective goggles or face shield Protective gloves Protective shoes Eyewash bottle with clean water











REMEMBER TO REFER TO THE M.S.D.S.

EMERGENCY RESPONSE EQUIPMENT

•Dry chemical or CO2 •Shovel •Sand or other absorbent









DRIVER FIRST ACTIONS - Only if it can be carried out without personal risk

 No smoking allowed •Warn road users and passers by to keep away from danger area •Keep upwind

DRIVER SPECIAL/ADDITIONAL ACTIONS - Only if it can be carried out without personal risk

Avoid sparks •Warn all persons not to touch damaged packages or spilled material •Warn all
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 Fight fire from maximum distance or use unmanned hose holders or monitor nozzles
 Always stay away from ends of tanks





ADDITIONAL INFORMATION

PREPARED BY (Company Name to be printed here)

from the best knowledge currently available; no guarantee is provided that the information is sufficient or correct under all circumstances.

Date: 2010-01-20

Reference: 182-1202-M0012

10177







DANGEROUS GOODS DECLARATION

"DGD"

A document that describes and quantifies the dangerous goods being transported from a consignor to a consignee

DANGEROUS GOODS DECLARATION Consignment Note No: 101 11X				Company Logo (optional)				
Consignor: R A Jones, Jones Warehouse, 100 High Rd, Germiston Tel: 011 100 1000			Operator: B Higgins, Higgins Road freight, 200 South Ave, Germiston Tel: 011 200 2000 Reg. no. vehicle: XYZ 200 GP					
Product manufacturer				Consignee: ABC Chemicals, 300 Marine Drive, Durban Tel: 031 300 3000				
Product owner			Additional information on handling/transport/ storage: The package marked with UN XXXX shall be					
Product custodian								
Party contracting the operator: R A Jones, Jones Warehouse, 100 High Rd, Germiston Tel: 011 100 1000				shaded from sunlight				
Shipping name:	UN No:	Haz Clas s:	PG:	Quantity & typ Packaging:	oe of	Gross mass kg:	Net mass/vol kg/L	
Paint	1263	3	III	2 fibreboard b 4 x 5 L ea	,	52	41.5	

DECLARATIONS

"I hereby declare that the content of this consignment is fully and accurately described above by the proper shipping name, and is classified, packaged, marked and labeled/placarded and in all respects, in proper condition for transport in accordance with the relevant national legislation."

Where the consignor is not the manufacturer, the declaration is based on information received.

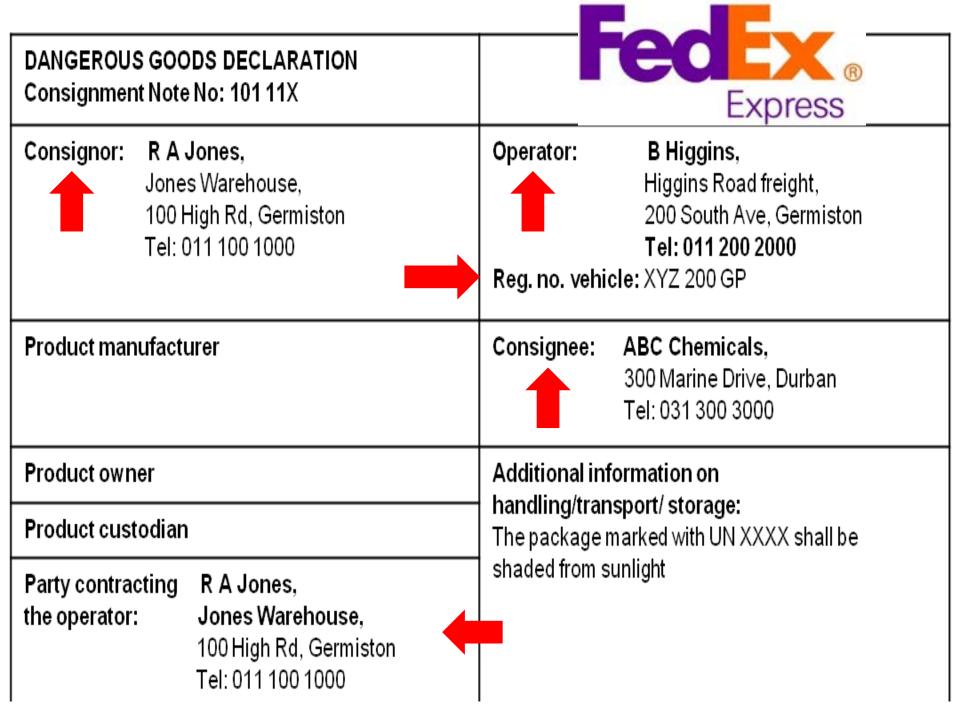
 ${\bf Consignor:} \quad {\bf Product\ manufacturer\,/\, Product\ owner\,/\, Product\ custodian\,/\, Contracting\ Party\ that\ contracts\ the\ operator:}$

Signed: RA Jones Date: 2008-03-15

"The consignment described above has been received into my vehicle. My vehicle is correctly placarded and I am in possession of all necessary transport documentation pertaining to the transport of dangerous goods, including information to be followed in case of an emergency."

Driver

Signed: J K Williams Date: 2008-039-15



Shipping name	UN No:	Haz Class	PG	Qty & type of Packaging:	Gross Mass kg	Nett Mass / Vol kg or ℓ
Paint, Flammable	1263	3	III	3 Fibreboard boxes 4 x 5 ℓ each	78	60
Petrol	1203	3	II	6 steel drums	1320	1260

DECLARATIONS

"I hereby declare that the content of this consignment is fully and accurately described above by the proper shipping name, and is classified, packaged, marked and labeled/placarded and in all respects, in proper condition for transport in accordance with the relevant national legislation."

Where the consignor is not the manufacturer, the declaration is based on information received.

Consignor: Product manufacturer / Product owner / Product custodian / Contracting Party that contracts the operator:

Signed: **RA** Jones

Date: 2008-03-15

"The consignment described above has been received into my vehicle. My vehicle is correctly placarded and I am in possession of all necessary transport documentation pertaining to the transport of dangerous goods, including information to be followed in case of an emergency."

Driver

Signed: J K Williams

Date: 2008-039-15

DGD

Three (3) copies per delivery

May be combined with Invoices

```
- Consignor (keeps 1 copy)
```

- Operator (driver to hand in)
- Consignee (keeps 1 after delivery)

Must be kept for 90 days minimum

DESIGNATED SPACE

GENERAL:

A container, of colour orange and marked with the word DOCUMENTS" in black, which is permanently fixed in a clearly visible space near the centre of the cab so as to be easily accessible from either door or through a broken front window



DESIGNATED SPACE

GENERAL:

METAL OR PLASTIC

PVC TUBES

VINYL OR CANVAS BAGS

ALL OF THE ABOVE ACCEPTED

WARNING

It is a criminal offence to drive a vehicle with tremcards, dgd's and other documents in the "Designated Space" when dangerous goods are not present on the vehicle.



PART SIX PRESCRIBED DOCUMENTS

CLICK ON THE TAB BELOW TO COMPLETE QUIZ

CHAPTER SIX QUIZ

PART SEVEN CONSIGNOR: DUTIES







CONSIGNOR

means the "person" who
offers
dangerous goods
for
transport in a vehicle...

