

GOVERNMENT NOTICE NO. 407 Published on 10-8-2018

THE RAILWAYS (HANDLING AND TRANSPORTATION OF DANGEROUS GOODS AND  
SUBSTANCES) REGULATIONS, 2018

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SCHEDULES

GOVERNMENT NOTICE NO. 407 Published on 10-8-2018

THE RAILWAYS ACT  
(ACT NO. 10 OF 2017)

REGULATIONS

*(Made under section 95)*

THE RAILWAYS (HANDLING AND TRANSPORTATION OF DANGEROUS GOODS AND SUBSTANCES) REGULATIONS, 2018

PART I  
PRELIMINARY PROVISIONS

Citation

1. These Regulations may be cited as the Railways (Handling and Transportation of Dangerous Goods and Substances) Regulations, 2018.

Interpretation

2. In these Regulations, unless the context otherwise requires:-

Act No. 10 of 2017

“Act” means the Railways Act;

“bag” means flexible packaging made of paper, plastic film, textile, woven materials or other suitable material;

“box” means packaging with complete rectangular or polygonal face, made of metal, wood, plywood, reconstituted wood, fibreboard, plastic or other suitable material;

“bulk container” means containment system and includes any liner or coating intended for the transportation of solid substances which are in direct contact with the containment system;

“carrier” means a person, organization or government undertaking the transport of dangerous goods by rail transport;

“competent authority” means any authority designated or otherwise recognized under any written law as an authority competent for any purpose under these Regulations;

“container” means an article of a permanent character specifically designed to facilitate the transport of goods

and substances and approved in accordance with the International Convention for Safe Containers (CSC), 1972;

“Corporation” means the Tanzania Railways Corporation established under section 4 of the Act;

“corrosive substance” means a substance which, by chemical action, can cause severe damage when contaminated with living tissue or, in the case of leakage, will materially damage, or destroy other goods or the means of transport;

“dangerous goods and substances” means goods, substances or articles prescribed under regulation 4, and includes articles or materials which are capable of posing significant risk to people, property or environment;

“dangerous goods list” means the dangerous goods list as provided in Part 3 of International Maritime Dangerous Goods (IMDG) Code of 1965;

“elevated temperature substance” means a substance which is transported or offered for transport-

- (a) in the liquid state at a temperature at or above 100 °C;
- (b) in the liquid state with a flashpoint above 60.5 °C and which is intentionally heated to a temperature above its flashpoint; or
- (c) in a solid state and at a temperature of or above 240 °C;

“environmentally hazardous substance” means substance pollutant to the environment;

“exclusive use” means the sole use by a single consignor, of a conveyance or of a large freight container, in respect of which all initial, intermediate and final loading and unloading is carried out in accordance with the directions of the consignor or consignee;

“explosive substance” means a solid, liquid substance or a mixture of substances which is capable by chemical reaction of producing gas at such a temperature and pressure and at such speed as to cause damage to the surroundings;

“flammable liquid” means a liquid or mixture of liquids or liquids containing solids in solution or suspension which has a flash point of not more than 60.5 °C closed-cup test, or not more than 65.6 °C open-cup test;

“flammable gas” means a gas which at 20 °C and a standard pressure of 101.3 kPa is ignitable when in a mixture of 13 per cent or less by volume with air;

“flammable solid” means a solid which, under conditions encountered in transport, are readily combustible or may cause or contribute to fire through friction, self-reactive substances which are liable to undergo a strongly exothermic reaction, solid desensitized explosives which may explode if not diluted sufficiently;

“gas” means a substance which, at 50 °C, has a vapor pressure greater than 300kPa or is completely gaseous at 20 °C at a standard pressure of 101.3 kPa;

“infectious substance” means a substance known or reasonably expected to contain pathogens;

“Intermediate Bulk Container (IBCs)” means a rigid or flexible portable packaging, designed for mechanical handling and has a capacity of:

- (a) not more than 3.0 cubic meters (3,000 litres) for solids and liquids of packing group II and III;
- (b) not more than 1.5 cubic meters for solids of packing group I when packed in flexible, rigid plastics, composite, fiber board and wooden IBCs;
- (c) not more than 3.0 cubic meters for solids of packing group I when packed in metal IBCs;
- (d) not more than 3.0 cubic meters for radioactive material of Class 7;

“liquid desensitized explosive” means an explosive substance which is dissolved or suspended in water or other liquid substances to form an homogeneous liquid mixture to suppress their explosives properties;

“outer packaging” means an outer protection of a composite or combination packaging together with any absorbent materials, cushioning and any other components necessary to contain and protect inner receptacles or inner packaging;

“oxidizing substances” mean substances which, while in themselves not necessarily combustible, may generally, by yielding oxygen, cause or contribute to the combustion of other material;

“organic peroxide” means an organic substance which contain the bivalent -O-O- structure and may be considered derivatives of hydrogen peroxide, where one or both of the hydrogen atoms have been replaced by organic radicals;

