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MARITIME AND PORT AUTHORITY OF SINGAPORE ACT  
(CHAPTER 170A)

MARITIME AND PORT AUTHORITY OF SINGAPORE  
(DANGEROUS GOODS, PETROLEUM AND EXPLOSIVES)  
REGULATIONS 2005

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In exercise of the powers conferred by section 41 of the Maritime and Port Authority of Singapore Act, the Maritime and Port Authority of Singapore, with the approval of the Minister for Transport, hereby makes the following Regulations:

**Citation and commencement**

1. These Regulations may be cited as the Maritime and Port Authority of Singapore (Dangerous Goods, Petroleum and Explosives) Regulations 2005 and shall come into operation on 31st January 2005.

**Definitions**

2.—(1) In these Regulations, unless the context otherwise requires —

“approved magazine” means any magazine constructed in accordance with the recommendations laid down by IMO;

“approved strong-room” means any strong-room or safe approved by the Authority for the safe-keeping of arms;

“approved wharf” means a wharf approved by the Authority for the purposes of these Regulations;

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“arms” includes —

- (a) arms, air-guns, air-pistols, automatic guns, automatic pistols, or any other kind of gun from which —
  - (i) a shot, bullet or other missile can be discharged;  
or
  - (ii) noxious fumes can be emitted,and any component part of such arms; and
- (b) bayonets, swords, daggers, spears and spearheads;

“authorised officer” means —

- (a) an employee of the Authority authorised by the Authority for the purposes of these Regulations;
- (b) a police officer or customs officer; or
- (c) any other person authorised by the Authority in writing for the purposes of these Regulations;

“certificate” means a certificate of freedom from flammable vapour issued by an Inspector of Petroleum under regulation 18;

“Class ‘A’ petroleum” means any petroleum the flash-point of which is less than 23 degrees Celsius and includes liquefied petroleum gas;

“Class ‘B’ petroleum” means any petroleum the flash-point of which is 23 degrees Celsius or more but less than 60 degrees Celsius;

“Class ‘C’ petroleum” means any petroleum the flash-point of which is 60 degrees Celsius or more;

“dangerous cargoes” —

- (a) means any of the following cargoes, whether packaged, carried in bulk packagings or in bulk:
  - (i) oils covered by Annex I of MARPOL 73/78;
  - (ii) gases covered by the Codes for the Construction and Equipment of Ships Carrying Liquefied Gases in Bulk;
  - (iii) noxious liquid substances or chemicals, including wastes covered by the Codes for the Construction and Equipment of Ships Carrying

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Dangerous Chemicals in Bulk and Annex II of MARPOL 73/78;

- (iv) dangerous, hazardous and harmful substances, materials and articles, including environmentally hazardous substances (marine pollutants) and wastes, covered by the IMDG Code; or
  - (v) solid bulk materials possessing chemical hazards and solid bulk materials hazardous only in bulk (MHBs) including wastes, covered by Appendix B of the Code of Safe Practice for Solid Bulk Cargoes; and
- (b) includes any empty uncleaned packagings (such as tank-containers, receptacles, intermediate bulk containers (IBCs), bulk packagings, portable tanks or tank vehicles) which previously contained dangerous cargoes unless the packagings have been —
- (i) sufficiently cleaned of residue of the dangerous cargoes, and purged of vapours, so as to nullify any hazard; or
  - (ii) filled with a non-dangerous substance;

“dangerous goods” means dangerous cargoes in packaged form;

“explosive” means any explosive within the meaning of the Arms and Explosives Act (Cap. 13);

“First Schedule dangerous goods” means any substance or article specified in the First Schedule;

“hot work” includes any repair or alteration involving chipping, grinding, drilling, riveting, welding, burning, or other fire, spark or heat producing operation;

“IMDG Code” means the International Maritime Dangerous Goods Code issued by IMO and such amendment thereto from time to time as may be adopted by Singapore;

“IMO” means the International Maritime Organisation;