CONSIGNOR

IS RESPONSIBLE FOR THE LOADING OF VEHICLES

PART 4 SANS 10231

AND MUST LOAD ACCORDING TO ALL RELEVANT NATIONAL LEGISLATION

CONSIGNOR DUTIES

SANS 10231: 2010

MUST CORRECTLY CLASSIFY GOODS

REMEMBER STEP ONE?

ENSURE GOODS ARE CORRECTLY
PACKAGED LABELLED (UN
APPROVED)

LOADING MAY ONLY BE DONE BY

QUALIFIED PERSONS
TRAINED IN RELEVANT PROCEDURES

CONSIGNOR

MUST TRAIN STAFF AND APPOINT "QUALIFIED PERSON" IN WRITING

AND KEEP A RECORD OF ALL SUCH APPOINTEES

IF CONSIGNOR DOES IT WRONG?

• DIFFICULT FOR DRIVERS TO OBEY TRAFFIC LAWS (FINED/ARRESTED)

THIS NON-COMPLIANCE DUE TO?

- IGNORANCE
- AVOIDING HIGHER INPUT COSTS
- LACK OF RESPECT FOR THE LAW

CONSIGNOR DUTIES

SANS 10231: 2010

DRIVER MUST BE PROVIDED WITH?

- SIGNED DGD / DGD'S
- TRANSPORT EMERGENCY CARD/S
- CORRECT PLACARDS

WARNING

Drivers and Operators should refuse to load non-compliant loads of dangerous goods

Acceptance of illegal loads transfers legal liability to Operators and Drivers



PART SEVEN CONSIGNOR: DUTIES

CLICK ON THE TAB BELOW TO COMPLETE QUIZ

CHAPTER SEVEN QUIZ

PART EIGHT QUALIFIED PERSON: DUTIES





A person trained to perform a specific task, and nominated by the operator, the consignor or the consignee

SANS 10231: 2010

the vehicle is correctly parked for loading or offloading, and wheel chocks are in place for heavy vehicles with GVM equal to or greater than 3500 kg and are placed appropriately under wheels on







SANS 10231: 2010

Vehicle fire extinguishers to be placed where not provided by the loading/offloading point;



SANS 10231: 2010

the area is safe, with barricades, where applicable, and the necessary warning signs are clearly displayed





SANS 10231: 2010

the requisite safety and first aid equipment in accordance with the transport emergency card(s) is provided





SANS 10231: 2010

the loading or offloading operation is conducted in a safe manner and is not placed at risk by other activities



SANS 10231: 2010

load is adequately secured





SANS 10231: 2010

that at the offloading site the dangerous goods that correspond with the DGD, can be offloaded in safe conditions,



at which all the necessary safety equipment is provided

SANS 10231: 2010

he/she consults with the operator and the consignor on appropriate action with regard to containers with leaks



SANS 10231: 2010

A qualified person is required to supervise the transfer of cargo when overloading incidents occur en-route.



LOADING REQUIREMENTS

the goods to be loaded are correctly classified, packaged and labeled;





LOADING REQUIREMENTS

the vehicle is suitable for its current purpose and is clean and fit to load;





LOADING REQUIREMENTS

if goods different from those previously transported by the vehicle are to be loaded and in the absence of a certificate of cleaning, or a gas- free certificate, the containment area



is inspected by a competent person to ensure that it is fit to receive the goods without risk;

LOADING REQUIREMENTS

the exempt quantity and compatibility requirements are adhered to

Table C.1 (continued)								LOAD COMPATIBILITY CHART																			
											0.00	1	2.1	2.2	2.3	3	4.1	4.2	4.3	5.1	5.2	6.1	6.2	7	8A	88	9
1	2	3	4	5	6	7	8	9	10	11	1	-															
UN No. Proper shipping name	Class	Pack- ing group	Subs. risk	Ex- empt quan- titles	F	P, B, L and O provisions				2.1		L		H		H	H	H		H	Α	A	H	A		H	
						P	В	L	0	2.3		Е							A	Α						- 100	
1202 DIESEL FUEL complying with standard EN 590:1993 or GAS OIL or HEATING OIL, LIGHT with a flash point as specified in EN 590:1993	3	III		1 000	1				2	4.1		F				F		F	A	A			F				
										4.3									A	A							
									1	5.1	_	_	-	_	A	A	A	A	-	⊢	_	H	_			\vdash	
										5.2		Α		-	A	Α	Α	Α						A	-		
1203	MOTOR SPIRIT or	3	II		500	2				2, 20	6.1		A												A		
	GASOLINE or PETROL										7											1					
1204 NITROGLYCERIN SOLUTION IN ALCOHOL with ≤1% nitroglycerin	3	11		500	2				2; 20	8A		Α	A							Α	A	A			A		
									8	88														Α			

LOADING REQUIREMENTS

the correct quantity is loaded, and complies with the relevant national legislation



LOADING REQUIREMENTS

the cargo is undamaged and properly secured



LOADING REQUIREMENTS

the vehicle is not allowed to proceed on its journey without placards that reflect the correct information relevant to the goods





LOADING REQUIREMENTS

the driver has the correct transport emergency card(s) in his possession



LOADING REQUIREMENTS

the necessary DGD(s) are made out for the load and supplied to the driver

DANGEROUS GOODS DECLARATION Consignment Note No: 101 11X				Company Logo (optional)			
Consignor: R A Jones, Jones Warehouse, 100 High Rd. Germiston Tel: 011 100 1000				Operator: B Higgins, Higgins Road freight, 200 South Ave, Germiston Tel: 011 200 2000 Reg. no. vehicle: XYZ 200 GP			
Product manufacturer				Consignee: ABC Chemicals, 300 Marine Drive, Durban Tel: 031 300 3000			
Product owner				Additional information on handling/transport/ storage: The package marked with UN XXXX shall be shaded from sunlight			
Product custodian							
Party contracting R A Jones, the operator: Jones Warehouse, 100 High Rd, Germiston Tel: 011 100 1000							
Shipping name:	UN No:	Haz Class:	PG:	Quantity & type of Packaging:	n	iross nass g:	Net mass/vol kg/L
Paint	1263	3	III	2 fibreboard b 4 x 5 L eac	· · · · · · · · · · · · · · · · · · ·	52	41.5

DECLARATIONS

"I hereby declare that the content of this consignment is fully and accurately described above by the proper shipping name, and is classified, packaged, marked and labeled /placarded and in all respects, in proper condition for transport in accordance with the relevant national legislation."

Where the consignor is not the manufacturer, the declaration is based on information received.

Consignor: Product manufacturer / Product owner / Product custodian / Contracting Party that contracts the operator:

ned: **RA Jones** Date: **2008-03-15**

"The consignment described above has been received into my vehicle. My vehicle is correctly placarded and I am in possession of all necessary transport documentation pertaining to the transport of dangerous goods, including information to be followed in case of an emergency."