“portable tank”-

- (a) for the purposes of the transport of substances of Class 1 and Classes 3 to 9, means a multimodal tank and includes a shell fitted with service equipment and structural equipment necessary for the transport of dangerous substances;
  - (b) for the purposes of transport of non-refrigerated, means liquefied gases of Class 2, a multimodal tank having a capacity of more than 450 litres and includes a shell fitted with service equipment and structural equipment necessary for the transport of gases;
  - (c) for the purposes of transport of refrigerated liquefied gases, means a thermally insulated tank having a capacity of more than 450 litres fitted with service equipment and structural equipment necessary for the transport of refrigerated liquefied gases;
- “pyrophoric substance” means a substance that, even in small quantities, is liable to ignite within five minutes after coming in contact with air;
- “radioactive material” means any material containing radionuclide where both the activity concentration and the total activity in the consignment exceed the values specified in the IMDG Code;
- “radiation level” means the corresponding dose rate expressed in millisieverts per hour;
- “receptacle” means a containment vessel for receiving and holding substances or articles, including any means of closing;
- “self-reactive substance” means a thermally unstable substance liable to undergo a strongly exothermic decomposition even without participation of oxygen (air), but do not include the following:
- (a) explosives according to the criteria of Class 1;
  - (b) oxidizing substances according to the assignment procedure of Division 5.1;
  - (c) organic peroxides according to the criteria of Division 5.2;
  - (d) substances whose heat of decomposition is less than 300 J/g; or
  - (e) substances whose self-accelerating decomposition temperature (SADT) is greater than 75 °C for a 50 kg package;
- “solid desensitized explosive” means an explosive substances which is wetted with water or alcohols or is diluted

- with other substances, to form a homogeneous solid mixture to suppress their explosive properties;
- “toxic substance” means a substance liable either to cause death or serious injury or to harm human health if swallowed or inhaled or by skin contact;
- “transport document” means a document which contains information of dangerous goods and substances in transit;
- “transport unit” means a transport tank, freight vehicle, railway transport tank and freight wagon and multimodal freight container and portable tank;
- “UN number” means a United Nations number assigned to a dangerous good by the United Nations Sub-Committee of Experts on the Transport of Dangerous Goods;
- “vehicle” means any wagon, coach, trolley, van or other conveyance used for transport by the Corporation; and
- “waste” means substances for which no direct use is envisaged but which are transported for dumping, incineration or other means of disposal.

PART II  
HANDLING AND TRANSPORTATION OF DANGEROUS GOODS

Restriction on transportation of dangerous goods and substances

**3.** A person shall not, unless in accordance with the requirements set out under these Regulations, transport goods, substances or articles which are liable to explode, dangerously react, produce a flame or dangerous emission of heat or dangerous emission of toxic, corrosive or flammable gas or vapour or radioactive material.

Handling and transportation of dangerous goods and substances

**4.** (1) Any person who intends to transport dangerous goods and substances by rail shall classify them in a manner specified in the First Schedule.

(2) A person shall not offer or accept dangerous goods and substances for transportation by rail unless the goods are properly classified, packaged, marked, labeled or placarded, described and certified on a transport document.

(3) For the purpose of these Regulations, dangerous goods that are required for the propulsion of the means of transport or the operation of its specialized equipment during transport or that are required in accordance with the operating regulations shall not be categorized as dangerous goods.

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Restriction on explosive substances

**5.**-(1) Save as provided under sub regulation (2), the Corporation shall not transport or cause to be transported explosive substances or articles not listed in the Dangerous Goods List specified under the Seventh Schedule.

(2) A competent authority may, for special purposes and under special conditions, approve transportation of explosive substances and articles listed in the Dangerous Goods List.

Separation of explosives into compatibility groups

**6.**-(1) A competent authority shall divide all explosives specified as Class 1 into compatibility groups as provided in the Second Schedule.

(2) Except where otherwise provided for in these Regulations:

(a) goods of Class 1 in the First Schedule shall not be transported together in freight containers, vehicles or wagons with dangerous goods of other classes;

(b) blasting explosives, other than UN 0083 type C, may be transported together with ammonium nitrate and inorganic nitrates of Class 5.1 (UN Nos. 1942 and 2067), except that the aggregate is treated as blasting explosives under Class 1 for the purposes of placarding, segregation, and maximum permissible load.

(3) Notwithstanding the requirements of sub-regulation 2(a), goods specified in Division 1.4, compatibility group S of these Regulations may be transported together with dangerous goods of other classes.

(4) Dangerous goods not listed by their proper shipping names in the Dangerous Goods List shall not be approved for transport as Class 1.

Transportation of gases

**7.** Gases and gas mixtures with hazards associated with more than one division, which are approved for transportation, shall be in accordance with the following precedence-

(a) division 2.3 takes precedence over all other divisions;

(b) division 2.1 takes precedence over Division 2.2.