“in bulk” means a homogeneous cargo stored loose in a free flowing tank and which must be handled by pumping;

“Inspector” means an inspector appointed under the Petroleum Act (Cap. 229) or an Inspector of Petroleum;

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“Inspector of Dangerous Goods” means a person appointed as an Inspector of Dangerous Goods under regulation 69;

“Inspector of Explosives” means a person appointed as an Inspector of Explosives under the Arms and Explosives (Explosives) Rules (Cap. 13, R 2);

“Inspector of Petroleum” means a person appointed as an Inspector of Petroleum under regulation 27;

“MARPOL 73/78” means the International Convention for the Prevention of Pollution from Ships (including its protocols, annexes and appendices) which constitutes attachment 1 to the final act of the International Conference on Marine Pollution signed in London on 2nd November 1973, as modified and added to by the Protocol of 1978;

“oil terminal” means any place having permanent means of loading or discharging petroleum, whether in bulk or packaged, into or from any vessel;

“petroleum” includes —

- (a) the liquids commonly known by the names of Rock oil, Rangoon oil, Burma oil, kerosene, paraffin oil, petrol, gasoline, benzol, benzoline, benzine or naptha; and
- (b) any like flammable liquid, which is —
  - (i) a natural product;
  - (ii) a product made from petroleum, coal, schist, shale or any other bituminous substance; or
  - (iii) a by-product of a substance referred to in sub-paragraph (i) or (ii);

“terminal manager” means a terminal manager, any person in charge of a wharf, or a representative of the terminal manager or person in charge of the wharf.

(2) In these Regulations, a reference to any special anchorage, petroleum anchorage, quarantine anchorage, immigration anchorage, explosives anchorage or dangerous goods anchorage means an anchorage —

- (a) designated as such under the Maritime and Port Authority of Singapore (Port) Regulations (Rg 7); or
- (b) declared as such by the Port Master under section 43 (d) of the Act.

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PART I

CARRIAGE OF PETROLEUM

*Division 1 — Preliminary provisions*

**Compliance with this Part**

3.—(1) No person shall within the port —

- (a) handle, import, export, load, discharge, transport or otherwise deal with petroleum; or
- (b) cause or permit petroleum to be handled, imported, exported, loaded, discharged, transported or otherwise dealt with,

except in accordance with this Part and the recommendations made by IMO that are accepted by the Authority.

(2) If there is a conflict between these Regulations and the recommendations made by IMO referred to in paragraph (1), these Regulations shall prevail.

**Exemption from this Part**

4. This Part shall not apply to the carriage of petroleum in properly sealed containers where the aggregate quantity of the petroleum does not exceed 25 litres.

**Power to board vessels**

5.—(1) For the purposes of this Part, an authorised person may —

- (a) go on board any vessel within the port whenever he suspects that an offence against any provision of these Regulations has been, or is about to be, committed in or on any vessel; and
- (b) seek such assistance as may be necessary.

(2) In paragraph (1), “authorised person” means the Port Master, an Inspector of Petroleum or the authorised representative of the Port Master or of the Director of Marine.

*Division 2 — Tests and licensing*

**Tests to determine class of petroleum**

6.—(1) For the purposes of this Part —

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- (a) to determine whether a sample of petroleum is Class 'C' petroleum, a test shall be carried out by means of the standard Pensky-Martens Closed Tester to determine its flash-point; and
  - (b) to determine whether a sample of petroleum is of a class other than Class 'C' petroleum, a test shall be carried out by means of the standard Abel Closed Tester to determine its flash-point.

(2) Notwithstanding paragraph (1), the Authority may allow the determination of the class of petroleum to which a sample of petroleum belongs to be carried out by means of such other test as may be acceptable to the Authority.