Driver

Signed: J K Williams Date: 2008-039-15

LOADING REQUIREMENTS

the special P, B, L and O provisions in annex C are adhered to:

- P PACKAGED GOODS
- **B BULK GOODS**
- L LOADING / OFFLOADING
- O TRANSPORT OPERATION

OFFLOADING REQUIREMENTS

cargo is correct and undamaged and there is no obvious spillage



OFFLOADING REQUIREMENTS

the load is refused if he/she is in doubt as to whether the goods can be offloaded without risk



OFFLOADING REQUIREMENTS

the offloading operation does not proceed, if, for any reason, he/she considers it unsafe



BULK DELIVERIES

sufficient space in the tanks or bins into which the cargo is to be unloaded and that they are in a fit condition to receive the load

QUALIFIED PERSON OVERFILLING A SILO



BULK DELIVERIES

the flow can be stopped immediately in case of leakage / other emergency







BULK DELIVERIES

after offloading, the vehicle is free spillage and all are closed



AFTER OFFLOADING
DOCUMENTS TO REFLECT CHANGE
IN LOAD



AFTER OFFLOADING

TANKERS RETAIN PLACARDING

ARE NOT CERTIFIED CLEAN



AFTER OFFLOADING
NO RESIDUE ON VEHICLE AND
VEHICLE FREE OF



CONSIGNEE MUST PROVIDE

UNLESS OTHERWISE AGREED BETWEEN PARTIES



PART EIGHT QUALIFIED PERSON: DUTIES

CLICK ON THE TAB BELOW TO COMPLETE QUIZ

CHAPTER EIGHT QUIZ

PART NINE

OPERATOR: DUTIES



OPERATE ON A PUBLIC ROAD

REGISTERED OWNER IS RESPONSIBLE FOR:

- MANNER A VEHICLE IS DRIVEN
- ROADWORTHINESS
- LICENSE AND REGISTRATION

THE OPERATOR

person responsible for the use of a motor vehicle

of any class contemplated in Chapter VI,

and who has been registered as the operator of such vehicle

THE OPERATOR

THE OWNER OF A MOTOR VEHICLE

IS USUALLY THE OPERATOR

UNLESS A WRITTEN AGREEMENT NOMINATES ANOTHER PERSON AS THE OPERATOR

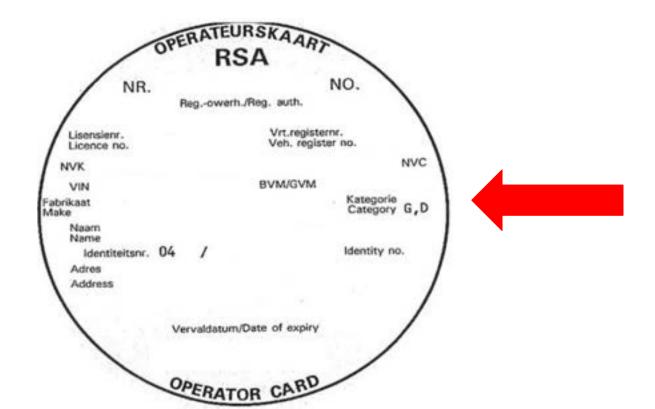
THE OPERATOR

MUST BE REGISTERED AS A

DANGEROUS GOODS OPERATOR

WITH THE RELEVANT LICENSING AUTHORITY WHERE VEHICLE IS REGISTERED AND LICENSED

THE OPERATOR MUST MAKE SURE THAT AN OPERATOR CARD IS DISPLAYED ON VEHICLES



- AGREE ON ROUTE WITH DRIVER
- INFORM LOCAL AUTHORITIES ON ROUTE AND PROVIDE FULL INFO ON PRODUCTS IF REQUESTED
- ENSURE DRIVER HAS PrDP D
- NOTIFY EMS & POLICE OF ANY INCIDENT INVOLVING VEHICLE
- REPLACE OR REPAIR VEHICLE
- TRANSFER CARGO AS "INCIDENT"

SUBMIT REPORT OF ANY D/G ROAD INCIDENT TO THE DEPARTMENT OF TRANSPORT ON PRESCRIBED FORM BY FAX TO (012) 309 3721

SEE PAGE 69

IF VEHICLE INVOLVED IN **ACCIDENT** WITH RISK OF DAMAGE TO CARGO **CONTAINMENT AREA, MUST BE** SUBMITTED FOR FULL ROADWORTHY AND COMPLIANCE INSPECTION

- SUPPLY DRIVER WITH SAFETY EQUIPMENT AS PER TREMCARDS AND PROVIDE TRAINING IN USE
- ENSURE THAT INSURANCE IS IN PLACE FOR CIVIL LIABILITY, RECOVERY OF SPILLS AND REHABILITATION COSTS

MUST BE NOTIFIED BY DRIVER IMMEDIATELY IN THE EVENT OF A MECHANICAL BREAKDOWN



MUST BE NOTIFIED WHEN:

- PACKAGES ARE TO BE OPENED
- UNLOADING OR DECANTING ARE TO OCCUR DUE TO OVERLOADING OR INCOMPATIBILITY ISSUES
- MUST ARRANGE QUALIFIED PERSON

VEHICLE INSPECTIONS:

- MUST BE INSPECTED DAILY
- RECORDS OF INSPECTIONS KEPT
- VEHICLES MECHANICALLY SOUND
- QUALIFIED STAFF OR COMPETENT WORKSHOP MUST MAINTAIN
- OPERATOR IS ULTIMATELY FULLY RESPONSIBLE FOR ALL INSPECTIONS AND ASSIGNING COMPETENT PERSONS
- RECORD KEPT: LOGBOOK OR COMPUTER

VEHICLE INSPECTIONS:

SEE PAGE 72

FOR PRESCRIBED INSPECTION SCHEDULE

PART NINE OPERATOR: DUTIES

CLICK ON THE TAB BELOW TO COMPLETE QUIZ

CHAPTER NINE QUIZ

PART TEN

DRIVER: DUTIES



DRIVER

any person who drives or attempts to drive any vehicle...;

DRIVER SKILLS AND TRAINING

DRIVERS OF DG VEHICLES SHALL:

- HAVE A PrDP D (all DG vehicles)
- BE FIT TO DRIVE (AS PER NRTA)

 LICENSED, IN GOOD PHYSICAL HEALTH, SOBER
- INTERPRET & IMPLEMENT THE INSTRUCTIONS OF TREMCARDS

DRIVERS OF DG VEHICLES SHALL:

RECEIVE ANNUAL COMPREHENSIVE
THEORETICAL AND PRACTICAL
TRAINING, RELEVANT TO TYPE OF VEHICLE
AND THE DANGEROUS GOODS THAT ARE
ASSIGNED TO HIM, INCLUDING
PROCEDURES SPECIFIC TO THE CARGO

DAILY PRELIMINARY CHECKS:

- VALID "DG" OPERATOR CARD
- VEHICLE IS ROADWORTHY
- COMPLETE CHECKLIST (PG 74 & 77)
- VEHICLE CLEAN AND FREE OF ANY PRODUCT THAT MAY CONTAMINATE ANY NEW LOAD OR CREATE HAZARD

DRIVER DUTIES BEFORE LOADING ON SITE

DRIVERS MUST ENSURE:

- SITE APPEARS SUITABLE
- VEHICLE POSITIONED AS DIRECTED
- PERMISSION TO LOAD IS GIVEN

DRIVER DUTIES AFTER LOADING COMPLETED

DRIVERS MUST ENSURE:

- TREC AND DGD IN ORANGE HOLDER
- EXTRANEOUS DOCS REMOVED
- SAFETY EQUIPMENT IS ON BOARD
- TREMCARD IS UNDERSTOOD
- ORANGE DIAMOND / PLACARDS ARE DISPLAYED ON VEHICLE