Flammable liquids

**8.**-(1) Any liquid whose risk is only flammability shall, for the purpose of transportation, be packed in accordance with the classification specified in the Third Schedule to these Regulations.

(2) Subject to sub-regulation (1) liquids with additional risks shall be packed in accordance with hazard precedence characteristics as set out in the Fourth Schedule.

(3) Substances classified as flammable liquids due to their being transported or approved for transportation at elevated temperatures shall be included in packing group III.

(4) Any flammable liquid with a flash point of more than 35 °C which does not sustain combustion shall not be considered as flammable liquids for the purposes of these Regulations.

Transport of  
toxic substances

**9.**-(1) A person shall not carry toxic and foodstuffs, feeds or other edible substances intended for consumption by human being or animals for transportation in the same railway vehicle or other transport unit.

(2) A railway vehicle or other transport unit which has been used to carry substances marked as or known to be toxic shall, prior to re-use, be inspected by a competent authority and if found contaminated, the vehicle or unit shall not be returned to service until such contamination is removed.

(3) A person shall not transport any goods that are observed to have error in labeling or documentation.

Classification of  
infectious  
substances

**10.**-(1) Infectious substances shall, for the purposes of transportation, be as classified in a manner prescribed in the First Schedule and assigned to UN 2814, UN 2900 or UN 3373, as appropriate.

(2) Notwithstanding sub-regulation (1), the following substances shall not be subjected to requirement under these Regulations-

(a) blood or blood components which have been collected for the purposes of transfusion or for the preparation of blood products to be used for transfusion or transplantation and any tissues or organs intended for use in transplantation;

(b) substances for which there is a low probability that infectious substances are present or where the concentration is at a level naturally encountered.

(3) A person who intends to transport any live animal which is infected or is known or suspected to contain an infectious substance shall comply with terms and conditions approved by the competent authority.

(4) Biological products manufactured and packaged in accordance with the requirements of a competent authority and transported for the purposes of final packaging or distribution, and use for personal health care by medical professionals or individuals are not subject to these Regulations.

(5) Genetically modified micro-organisms not meeting the definition of infectious substance shall be classified as Class 9 specified in the First Schedule.

Handling of  
infectious  
substance  
leakage

**11.**-(1) A person responsible for the carriage of packages containing infectious substances who becomes aware of damage to or leakage from such packages shall-

- (a) avoid handling the package or keep handling to a minimum;
- (b) inspect adjacent packages for contamination and put aside any package that may have been contaminated; and
- (c) inform the appropriate public health authority or veterinary authority, and provide information on any other countries of transit where persons may have been exposed to danger.

(2) A vehicle or other transport unit which has been used to carry substances marked as or known to be infectious substances shall, prior to re-use, be inspected by a competent authority and if found contaminated, the wagon or unit shall not be returned to service until such contamination is removed.

Radioactive  
substances

**12.**-(1) A radioactive substance, other than those exclusively reserved for couriers package or overpack shall not be carried in compartments occupied by passengers.

(2) Except for packages or overpacks transported under exclusive use by rail, maximum radiation level at any point on any external surface of a package or overpack shall not exceed 2 mSv/h.

(3) A person shall not have access to a package that is, or suspected to have been damaged or leaked.

(4) For the purpose of sub-regulation (3), a qualified person responsible for handling damaged or leaked packages shall, as soon as practicable, assess the extent of contamination and the resultant radiation level of the package and take necessary steps.

PACKING, LABELING AND MARKINGS

Packing groups

**13.** For the purpose of transportation, dangerous substances other than those of Classes 1, 2 and 7, divisions 5.2 and 6.2 and self-reactive substances of division 4.1 specified under First Schedule to these Regulations shall be assigned to three packing groups in accordance with the degree of danger they present as follows:

- (a) packing group I: Substances presenting high danger;
- (b) packing group II: Substances presenting medium danger; and
- (c) packing group III: Substances presenting low danger.

Packing instructions

**14.**-(1) Packing instructions applicable to dangerous goods of Classes 1 to 9 specified in the First Schedule shall be as specified in the IMDG Code.

(2) A person who intends to transport a substance, article, packaging or Intermediate Bulk Containers (IBC) not specifically authorized in the applicable packing instruction shall seek the approval from a competent authority.

(3) Notwithstanding sub regulation (2), it shall be a sufficient approval under this regulation where-

- (a) the competent authority determines that the alternative packaging provides at least the same level of safety as if the substance were packed in accordance with a method specified in the particular packing instruction indicated in the dangerous goods list; and
- (b) a copy of the competent authority approval accompanies each consignment or the transport document includes an indication that alternative packaging was approved by the competent authority.

Precedence of hazards

**15.** For any mixture or solutions having multiple hazards which are not specifically listed by name, the most stringent packing group of those assigned to the respective hazards of the goods shall take precedence over other packing groups as set out in the Fourth Schedule.

Labeling

**16.**-(1) A carrier of dangerous goods and substances for

transportation shall ensure that the goods and substances bear a label displayed in a conspicuous place.