### **Restrictions on carriage of Class 'A' or 'B' petroleum**

7. No person shall cause or permit Class 'A' petroleum or Class 'B' petroleum to be carried on board a vessel, other than any of the following vessels, within the port limits:

- (a) a vessel licensed under the Maritime and Port Authority of Singapore (Harbour Craft) Regulations (Rg 3);
- (b) a vessel certified by a classification society recognised for this purpose by the Director of Marine as having been constructed to carry Class 'A' petroleum or Class 'B' petroleum either in bulk or in packages; or
- (c) a vessel certified by the Director of Marine as having been constructed to carry Class 'A' petroleum or Class 'B' petroleum either in bulk or in packages.

### **Quantity of Class 'A' petroleum which may be carried on deck of vessel**

8. The owner, agent or master of a vessel that is licensed to carry petroleum shall not cause or permit to be carried on the deck of the vessel a quantity of Class 'A' petroleum that exceeds —

- (a) 500 litres, where the vessel is within any of the following areas:
  - (i) the full extent of all rivers entering the port; or
  - (ii) the area described in the Second Schedule; or
- (b) 100,000 litres, where the vessel is in any other area of the port.

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**Notice of arrival**

9. The owner, agent or master of a vessel carrying Class ‘A’ petroleum or Class ‘B’ petroleum on board as cargo shall give notice of the vessel’s arrival at the port to the Port Master —

- (a) before the vessel arrives at the port; or
- (b) if it is impracticable to give notice before arrival at the port, upon arrival at the port.

**Notice of departure**

10. The owner, agent or master of a vessel about to leave the port with Class ‘A’ petroleum or Class ‘B’ petroleum on board as cargo shall give notice to the Port Master of that fact.

**Directions on entering port**

11.—(1) No person shall cause or permit a vessel that is carrying Class ‘A’ petroleum or Class ‘B’ petroleum as the whole or part of the vessel’s cargo or that carried such petroleum as the whole or part of the vessel’s last cargo to proceed to —

- (a) any place within the port unless the following parts of the vessel have been certified free from flammable vapour by an Inspector of Petroleum:
  - (i) all cargo compartments and systems connected with the carriage of Class ‘A’ petroleum or Class ‘B’ petroleum; and
  - (ii) such other parts of the vessel as an Inspector thinks necessary; or
- (b) any local shipyard or repair facility, unless an Inspector has inspected the fuel oil tanks of the vessel and is satisfied that the petroleum vapour in the tanks is 50% of the lower explosive limit or below 50% of the lower explosive limit.

(2) Paragraph (1) (a) shall not apply to a vessel proceeding to a petroleum anchorage, a special anchorage or an oil terminal.

**Loading and discharging and other operations**

12.—(1) No person shall load or discharge petroleum within the port except at such place or places as the Authority may allow.

(2) A person who wishes to ballast or gas-free any vessel within the port after the carriage of petroleum in the vessel shall notify the Port Master who may —

- (a) direct where the ballasting or gas-freeing operations are to be carried out; and
- (b) impose such conditions in respect of the ballasting or gas-freeing operations as the Port Master thinks fit.

### **Restrictions on cleaning or gas-freeing of tanks**

**13.**—(1) No person shall cause or permit the cleaning or gas-freeing of a vessel's tanks unless he has applied for and obtained the written permission of the Port Master.

(2) An application for permission under paragraph (1) shall be accompanied by full details of the arrangements proposed for the disposal of sludge, residue or waste material.

(3) The owner of the vessel, the person-in-charge of the vessel and the person-in-charge of the tank-cleaning or gas-freeing operations shall ensure that no person employed in the cleaning or gas-freeing of the tanks —

- (a) smokes; or
- (b) carries or takes into the tank any matches or other substance that produces, or is capable of producing, a fire or spark.

### **Compliance with acceptable standards of safety**

**14.** The owner or operator of a wharf at which a vessel loads or discharges Class 'A' petroleum or Class 'B' petroleum shall ensure that all loading, discharging or ballasting operations are carried out in accordance with safety standards acceptable to the Authority, including the safety guidelines set out in the International Safety Guide for Oil Tankers and Terminals, as amended from time to time.