DRIVER DUTIES AFTER LOADING COMPLETED

DRIVERS MUST ENSURE:

- NOT OVER- OR UNDER-LOADED
- LOAD IS PROPERLY SECURED

DOORS, HATCHES, STRAPS, NETS, VALVES, HOSES AND CHOCKS

EN-ROUTE:

- •FOLLOW AGREED ROUTE
- NOT PARTICIPATE IN ANY OTHER
 ACTIVITIES NOT RELATED TO LOAD
- •NO UNAUTHORISED PASSENGERS
 ARE ALLOWED IN VEHICLE
 •STOP ONLY AT AGREED PLACES

CONSTANT VEHICLE AND LOAD SUPERVISION REQUIRED WHEN:

- EXEMPT QTY IS < 10 kg or Litres
- •SPECIAL "O" PROVISIONS APPLY AS PER PART C.5 "O14 to O20"

OTHER EN-ROUTE PROCEDURES:

- OPENING OF PACKAGES, UNLOADING OR DECANTING NOT ALLOWED...
- UNLESS SUPERVISED BY QUALIFIED PERSON AND OPERATOR IS NOTIFIED

OTHER EN-ROUTE PROCEDURES:

INCIDENT OCCURS? FOLLOW INSTRUCTIONS OF TREC AND GIVE ASSISTANCE TO EMS

HAND OVER TREC/S AND DGD'S TO THE EMS WHEN SO REQUESTED

RECOMMENDED DRIVING HOURS

SINGLE DRIVER

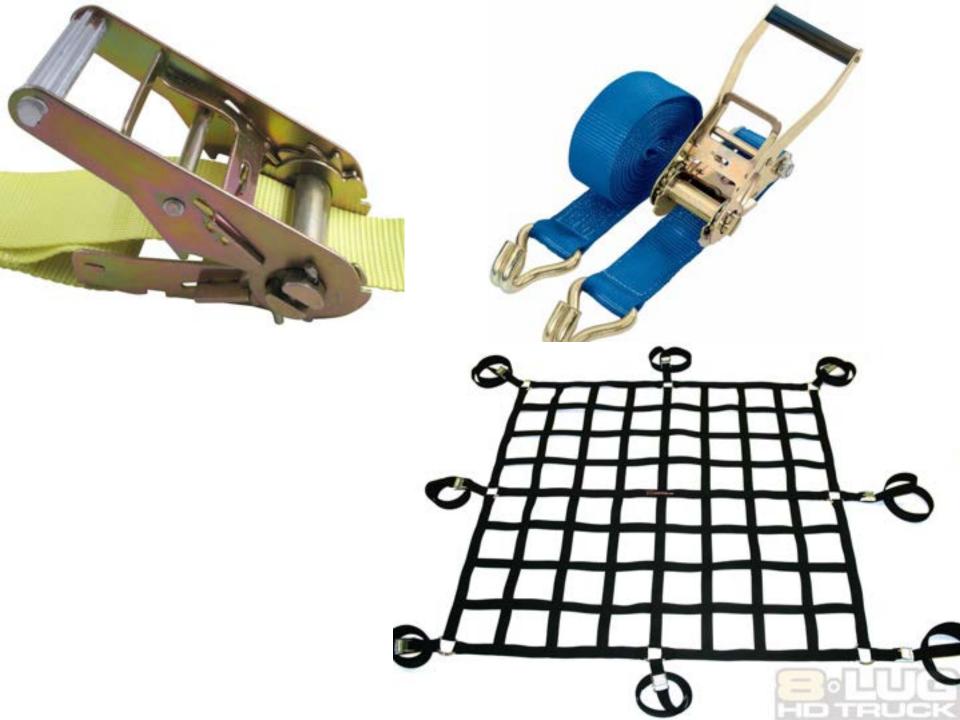
- MAXIMUM <u>5 HOURS</u> AT ONE TIME
- MAXIMUM <u>14 HOURS</u> PER 24 HR DAY
- AFTER 5 HRS REST MIN 15 MIN
- AFTER 10 HRS REST MIN 30 MIN
- CONTINUOUS REST 9 HRS / 24 HRS

CARGO SECUREMENT

OBEY SANS 10187:

MUST MINIMIZE RISK OF SPILLAGE
IF VEHICLE OVERTURNS OR IF VEHICLE
IS INVOLVED IN AN INCIDENT

DOORS, HATCHES, STRAPS, NETS CHAINS, CURTAINS



PROFESSIONAL DRIVING PERMIT

"PRDP"

PrDP CATEGORY "D"

IF VEHICLE EXCEEDS 3,500 kg GVM

 ANY VEHICLE TO WHICH SANS 1518 APPLIES

(i.e. BAKKIES / PANELVANS)

PrDP

CATEGORY "D"

MINIMUM AGE TO APPLY:

25 YEARS

Address where notice must be served (mark with X) postal address street address posadres street address Adres waar kennisgewing beteken moet word (merk met X)

CATEGORY OF PROFESSIONAL DRIVING PERMIT		В		KATEGORIE VAN PROFESSIONELE BESTUURSPERMIT		
Mark with a cross (X) the category(ies driving permit is required. Note that includes category G.			bestu	urs		e kategorie(ë) waarvoor 'n professionele ord. Neem kennis dat kategorie D sluit.
Category	passengers passasiers p (21 years/jaar)	dangerous goods gevaarlike goedere (25 years/jaar)		or of	goods goedere G (18 years/jaar)	Kategorie
State whether any previous application for a professional driving permit had been refused, and if so, where, when and reasons for refusal.						Meld of enige vorige aansoek om 'r professionele bestuurspermit geweier is, en indien wel, waar wanneer en redes vir weiering.

PrDP CATEGORY "D"

DISQUALIFICATION

- UNDER 25 YEARS OLD
- CRIMINAL RECORD <5 YEARS OLD
 - DRUNK DRIVING OR DRUGS,
 - RECKLESS OR NEGLIGENT DRIVING
 - VIOLENT OFFENCES

DRIVER PPE PERSONAL PROTECTION

EXPOSURE METHODS

ABSORPTION – THROUGH SKIN
INHALATION – GAS, DUST, FUMES
INGESTION – SWALLOWING
INJECTION – SHARP OBJECTS

DRIVER PPE

CONTROL METHODS FOR HCS

ELIMINATION – 100%
TRANSFER – 100%
SUBSTITUTION – 90%
ENGINEERING – 80%
ADMIN – 60%
PPE – 40%

PPE SHOULD BE THE LAST RESORT BUT IS USUALLY NECESSARY

































PARTEN DRIVER: DUTIES

CLICK ON THE TAB BELOW TO COMPLETE QUIZ

CHAPTER TEN QUIZ

PART ELEVEN

CONSIGNEE: DUTIES



CONSIGNEE

means the person who accepts dangerous goods which have been transported in a vehicle



CONSIGNEE

IS RESPONSIBLE FOR THE

OFFLOADING

OF DANGEROUS GOODS
AND MUST PROVIDE THE
QUALIFIED PERSON
UNLESS OTHERWISE AGREED BETWEEN PARTIES

CONSIGNEE

IS RESPONSIBLE FOR THE

OFFLOADING

OF DANGEROUS GOODS

CONSIGNEE DUTIES OFFLOADING – SANS 10231 QUALIFIED PERSON

- CARGO IS CORRECT & UNDAMAGED
- LOAD REFUSED IF IN DOUBT WHETHER NO RISK IF OFFLOADED
- OFFLOADING CEASED IF UNSAFE
- SUFFICIENT SPACE IN TANKS / BINS
- FLOW ABLE TO STOP IMMEDIATELY
- VEHICLE CLEAN & VALVES CLOSED