(2) A carrier of goods for transportation shall ensure that the label used is able to withstand open weather exposure without substantial reduction in effectiveness and conform, in terms of colour, symbols and general format, to the specimen labels shown in the Fifth Schedule.

Markings

**17.-(1)** The Corporation shall ensure that any packaging intended for use for the purpose of transportation shall bear markings which are durable, legible and placed in a location and of such a size relative to the packaging as to be readily visible.

(2) Labeling of letters, numerals and symbols of markings shall be at least 12 mm high, except for packaging of-

- (a) 30 liters or 30 kg capacity or less, when they shall be at least 6 mm in height;
- (b) 5 litres or 5 kg or less when they shall be of an appropriate size.

(3) An overpack shall be marked with the word "OVERPACK", with the proper shipping name and the UN Number and labeled for each item of dangerous goods contained in the overpack unless markings and labels representative of all dangerous goods in the overpack are visible.

(4) Where two or more dangerous goods are packed within the same outer packaging, the package shall be labeled and marked as required for each substance.

(5) Notwithstanding the provisions of sub-regulation 4, a person shall not apply subsidiary risk labels if the hazard is already represented by a primary risk label in accordance to Part 3 of the IDMG code.

(6) The marking for packaging infectious substances under division 6.2 shall indicate-

- (a) the United Nations packaging symbol;
- (b) the code designating the type of packaging;
- (c) the text "CLASS 6.2";
- (d) the last two digits of the year of manufacture of the packaging;
- (e) the state authorizing the allocation of the mark, indicated by the distinguishing sign for motor vehicles in international traffic; and
- (f) the name of the manufacturer or other identification

of the packaging specified by the competent authority.

(7) The Corporation shall ensure that marking for packaging radioactive substances is done in accordance with international laws for safe transport of radioactive material.

(8) Every portable tank designed to carry dangerous goods shall be fitted with a corrosion resistant metal plate permanently attached to the portable tank in a conspicuous place readily accessible for inspection and be marked with at least the information required by the pressure vessel code as prescribed in Sixth Schedule.

(9) Freight containers used, maintained and qualified as bulk containers shall be tested, approved, inspected periodically and marked with a Safety Approval Plate in accordance with the International Convention for Safe Containers (CSC), 1972.

Placarding and marking of transport units

**18.-(1)** A person shall, affix placards to the exterior surface of transport units to provide a warning that the contents of the unit are dangerous goods and present risks, and the placard shall correspond to the primary risk of the goods contained in the transport unit.

(2) Placards shall be displayed for subsidiary risks for which a subsidiary risk label is required in accordance to Part 3 of the IMDG code.

(3) Transport units containing goods of more than one class need not bear a subsidiary risk placard if the hazard represented by that placard is already indicated by a primary risk placard.

(4) Placards shall be displayed on a background of contrasting colour, or shall have a dotted or solid outer boundary line.

(5) Where a transport unit has a multiple compartment tanks which carries two or more dangerous goods, appropriate placards shall be displayed along each side at the position of the relevant compartments.

(6) Placards shall be clearly and visibly displayed on at least two opposing sides of the transport units that carry dangerous goods or residue of dangerous goods in unpurged tanks or empty unclean bulk containers.

(7) Notwithstanding the provisions of sub-regulation (1) placards shall not be required on transport units carrying any quantity of explosives of Division 1.4, Compatibility Group S, dangerous goods packed in limited quantities, or excepted

packages of radioactive material.

UN numbers and proper shipping names

**19.**-(1) A person shall, on every dangerous goods and substances, assign UN numbers and proper shipping names according to hazard classification and composition of the goods and substances as provided for under Part 3 of the IMDG Code.

(2) For dangerous goods not specifically listed by name, "generic" or "not otherwise specified" entries shall be provided to identify the article or substance in transport, as prescribed in the Seventh Schedule.

Dangerous goods packed in limited quantities

**20.**(1) Packages containing dangerous goods in limited quantities shall be marked with the UN number of the contents preceded by the letters "UN" placed within a diamond mark.

(2) The width of line forming the diamond shall be at least 2 mm and the number shall be at least 6 mm high.

PART IV  
TRANSPORT DOCUMENTS

Documentation

**21.**-(1) A person shall ensure that transport document includes name and address of the consignor and the consignee, port of loading and discharge and the date the document or an electronic copy of it was prepared or given to the initial carrier.

(2) Subject to sub regulation (1) transport document shall contain information for each dangerous substance, material or article offered for transport sequentially as follows:

- (a) the UN number preceded by the letters "UN";
- (b) the proper shipping name, including the technical name enclosed in parenthesis;
- (c) the primary hazard class or when assigned the division of the goods including for Class 1 the compatibility group letter where the words "Class" or "Division" may be included preceding the primary hazard class or division numbers;
- (d) subsidiary hazard class or division number corresponding to the subsidiary risk label required to be applied, when assigned, shall be entered following the primary hazard class or division and shall be enclosed in parenthesis; and
- (e) where assigned, the packing group for the substance or article which may be preceded by

“PG.