### **Compliance with specific safety measures**

**15.** The owner, agent or master of a vessel shall provide —

- (a) a competent member of the engine room staff to be available to operate fire pumps or other fire extinguishing apparatus on the vessel;
- (b) a sufficient number of crew members to adequately assist the person referred to in paragraph (a) and the engineer;

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- (c) in the case of a vessel on which petroleum is loaded or discharged or on which ballasting, tank-cleaning or gas-freeing operations are carried out, a sufficient number of officers and men to carry out the loading, discharging or operations efficiently at all times and, if necessary, to move the vessel; and
  - (d) a watchman to be stationed at each gangway leading to the vessel —
    - (i) to prevent smoking by any person on or near the vessel;
    - (ii) to prevent access onto the vessel by any unauthorised person; and
    - (iii) to warn all persons on or near the vessel that flammable goods are being handled on the vessel.

### **Restrictions on hot work, high speed drilling and other similar operations**

**16.** No person shall cause or permit any hot work, high speed drilling or other similar operation to be carried out on any waterfront facility or vessel within the port limits during the handling, storing, stowing, loading, discharging or transporting of petroleum on the waterfront facility or vessel.

### **Carrying out of hot work, high speed drilling or other similar operations or ship-breaking or dismantling operations**

**17.—(1)** The owner of a shipyard or his employee or agent who has control over any works to be carried out in a shipyard shall ensure that the following works shall not be carried out in the shipyard or in any compartment or pipeline of a vessel which contains, or had contained, petroleum unless a certificate is issued in respect of the work to be carried out:

- (a) hot work or high speed drilling; and
- (b) other fire, spark or heat producing operation.

(2) The owner, agent or master of a vessel shall ensure that no hot work, high speed drilling or any other fire, spark or heat producing operation is carried out on or in any vessel at any petroleum anchorage or dangerous goods anchorage.

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(3) The owner, agent or master of a vessel that is within the port shall ensure that no hot work, high speed drilling or any other fire, spark or heat producing operation is carried out —

- (a) on or in the vessel if the vessel carried petroleum as the whole or part of her last cargo; or
- (b) on or in any compartment or pipeline of the vessel that contained petroleum,

unless a certificate is issued in respect of the work to be carried out.

(4) The owner, agent or master of a vessel shall ensure that no ship-breaking or dismantling operation is carried out on the vessel unless a certificate is issued in respect of the work to be carried out.

(5) This regulation shall not apply to the carrying out of any hot work for which a hot-work permit has been issued under regulation 40 of the Factories (Shipbuilding and Ship-repairing) Regulations (Cap. 104, Rg 11).

#### **Issue of certificate of freedom from flammable vapour**

**18.**—(1) The certificate that is required for the purposes referred to in regulation 17 (1), (3) and (4) shall be a certificate of freedom from flammable vapour.

(2) An application for a certificate for a purpose referred to in regulation 17 (1), (3) or (4) shall be made by the master of the vessel concerned or by a person who is in charge of the works proposed to be carried out to or on the vessel.

(3) In considering whether to issue a certificate, an Inspector of Petroleum may, if he considers it necessary —

- (a) require the applicant to provide any information; and
- (b) examine the vessel or any part thereof.

(4) In issuing a certificate under this regulation, the Inspector of Petroleum may impose such conditions as he thinks fit.

(5) A certificate shall not be valid if, after the certificate has been issued —

- (a) any pipeline, valve, heating coil or pump on the vessel is altered;

- (b) the scale or sediment is removed from a compartment of the vessel; or
- (c) the ballast conditions of the vessel have been changed.

### **Display of certificate of freedom from flammable vapour**

**19.**—(1) Subject to paragraph (2), where a certificate has been issued, the master of the vessel shall —

- (a) display a copy of the certificate prominently at the main gangway to the vessel or, if this is not practicable, at the main access to the vessel at all times; and
- (b) produce the certificate on the request of any authorised officer or any person who is empowered or authorised under any written law to request the production of such a certificate.