CONSIGNEE DUTIES OFFLOADING – SANS 10231 QUALIFIED PERSON

- PART LOADS PROPERLY SECURED
- DOCUMENTS REMOVED FROM D/S
- NO RESIDUE LEFT ON VEHICLE
- PLACARDS ON TANKERS REMAIN
- VEHICLE FREE OF CONTAMINATION
 THIS MEANS CONSIGNEE HAS THE
 DUTY TO CLEAN SPILLAGES

PART ELEVEN CONSIGNEE: DUTIES

CLICK ON THE TAB BELOW TO COMPLETE QUIZ

CHAPTER ELEVEN QUIZ

PART TWELVE

VEHICLE COMPLIANCE





VEHICLE COMPLIANCE NRTA

ROADWORTHY CERTIFICATE

ALL DANGEROUS GOODS VEHICLES
REQUIRE AN

ANNUAL RWC

FOR BOTH LIGHT <u>AND</u> HEAVY GOODS VEHICLES

VEHICLE COMPLIANCE NRTA

OPERATOR REGISTRATION

ALL DANGEROUS GOODS VEHICLES
REQUIRE AN ANNUAL

OPERATOR CARD "D"

FOR BOTH LIGHT <u>AND</u> HEAVY GOODS VEHICLES

VEHICLE COMPLIANCE

SANS 1157: 2013

MUNICIPAL TRANSPORT PERMITS

ALL DANGEROUS GOODS VEHICLES
REQUIRE AN ANNUAL

MUNICIPAL DG PERMIT

FOR BOTH LIGHT <u>AND</u> HEAVY GOODS VEHICLES

VEHICLE COMPLIANCE

SANS 1157: 2013

MUNICIPAL TRANSPORT PERMITS

MUST BE FITTED WITH

EQUIPMENT & SIGNS

AS PER SANS 1157 AND BY-LAWS



TRANSPORT-PERMIT INFLAMMABLE LIQUIDS & SUBSTANCES

REG. No	
---------	--

MAKE

EXPIRY DATE ______







Community Safety - Emergency Services FLAMMABLE SUBSTANCE TRANSPORT PERMIT

FLAMMABLE SUBSTANCE	TRANSPORT PERMIT
This is cartify that the vehicle, perfections of which are comply with the presurised structural imquirements as a	given below has been examined and lound to contained in the municipal By-law relating to.
No. Louising / multi-holoiding weight of container and in as By Lown Govern No. 60 of 22 February 2006.	
Registration No WIN 297 GP Makes Freis	chaliner Type 1. IRACTOR.
Owner's Name: 135 Trucking	
Address: Inr John & Johns	Piraw
Jus	
This permit is not a warranty of lances of the vehicle operant interested a local status, himself as to the construction.	herein described and any owner, driver or other nuction and condition of the sold yorkic e.
This permit shall, writers previously vestoled, concelled or	responded emission 22 5 2015
The prescribed for of 632 00 has been so	plected per Receipt No.: 8862
Dated 22 1 lay 2014 issued	
*Delete which is not applicable EKUTEUI	Diec. No.1
Phoder Mary	Ekurhuleni
Authorises Official	FLAMMABLE SUBSTANCE TRANSPORT PERMIT
On behalf of Ekurhuleni litation of our fiturionality	RIS NO WOLL 397 GP
Cross out with an indelible	IN TERMITOR
marker what is not applicable.	techny Date 3.2 . 5 . 3015
NOTE: Before the permit is deemed complete the official stamp of the	

MUNICIPAL PERMITS

AS PER SANS 1157

PANEL VAN & LDV

CHECKLIST - PAGE 89

- DRIVER SHIELDED FROM LOAD
- 2 X FIRE EXTINGUISHERS (DCP)
- 2 X QUICK-RELEASE BRACKETS
- ORANGE WARNING DIAMOND
- OPERATOR CARD CATEGORY "D"
- DOCUMENT HOLDER (D/SPACE)
- VENTILATION WHERE APPLICABLE
- SIDES 600 mm HIGH (open vehicles)
- 3 PLACARDS / BRACKETS 350 X 200
- 3 x NO SMOKING
- 3 x NO NAKED FLAME 150 x 150 mm
- 3 x NO CELLPHONE Battery Isolator











NR.

Reg.-owerh./Reg. auth.

Kempton Park

Lisensienr. Licence no. Vrt.registernr. Veh. register no.

NVK

NVC

D

VIN

BVM/GVM

14000 kg

Fabrikaat Make

Kategorie Category

Naam Name

Identity no.

Identiteitsnr. 04 Adres

Address

Vervaldatum/Date of expiry

OPERATOR CARD





MUNICIPAL PERMITS

AS PER SANS 1157

TRUCK TRACTOR

CHECKLIST - PAGE 90

- 1 x FIRE EXTINGUISHER (DCP)
- 1 x QUICK-RELEASE BRACKET
- ORANGE WARNING DIAMOND
- EXHAUST SHIELD FLAMMABLES EXPLOSIVES
- OPERATOR CARD CATEGORY "D"
- DOCUMENT HOLDER (D/SPACE)
- BATTERY COVER INSULATED
 - VENTILATED
- BATTERY ISOLATOR SWITCH WITH ON AND OFF POSITIONS MARKED









NR.

Reg.-owerh./Reg. auth.

Kempton Park

Lisensienr. Licence no. Vrt.registernr. Veh. register no.

NVK

NVC

VIN

BVM/GVM

14000 kg

Fabrikaat Make

Kategorie Category G,D

Naam

Name

Identiteitsnr. 04

Identity no.