(3) A person shall ensure that any documents for transportation of infectious substances indicate the physical and full address of the consignor, consignee, port of loading and discharge and the name of a responsible person and his telephone number.

(4) Documentation for transportation of radioactive material shall be in accordance with the requirements prescribed by a competent authority.

(5) Transport document shall include a certification or declaration as provided in the Eighth Schedule that-

- (a) the consignment is acceptable for transport; and
- (b) the goods are properly packaged, marked, labeled and in proper condition for transport.

Emergency response information

**22.** A carrier of dangerous goods shall maintain appropriate information at all times for use in emergency response to accidents and incidents.

PART V  
MISCELLANEOUS PROVISIONS

Training and security provisions

**23.**-(1) The Corporation shall ensure that its staff are trained in handling and transportation of dangerous goods and substances.

(2) Training referred to under sub regulation (1) shall include a description of dangerous goods, labeling, marking, placarding, packaging, segregation and compatibility requirements, description of the purpose and content of the dangerous goods transport document and description of available emergency response documents.

(3) The Corporation shall ensure that the stations, marshalling yards and other temporary storage areas handling dangerous goods and substances are properly secured, well lit and where possible, not accessible to the general public.

(4) The Corporation shall establish a system for identifying consignors and consignees engaged in the transport of high consequence dangerous goods for the purpose of communicating security related information in accordance with indicative list of high consequence dangerous goods provided in the Ninth Schedule.

Miscellaneous dangerous

**24.** Miscellaneous dangerous substances and articles shall include:

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substances and articles

- (a) environmentally hazardous substances;
- (b) elevated temperature substances; and
- (c) genetically Modified Micro-Organisms or Genetically Modified Organisms which do not meet the definition of infectious substances but are capable of altering animals, plants or microbiological substances in a way not normally the result of natural reproduction.

Transportation of waste by rail

**25.** A person shall not transport waste by rail unless the transportation is in compliance with the requirements under these Regulations relating to the appropriateness of the class of goods, their hazardousness and criteria thereof.

Offences and penalties

**26.** A person who-

- (a) fails to ensure that all transportation of dangerous goods meet the requirement of these regulations;
- (b) furnishes to the Regulator or as the case may be, the Corporation, record, statement, declaration, written information or explanation containing any particulars which to his knowledge are false or incorrect;
- (c) fails to submit relevant information upon being required to do so;
- (d) hinders or obstructs an officer of the Corporation, a police officer or agent in the performance of his duties under these Regulations;
- (e) makes, or has in possession of any document, plate, or mark so closely resembling to those required under these Regulations with an intention to deceive, or forges or alters an entry in records made under these Regulations;
- (f) fails to comply with any provisions of these Regulations,

commits an offence and is liable on conviction to a fine not less than five million shillings and not exceeding ten million shillings or to imprisonment for a term not less than two years and not exceeding five years or to both such fine and imprisonment.

Compound of offences

**27.-(1)** Notwithstanding the provisions of these Regulations relating to penalties, where a person admits in

writing that he has committed an offence under these Regulations, the Director General or any other person authorised by him in writing may, at any time prior to the commencement of the proceedings by a court of competent jurisdiction compound such offence and order such person to pay sums of money, not exceeding one half of the amount of the fine to which such person would otherwise have been liable to pay if he had been convicted of such offence.

(2) Where an offence is compounded in accordance with sub regulation (1) and proceedings are brought against the offender for the same offence, it shall be a good defence for the offender to prove to the satisfaction of the court that the offence with which the offender is charged has been compounded under sub regulation (1).

(3) Where the person fails to comply with the compounding order issued under this regulation within the prescribed period, the Corporation may-

- (a) in addition to the sum ordered, require the person to pay an interest at the rate prescribed in the regulations; and
- (b) enforce the compounding order in the same manner as a decree of a court for the payment of the amount stated in the order.

**FIRST SCHEDULE**

*(Made under Regulation 4(1) and 10(1))*

**CLASSIFICATION OF DANGEROUS GOODS AND SUBSTANCES**

**(a) Class 1: Explosives**

Division 1.1: Substances and articles which have a mass explosion hazard

Division 1.2: Substances and articles which have a projection hazard but not a mass explosion

hazard

Division 1.3: Substances and articles which have a fire hazard and either a minor blast hazard or a

minor projection hazard or both, but not a mass explosion hazard

Division 1.4: Substances and articles which present no significant hazard

Division 1.5: Very insensitive substances which have a mass explosion hazard

Division 1.6: Extremely insensitive articles which do not have a mass explosion hazard

**(b) Class 2: Gases**

Division 2.1: Flammable gases

Division 2.2: Non-flammable, non-toxic gases

Division 2.3: Toxic gases

**(c) Class 3: Flammable liquids**

**(e) Class 4: Flammable solids; substances liable to spontaneous combustion; substances which, on contact with water, emit flammable gases**