(2) No person shall display any certificate that is forged or altered, or is invalid by virtue of regulation 18 (5).

### **Pump-room sea-suction valves**

**20.**—(1) The owner, agent or master of a vessel carrying petroleum in bulk shall ensure that —

- (a) all pump-room sea-suction valves on the vessel are chain locked and sealed;
- (b) a record of the locking and sealing is made in an appropriate log book; and
- (c) no such seal is broken except in an emergency.

(2) Where there is an emergency, the pump-room sea-suction valve may be opened on the authority of the master of the vessel who shall cause that fact and the nature of the emergency to be recorded in the log book referred to in paragraph (1) (b).

### **Loading and discharging of petroleum in port**

**21.** The owner, agent or master of a vessel onto or from which petroleum of any description is being loaded or discharged anywhere in the port shall —

- (a) ensure that all scuppers and overside deck openings are plugged so as to prevent the escape of any petroleum into the sea; and

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- (b) ensure that towing-off wires are secured forward and aft and that such wires are —
- (i) capable of bearing any strain which may be necessary to be imposed upon them in towing-off the vessel;
  - (ii) suspended such that the eyes shall not be more than 2 metres above the level of the sea; and
  - (iii) of such length as to provide an effective towing length of not less than 50 metres.

### **Use of specific anchorages and terminals**

**22.** Subject to section 43 of the Act, the owner, agent or master of a vessel loaded with Class ‘A’ petroleum or Class ‘B’ petroleum shall not cause or permit the vessel to anchor or berth within the port limits except —

- (a) within a petroleum anchorage or a special anchorage, or at an oil terminal; or
- (b) with the permission of the Port Master.

### **Limit to time within which petroleum may remain in wharf, etc.**

**23.** No person shall cause or permit petroleum to be placed on a wharf, the foreshore or other similar place for a period of time longer than is reasonably necessary for the loading or discharging of the petroleum or for the petroleum to be transported.

### **Limit to time within which vessels may remain in port**

**24.** The owner, agent or master of a vessel, which has on board as cargo any Class ‘A’ petroleum or Class ‘B’ petroleum, whether for transport or storage, shall ensure that —

- (a) the vessel does not remain within the port limits except in a petroleum anchorage or at an oil terminal; and
- (b) the vessel does not remain within the port limits for a period of time longer than is reasonably necessary for the loading or discharging, or ballasting after discharge, of such petroleum.

### **Prohibition on handling by night**

**25.—(1)** No person shall cause or permit Class ‘A’ petroleum to be loaded or discharged onto or from any vessel or otherwise handled

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on any vessel between 7 p.m. and 7 a.m., except for the loading or discharging of such petroleum in bulk onto or from any vessel constructed for the carriage of petroleum in bulk.

(2) No person shall cause or permit general cargo to be handled between 7 p.m. and 7 a.m. on any vessel on which there is Class ‘A’ petroleum in bulk unless he has obtained the written permission of the Port Master.

### **Conditions of discharge**

**26.—**(1) No person shall cause or permit Class ‘A’ petroleum or Class ‘B’ petroleum to be discharged within the port from any vessel unless the owner, agent or master of the vessel has applied for and obtained —

- (a) the permission of the Port Master; and
- (b) in the case of a vessel berthed or moored at a wharf, the permission of the terminal manager.

(2) The Port Master and the terminal manager may each, in granting his permission, impose such conditions as he thinks fit.

### **Appointment of Inspectors of Petroleum**

**27.—**(1) The Authority may appoint Inspectors of Petroleum who may each —

- (a) board any vessel that is carrying petroleum on board, or that is being prepared to carry petroleum, for the purpose of —
  - (i) examining the vessel and its cargo; or
  - (ii) taking and testing samples of the petroleum being carried; and
- (b) board any vessel that has carried Class ‘A’ petroleum or Class ‘B’ petroleum as the whole or part of the vessel’s last cargo for the purpose of certifying that the vessel, or such part of the vessel that is accessible, is in the opinion of the Inspector of Petroleum free from flammable vapour.