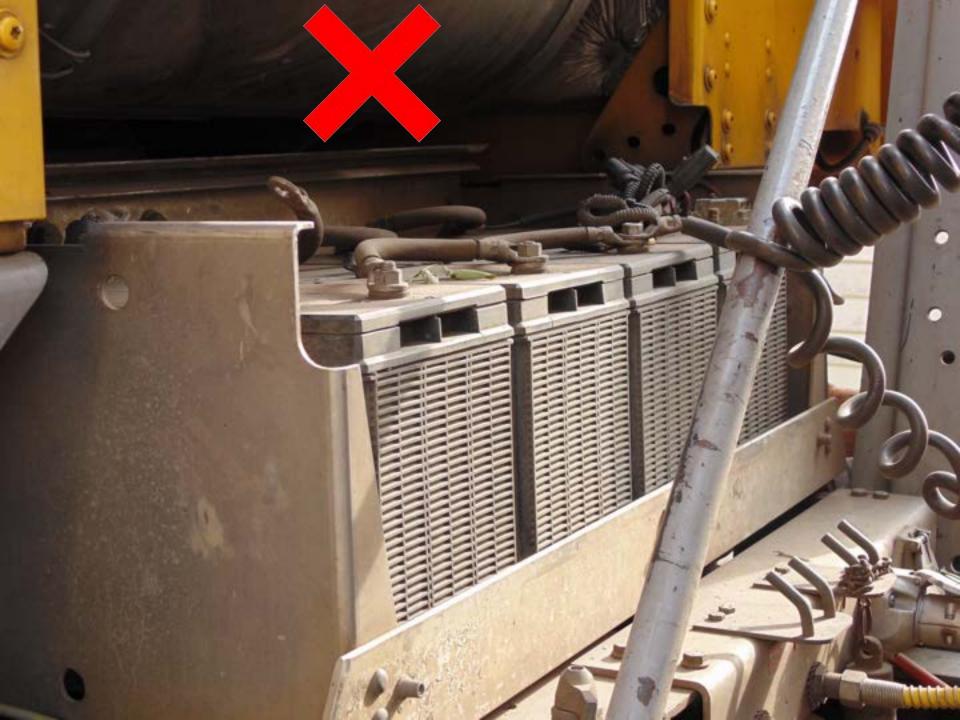
Adres

Address

Vervaldatum/Date of expiry

OPERATOR CARD









MUNICIPAL PERMITS

AS PER SANS 1157

RIGID HMV

CHECKLIST - PAGE 91

- 2 x FIRE EXTINGUISHERS (DCP)
- 2 x QUICK-RELEASE BRACKETS
- OPERATOR CARD CATEGORY "D"
- ORANGE WARNING DIAMOND
- DOCUMENT HOLDER (D/SPACE)
- VENTILATION WHERE APPLICABLE
- BATTERY COVER INSULATED
 - VENTILATED
- BATTERY ISOLATOR SWITCH WITH ON AND OFF POSITIONS MARKED

- SIDES 600 mm HIGH (open vehicles)
- 3 PLACARDS / BRACKETS 700 X 400
- 3 x NO SMOKING
- 3 x NO NAKED FLAME 290 x 290 mm
- 3 x NO CELLPHONE
- 2 x WHEEL CHOCKS, HD, NON-SPARK





NR.

Reg.-owerh./Reg. auth.

Kempton Park

Lisensienr. Licence no. Vrt.registernr. Veh. register no.

NVK

NVC

VIN

BVM/GVM

14000 kg

Fabrikaat Make

Kategorie Category G,D

Naam

Name

Identiteitsnr. 04

Identity no.

Adres

Address

Vervaldatum/Date of expiry

OPERATOR CARD





















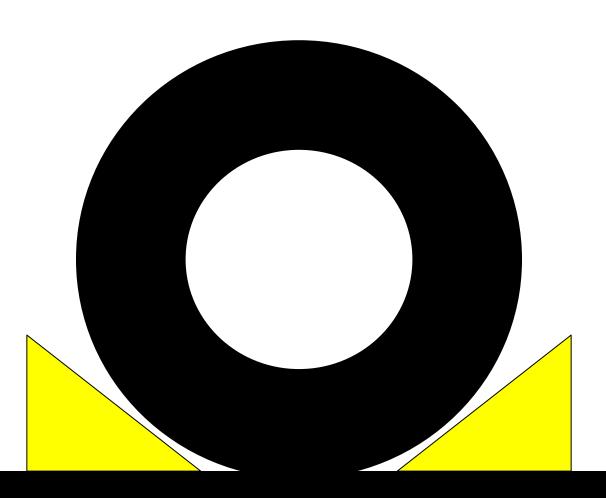


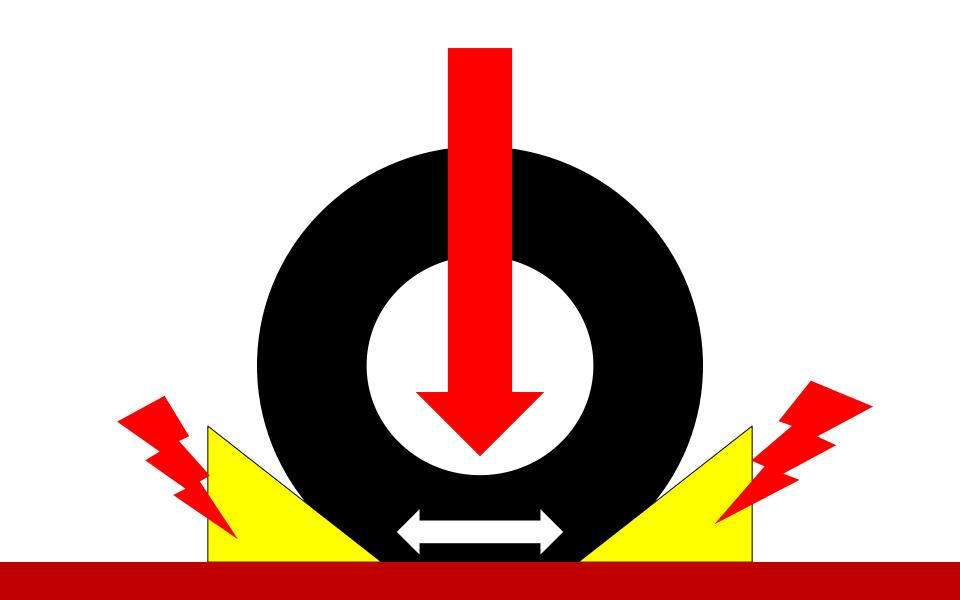


PLACE WHEEL CHOCKS BEHIND NON-STEERING WHEELS ONLY

DRIVER'S SIDE

NOT TOO CLOSE TO TYRE – WILL GET STUCK





MUNICIPAL PERMITS

AS PER SANS 1157

RIGIDTANK TRUCKS & TANK TRAILERS CHECKLIST - PAGE 92







- 2 x FIRE EXTINGUISHERS (DCP)
- 2 x QUICK-RELEASE BRACKETS
- OPERATOR CARD CATEGORY "D"
- ORANGE WARNING DIAMOND -TRUCKS
- DOCUMENT HOLDER (D/SPACE)
- 3 PLACARDS / BRACKETS 700 X 400
- 3 x NO SMOKING
- 3 x NO NAKED FLAME 290 x 290 mm
- 3 x NO CELLPHONE

- PIPES FITTINGS NOT TO PROJECT
- REAR BUMPER TO PROTECT TANK
 & PIPES FROM COLLISION
- 2 x WHEEL CHOCKS, HD, NON- SPARK
- BATTERY COVER INSULATED
 - VENTILATED
- BATTERY ISOLATOR SWITCH WITH ON AND OFF POSITIONS MARKED



NR.

Reg.-owerh./Reg. auth.

Kempton Park

Lisensienr. Licence no. Vrt.registernr. Veh. register no.

NVK

NVC

VIN

BVM/GVM

14000 kg

Fabrikaat Make

Kategorie Category G,D

Naam

Name

Identiteitsnr. 04

Identity no.