Division 4.1: Flammable solids, self-reactive substances and solid desensitized explosives

Division 4.2: Substances liable to spontaneous combustion

Division 4.3: Substances which in contact with water emit flammable gases

**(e) Class 5: Oxidizing substances and organic peroxides**

Division 5.1: Oxidizing substances

Division 5.2: Organic peroxides

**(f) Class 6: Toxic and infectious substances**

Division 6.1: Toxic substances

Division 6.2: Infectious substances

**(g) Class 7: Radioactive material**

**(h) Class 8: Corrosive substances**

**(i) Class 9: Miscellaneous dangerous substances and articles**

\*For dangerous goods and substances, not otherwise specified, the consignor shall consult competent authority

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**SECOND SCHEDULE**

*(Made under Regulation 6(1))*

**CLASSIFICATION CODES**

Description of substance or article to be classified	Compatibility Group	Classification code
Primary explosive substances	A	1.1A
Article containing a primary explosive substance and not containing two or more effective protective features. Some articles, such as detonators for blasting, detonator assemblies for blasting and primers, cap-type, are included, even though they do not contain primary	B	1.1B 1.2B 1.4B
Propellant explosive substance or other deflagrating explosive substance or article containing such explosive substance	C	1.1C 1.2C 1.3C 1.4C
Secondary detonating explosive substance or black powder or article containing a secondary detonating explosive substance, in each case without means of initiation and without a propelling charge, or article containing a primary explosive substance and containing two or more effective protective features	D	1.1D 1.2D 1.4D 1.5D
Article containing a secondary detonating explosive substance, without means of initiation, with a propelling charge (other than one containing a flammable liquid or gel or hypergolic liquids)	E	1.1E 1.2E 1.4E
Article containing a secondary	F	1.1F

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detonating explosive substance with its own means of initiation, with a propelling charge (other than one containing a flammable liquid or gel or hypergolic liquids) or without a propelling charge		1.2F 1.3F 1.4F
Pyrotechnic substance, or article containing a pyrotechnic substance, or article containing both an explosive substance and an illuminating, incendiary, tear- or smoke-producing substance (other than a water activated article or one containing white phosphorus, phosphates a pyrophoric substance, a flammable liquid or gel, or hypergolic liquids)	G	1.1G 1.2G 1.3G 1.4G
Article containing both an explosive substance and white phosphorus	H	1.2H 1.3H
Article containing both an explosive substance and a flammable liquid or gel	J	1.1J 1.2J 1.3J
Article containing both an explosive substance and a toxic chemical agent	K	1.2K 1.3K
Explosive substance or article containing an explosive substance and presenting a special risk (e.g. due to water-activation or presence of hypergolic liquids, phosphates or a pyrophoric substance) and needing isolation of each type.	L	1.1L 1.2L 1.3L
Articles containing only extremely insensitive detonating substances	N	1.6N
Substance or article so packed or designed that any hazardous effects arising from accidental	S	1.4S

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functioning are confined within the package unless the package has been degraded by fire, in which case all blast or projection effects are limited to the extent that they do not significantly hinder or prohibit fire fighting or other emergency response efforts in the immediate vicinity of the package.		
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**THIRD SCHEDULE**

*(Made under Regulation 8(1))*

**HAZARD GROUPINGS FOR FLAMMABLE LIQUIDS**

Packing group	Flash point (closed-cup)	Initial boiling point
I	-	$\leq 35\text{ }^{\circ}\text{C}$
II	$< 23\text{ }^{\circ}\text{C}$	$> 35\text{ }^{\circ}\text{C}$
III	$\geq 23\text{ }^{\circ}\text{C} \leq 60\text{ }^{\circ}\text{C}$	$> 35\text{ }^{\circ}\text{C}$

FOURTH SCHEDULE

(Made under Regulation 8 (2) and 15)