Adres

Address

Vervaldatum/Date of expiry

OPERATOR CARD





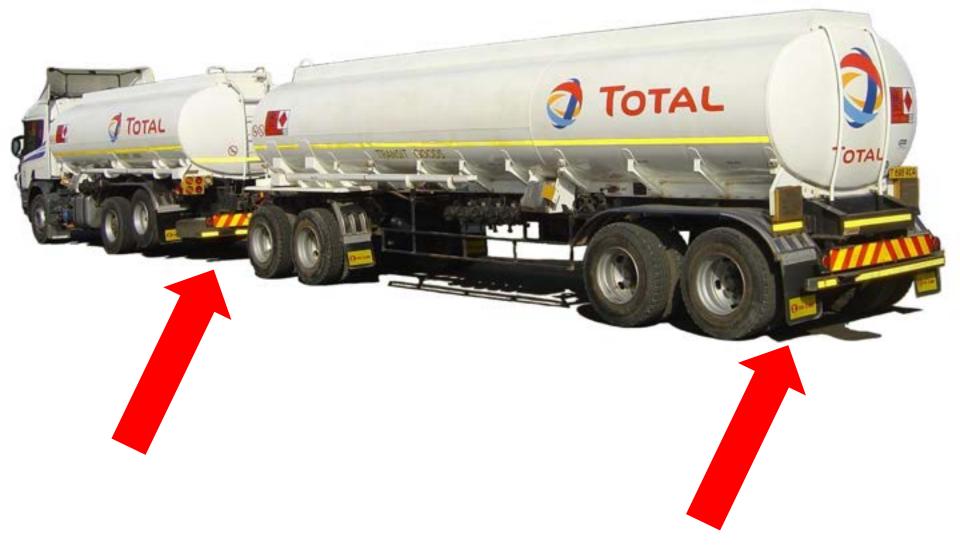






PIPES AND FITTINGS MAY NOT PROJECT





REAR BUMPER TO PROTECT TANKS / PIPES



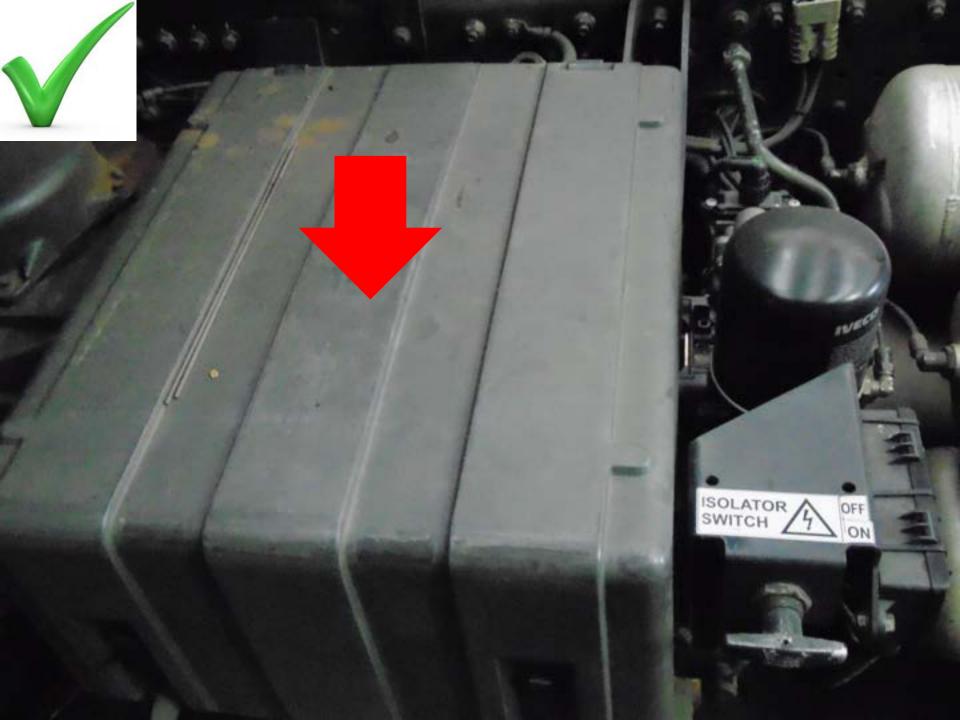
ELECTRICAL BONDING













MUNICIPAL PERMITS

AS PER SANS 1157

SKELETAL OR GOODS TRAILERS CHECKLIST - PAGE 93

- 2 x FIRE EXTINGUISHERS (DCP)
- 2 x QUICK-RELEASE BRACKETS
- OPERATOR CARD CATEGORY "D"
- HIGH SIDES OF 600 mm FOR GAS OR UNSECURED LOADS
- 3 PLACARDS / BRACKETS 700 X 400
- 3 x NO SMOKING
- 3 x NO NAKED FLAME 290 x 290 mm
- 3 x NO CELLPHONE









NR.

Reg.-owerh./Reg. auth.

Kempton Park

Lisensienr. Licence no. Vrt.registernr. Veh. register no.

NVK

NVC

VIN

BVM/GVM

14000 kg

Fabrikaat Make

Kategorie Category G,D

Naam

Name

Identiteitsnr. 04

Identity no.

Adres

Address

Vervaldatum/Date of expiry

OPERATOR CARD













PART TWELVE VEHICLE COMPLIANCE

CLICK ON THE TAB BELOW TO COMPLETE QUIZ

CHAPTER TWELVE QUIZ

PART THRTEEN

FIRE FIGHTING & FIRST AID





FIRE EXTINGUISHERS

SANS 1518 & 1157

DANGEROUS GOODS CARRIERS

MUST BE EQUIPPED WITH PRESCRIBED PORTABLE

DCP

"DRY CHEMICAL POWDER" EXTINGUISHERS













SANS 1518 & 1157

MUST BE SUITABLE FOR CLASS A, B AND C FIRES













SANS 1518 & 1157

MUST BE MOUNTED ON QUICK RELEASE BRACKETS

AND BE PROTECTED FROM NEGATIVE ENVIRONMENTAL & OPERATIONAL INFLUENCES (e.g. corrosives)

SANS 1518 & 1157

MUST <u>NOT</u> BE MOUNTED VERTICALLY (90°) OR HORIZONTALLY (180°) FLAT

45° PREVENTS COMPACTION OF THE MONO-AMMONIUM PHOSPHATE POWDER

SANS 1518 & 1157

ALL EXTINGUISHERS MUST BE PROVIDED WITH:

- SEALS TO VERIFY NON-USAGE
- GAUGES PRESSURE CORRECT
- LABELS LAST / NEXT DATE
- SANS 1910 APPROVAL MARK





FIRE EXTINGUISHER MAINTENANCE RECORD

This fire extinguisher is serviced and maintained in accordance with the recommendations and frequencies of British Standard 5306 part 3 and refilled when required to BS6643 part 1 and future amendments

DATE	CODE	COMMENTS	NSD	WEIGHT	ENG
		No. of the last of			
_	-				
					. ,

CODES

R - Refilled

B - Basic Service

E - Extended Service

O - Overhaul AR - Advise Replacement

NSD - Next Service Due

Weight - Extinguisher or Cartridge (Delete as applicable)

Next Test

Discharge Due

Last Test Discharged

SANS 1518 & 1157

NEW EXTINGUISHERS MUST BE MAINTAINED, LABELLED AND TESTED AFTER 12 MONTHS AS PER:

SANS 1910

SANS 1518 & 1157

ALL EXTINGUISHERS MUST BE MAINTAINED, LABELLED AND TESTED 6-MONTHLY AS PER:

SANS 1475-1
THE PRODUCTION OF
RECONDITIONED FIRE-FIGHTING
EQUIPMENT – PART 1

FIRE EXTINGUISHERS SANS 10231

INSPECTION OF GOODS CONTAINMENT AREA OF A VEHICLE

MOUNTING (QUICK-RELEASE)
BRACKETS MUST BE CHECKED FOR
CORRECT FITMENT

FIRE EXTINGUISHERS SANS 10231

LISTED UNDER REQUIREMENTS FOR LOADING AND OFFLOADING ("L" PROVISIONS, TABLE C.1)