PRECEDENCE OF HAZARDS

Class or Division and Packing group	4.2	4.3	5.1 I	5.1 II	5.1 III	6.1, I Dermal	6.1, I Oral	6.1 II	6.1 III	8, I Liquid	8, I Solid	8, II Liquid	8, II Solid	8, III Liquid	8, III Solid
3 Ia		4.3				3	3	3	3	3	-	3	-	3	-
3 IIa		4.3				3	3	3	3	8	-	3	-	3	-
3 IIIa		4.3				6.1	6.1	6.1	3b	8	-	8	-	3	-
4.1 IIa	4.2	4.3	5.1	4.1	4.1	6.1	6.1	4.1	4.1	-	8	-	4.1	-	4.1
4.1 IIIa	4.2	4.3	5.1	4.1	4.1	6.1	6.1	6.1	4.1	-	8	-	8	-	4.1
4.2 II		4.3	5.1	4.2	4.2	6.1	6.1	4.2	4.2	8	8	4.2	4.2	4.2	4.2
4.2 III		4.3	5.1	5.1	4.2	6.1	6.1	6.1	4.2	8	8	8	8	4.2	4.2
4.3 I			5.1	4.3	4.3	6.1	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3
4.3 II			5.1	4.3	4.3	6.1	4.3	4.3	4.3	8	8	4.3	4.3	4.3	4.3
4.3 III			5.1	5.1	5.1	6.1	6.1	6.1	4.3	8	8	8	8	4.3	4.3
5.1 I						5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1
5.1 II						6.1	5.1	5.1	5.1	8	8	5.1	5.1	5.1	5.1
5.1 III						6.1	6.1	6.1	5.1	8	8	8	8	5.1	5.1
6.1 I Dermal										8	6.1	6.1	6.1	6.1	6.1
6.1 I Oral										8	6.1	6.1	6.1	6.1	6.1
6.1 II Inhalation										8	6.1	6.1	6.1	6.1	6.1
6.1 II Dermal										8	6.1	8	6.1	6.1	6.1
6.1 II Oral										8	8	8	6.1	6.1	6.1
6.1 III										8	8	8	8	8	8

**a** Substances of Division 4.1 other than self reactive substances and solid desensitized explosives  
and substances of class 3 other than liquid desensitized explosives

**b** 6.1 for pesticides

- Denotes an impossible combination

\*The primary characteristics of the substances below shall always take precedence:

- (a) Substances and articles of Class 1;
- (b) Gases of Class 2;
- (c) Liquid desensitised explosives of Class 3;
- (d) Self-reactive substances and solid desensitized explosives of Division 4.1;
- (e) Pyrophoric substances of Division 4.2;
- (f) Substances of Division 5.2;
- (g) Substances of Division 6.1 with a packing group I vapour inhalation toxicity.
- (h) Substances of Division 6.2;
- (i) Materials of Class 7.

*The Railways (Handling and Transportation of Dangerous Goods and  
Substances)*

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*Gn. No. 407(Contd.)*

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FIFTH SCHEDULE  
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*(Made under Regulation (16(2)))*

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DANGEROUS GOODS LABEL

*The Railways (Handling and Transportation of Dangerous Goods and Substances)*

Gn. No. 407(Contd.)

**CLASS 1**  
Explosive substances or articles



(No.1)

Divisions 1.1, 1.2 and 1.3

Symbol (exploding bomb): black; Background: orange; Figure '1' in bottom corner



(No. 1.4)  
Division 1.4



(No. 1.5)  
Division 1.5



(No. 1.6)  
Division 1.6

Background: orange; Figures: black; Numerals shall be about 30 mm in height and be about 5 mm thick (for a label measuring 100 mm x 100 mm); Figure '1' in bottom corner

- \*\* Place for division - to be left blank if explosive is the subsidiary risk
- \* Place for compatibility group - to be left blank if explosive is the subsidiary risk

**CLASS 2**  
Gases



(No.2.1)  
Division 2.1  
Flammable gases

Symbol (flame): black or white;  
(except as provided for in 5.2.2.2.1.6 c))  
Background: red; Figure '2' in bottom corner



(No.2.2)  
Division 2.2

Non flammable, non-toxic gases  
Symbol (gas cylinder): black or white;  
Background: green; Figure '2' in bottom corner



**CLASS 3**  
Flammable liquids



(No. 2.3)  
Division 2.3  
Toxic gases

Symbol (skull and crossbones): black;  
Background: white; Figure '2' in bottom corner



(No. 3)  
Symbol (flame): black or white;  
Background: red; Figure '3' in bottom corner

*The Railways (Handling and Transportation of Dangerous Goods and Substances)*

Gn. No. 407(Contd.)

CLASS 4



(No. 4.1)  
Division 4.1  
Flammable solids  
Symbol (flame): black;  
Background: white with  
seven vertical red stripes;  
Figure '4' in bottom corner



(No. 4.2)  
Division 4.2  
Substances liable  
to spontaneous combustion  
Symbol (flame): black;  
Background: upper half white,  
lower half red;  
Figure '4' in bottom corner



(No. 4.3)  
Division 4.3  
Substances which, in contact  
with water, emit flammable gases  
Symbol (flame): black or white;  
Background: blue;  
Figure '4' in bottom corner



CLASS 5



(No. 5.1)  
Division 5.1  
Oxidizing substances  
Symbol (flame over circle): black;  
Background: yellow;  
Figure '5.1' in bottom corner



(No. 5.2)  
Division 5.2  
Organic peroxides  
Symbol (flame): black or white;  
Background: upper half red; lower half yellow;  
Figure '5.2' in bottom corner



CLASS 6



(No. 6.1)  
Division 6.1  
Toxic substances  
Symbol (skull and crossbones): black;  
Background: white; Figure '6' in bottom corner



(No. 6.2)  
Division 6.2  
Infectious substances  
The lower half of the label may bear the inscriptions: 'INFECTIOUS SUBSTANCE'  
and 'In the case of damage or leakage immediately notify Public Health Authority';  
Symbol (three crescents superimposed on a circle) and inscriptions: black;  
Background: white; Figure '6' in bottom corner