PLACE VEHICLE EXTINGUISHERS
READY FOR USE IF NONE ARE
PROVIDED AT THE LOADING
OR OFFLOADING POINT

TYPES OF FIRES

TYPES OF EXTINGUISHERS

CLASS A ORDINARY COMBUSTIBLES: wood, paper, rubber, fabrics and many plastics



CLASS A







CLASS B FLAMMABLE LIQUIDS & GASES: gasoline, oils, paint,



CLASS A:B







CLASS C

FIRES INVOLVING LIVE ELECTRICAL **EQUIPMENT**

lacquer and tar



CLASS A:B:C







CLASS D

COMBUSTIBLE METALS **COMBUSTIBLE METAL ALLOYS**



CLASS A:C





CLASS B:C





(NO picture symbol)

CLASS K FIRES IN COOKING APPLIANCES THAT INVOLVE COMBUSTIBLE **COOKING MEDIA** vegetable or animal oils and fats



CLASS D

CLASS A:K









HOW TO USE EXTINGUISHERS

- 1. CALL FOR HELP (SERIOUS, LARGE)
- 2. OWN SAFETY
- 3. ASSESS THE FIRE SIZE ETC...
- 4. EXTINGUISHER TYPE (CLASSES?)
- 5. READY THE EXTINGUISHER (Shake)
- 6. AIM AT THE BASE OF THE FIRE
- 7. APPLY THE P.A.S.S. METHOD
- 8. 30 seconds EXTINGUISHING AGENT
- 9. TEND TO SURROUNDING AREA TOO
- 10. REPLACE / REFILL EXTINGUISHER

P.A.S.S. METHOD OF EXTINGUISHING FIRES

- P PULL
- A AIM
- S SQUEEZE
- S SWEEP



TIPS

FOR FIRE EXTINGUISHERS

- REPLACE IF DISCHARGED
- REPLACE IF DAMAGED
- SERVICE EVERY 6 MONTHS
- CHECK ALL PARTS EVERY DAY
- KEEP CLEAN NO OIL / GREASE
- HYDROTEST EVERY 3 YEARS
- SHAKE MONTHLY LOOSEN DCP









FIRST AID

FOR CHEMICAL EXPOSURE

PARTS OF THE BODY EXPOSED:

- EYES
- SKIN
- LUNGS (inhalation)
- STOMACH (ingestion)

FIRST AID FOR CHEMICAL EXPOSURE

EYES

- FLUSH WITH CLEAN WATER
- UNDER EYELIDS 15 MIN
- KEEP EYEWASH BOTTLE



FIRST AID FOR CHEMICAL EXPOSURE

SKIN

- QUICKLY WASH
- SOAP AND WATER
- REMOVE DIRTY CLOTHING
- 20 MINUTES OR LONGER



FIRST AID

FOR CHEMICAL EXPOSURE

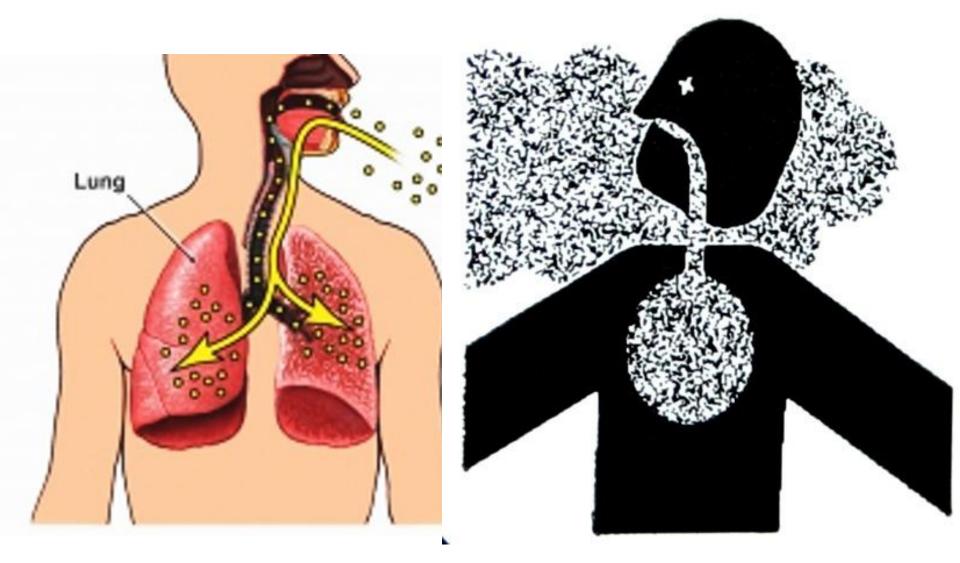
LUNGS

(inhalation)

RECOGNISE SIGNS:

DIZZINESS, NAUSEA, STOMACH UPSET

GO TO FRESH AIR QUICKLY SIT OR LIE DOWN



FIRST AID

FOR CHEMICAL EXPOSURE

SWALLOWING

(ingestion)

REFER TO MSDS OR LABEL
IF AVAILABLE

DRINK MILK OR WATER
DO NOT INDUCE VOMITING



FIRST AID FOR CHEMICAL EXPOSURE

ALWAYS SEEK MEDICAL HELP IF:

- CONTACT EYES, NOSE, MOUTH
- WHEN MSDS GIVES INSTRUCTION
- LABEL WARNS CORROSIVE
- LARGE BURNS CAUSED
- IF DIFFICULTY IN BREATHING

FIRST AID FOR CHEMICAL EXPOSURE

WHILE YOU WAIT FOR HELP:

- REASSURE CONSCIOUS VICTIM
- RESCUE BREATHING OR CPR
- KEEP AIRWAY OPEN
- RECOVERY POSITION ON SIDE
- RECORD DETAILS AND SIGNS

PART THIRTEEN FIRE FIGHTING & FIRST AID

CLICK ON THE TAB BELOW TO COMPLETE QUIZ

CHAPTER THIRTEEN QUIZ

YOU ARE ABOUT TO TAKE OUR ONLINE CONVEY DANGEROUS GOODS BY ROAD

ASSESSMENT

<u>IMPORTANT</u>

- Make sure you fill in your details correctly
- Please wait a few seconds after clicking submit, you will be prompted to submit final answers
- We will ONLY contact you after successfully completing the assessment.
- Certificates will be sent to your email address <u>after</u> receiving payment, or you may pay on collection.

CLICK ON THE TAB BELOW TO COMPLETE QUIZ

FINAL ASSESSMENT

CERTIFICATION PROCESS

- 1. Upon successfully achieving 75% or above, you will receive two emails to sign (electronically)
- 2. Once we have received both emails, you will be required to pay for your dangerous goods documentation. You have two options:
 - Pay on collection (15A Terrace Road, Eastleigh, Edenvale)
 - EFT payment (You will be responsible for printing and laminating your documents.

PLEASE NOTE:

Certificates will only be issued during the following work hours:

Monday - Friday

08:00 to 15:30

Saturday

08:00 - 12:30

Support team: 064 947 9574 or 083 279 6047

Message us on WhatsApp