SIXTH SCHEDULE

(Made under Regulation 17(8))

**MARKING OF PORTABLE TANKS**

As a minimum at least the following information shall be marked on the plate by stamping or by any other similar method. Country of manufacture

U Approval Approval For Alternative Arrangements

N Country Number “ AA”

Manufacturer's name or mark

Manufacturer's serial number

Authorized body for the design approval

Owner's registration number

Year of manufacture

Pressure vessel code to which the shell is designed

Test pressure \_\_\_\_\_ bar/kPa gauge

MAWP \_\_\_\_\_ bar/kPa gauge

External design pressure \_\_\_\_\_ bar/kPa gauge

Design temperature range \_\_\_\_\_ °C to \_\_\_\_\_ °C

Water capacity at 20 °C \_\_\_\_\_ litres

Water capacity of each compartment at 20 °C \_\_\_\_\_ litres

Initial pressure test date and witness identification

MAWP for heating/cooling system \_\_\_\_\_ bar/kPa gauge

Shell material(s) and material standard reference(s)

Equivalent thickness in reference steel \_\_\_\_\_ mm

Lining material (when applicable)

Date and type of most recent periodic test(s)

Month \_\_\_\_\_ Year \_\_\_\_\_ Test pressure \_\_\_\_\_ bar/kPa gauge

Stamp of expert who performed or witnessed the most recent test

The following information shall be marked either on the portable tank itself or on a metal plate

firmly secured to the portable tank:

Name of the operator

Maximum permissible gross mass (MPGM) \_\_\_\_\_ kg

Unladen (t**RIES IN THE DANGEROUS GOODS LIST**

Each entry in the Dangerous Goods List is characterized by a UN number. This list also contains relevant information for each entry, such as hazard class, subsidiary risk(s) (if any), packing group (where assigned), packing and tank

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transport requirements, etc. Entries in the Dangerous Goods List are of the following

four types:

(a) Single entries for well-defined substances or articles e.g.

1090 ACETONE

1194 ETHYL NITRITE SOLUTION;

(b) Generic entries for well-defined group of substances or articles e.g.

1133 ADHESIVES

1266 PERFUMERY PRODUCT

2757 CARBAMATE PESTICIDE, SOLID, TOXIC

3101 ORGANIC PEROXIDE, TYPE B, LIQUID;

(c) Specific n.o.s. entries covering a group of substances or articles of a particular chemical or technical nature e.g.

1477 NITRATES, INORGANIC, N.O.S.

1987 ALCOHOLS, N.O.S.;

(d) General n.o.s. entries covering a group of substances or articles meeting the criteria of one or more classes or divisions e.g.

1325 FLAMMABLE SOLID, ORGANIC, N.O.S.

1993 FLAMMABLE LIQUID, N.O.S.

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EIGHTH SCHEDULE  
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*(Made under Regulation 21(5))*  
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**DANGEROUS GOODS DECLARATION FORM**

“I..... hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.”

Signed by Consigner .....

Date.....

—————  
NINETH SCHEDULE  
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(Made under Regulation 23(4))  
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**INDICATIVE LIST OF HIGH CONSEQUENCE DANGEROUS GOODS**

High consequence dangerous goods are those which have the potential for mis-use in a terrorist incident and which may, as a result, produce serious consequences such as mass casualties or mass destruction.

The following is an indicative list of high consequence dangerous goods:

- Class 1, Division 1.1 explosives
- Class 1, Division 1.2 explosives
- Class 1, Division 1.3 compatibility group C explosives
- Class 1, Division 1.5 explosives
- Division 2.1 flammable gases in bulk
- Division 2.3 toxic gases (excluding aerosols)
- Class 3 flammable liquids of packing groups I and II in bulk
- Class 3 and Division 4.1 desensitized explosives
- Division 4.2 goods of packing group I in bulk
- Division 4.3 goods of packing group I in bulk
- Division 5.1 oxidizing liquids of packing group I in bulk
- Division 5.1 perchlorates, ammonium nitrate and ammonium nitrate fertilizers in bulk
- Division 6.1 toxic substances of packing group I
- Division 6.2 infectious substances of Category A
- Class 7 radioactive material in quantities greater than 3000 A1 (special form) or 3000 A2, as applicable, in Type B or Type C packages
- Class 8, Corrosive substances of packing group I in bulk

**NOTE 1:** For the purposes of this Schedule, "in bulk" means transported in quantities greater than 3000 kg or 3000 l in portable tanks or bulk containers.

**NOTE 2:** For purposes of non-proliferation of nuclear material, the Convention on Physical Protection of Nuclear Material applies to international transport supported by IAEA INFCIRC/225(Rev.4). Dodoma, ISACK

A. KAMWELWE

30<sup>th</sup> July, 2018

*Minister for Works, Transport and Communicati*