(2) The taking and testing of samples under paragraph (1) shall be carried out in accordance with such procedures and standards as the Authority may determine.

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*Division 3 — Packed cargo*

**Carriage of packaged petroleum**

**28.** When packaged petroleum is carried on board a vessel, the owner, agent or master of the vessel shall ensure that the carriage of packaged petroleum complies with the provisions in the IMDG Code.

**Restrictions on handling of Class ‘A’ petroleum**

**29.** No person shall cause or permit any packaged petroleum product or dangerous goods of any description to be handled on a vessel while the vessel is engaged in —

- (a) loading or discharging Class ‘A’ petroleum in bulk; or
- (b) ballasting after discharging of Class ‘A’ petroleum in bulk.

*Division 4 — Safety (General)*

**Leaking or damaged receptacle**

**30.—(1)** No person shall cause or permit a leaking receptacle containing petroleum to be placed on board any vessel.

(2) The owner, agent or master of a vessel in which there is a leaking or damaged receptacle containing petroleum shall —

- (a) ensure that all loading and discharging operations cease immediately on discovery of the leak or damage;
- (b) inform the Port Master and, if the vessel is berthed at a wharf or terminal, the terminal manager, of the leaking or damaged receptacle as soon as possible; and
- (c) comply with all directions of —
  - (i) the Port Master or his authorised representative; and
  - (ii) if the vessel is berthed at a wharf or terminal, the terminal manager,

relating to the handling and storage of the leaking or damaged receptacle.

**Safety measures**

**31.—(1)** The owner, agent or master of a vessel shall ensure that no person is permitted to enter or remain in a compartment of a

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vessel that contained petroleum unless he has taken or caused to be taken all precautions to guard against the ignition of flammable vapour and the toxic effect of the flammable vapour.

(2) The owner, agent or master of a vessel shall ensure that no person is permitted to work in a compartment of a vessel that contained petroleum unless —

- (a) the compartment is efficiently ventilated by spark free equipment;
- (b) all tools and equipment used are of a non-sparking type;
- (c) the person working in the compartment does not —
  - (i) carry on his person matches or other means of ignition; or
  - (ii) wear any footwear in the compartment which is liable to cause any spark;
- (d) not less than one set of efficient breathing apparatus and 2 efficient life lines are placed near to the access to the compartment and are ready for immediate use;
- (e) the lighting provided is adequate for the purpose of the work to be done and is of an intrinsically safe type; and
- (f) any work to be carried out is done so under the personal supervision of a responsible person who is —
  - (i) fully conversant with these Regulations and the relevant provisions of the Factories Act (Cap. 104) and of any other written law; and
  - (ii) approved by the master of the vessel.

(3) No person shall cause or permit naked or artificial light, other than an intrinsically safe self-contained light, to be used in the hold of any vessel on which petroleum is or was carried.

(4) No person shall cause or permit radio receiving sets, including transistor sets, to be brought or kept in any hold or compartment containing petroleum.

(5) The owner, agent or master of a vessel shall ensure that no fire alarm point or emergency call box is located at any part of the vessel where it is likely to be rendered inactive by an explosion.

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**Precautions to prevent accident**

**32.**—(1) The owner, agent or master of a vessel on which petroleum is loaded or discharged, or on which ballasting, tank-cleaning or gas-freeing operations are carried out, shall ensure that the vessel is equipped and managed such that every reasonable precaution is taken to prevent fire, explosion, implosion or accident.

(2) No owner, agent or master of a vessel shall cause or permit any ship-to-ship transfer of petroleum other than normal bunkering within the port unless he has obtained the permission of the Port Master.

(3) The Port Master may, in granting his permission, impose such conditions as he thinks fit.

**Unsafe equipment**

**33.** The owner, agent or master of a vessel engaged in the transport or storage of petroleum shall ensure that the vessel is equipped, managed and handled such that —

- (a) all reasonable precautions are taken against the incidence of mishap or accident of any kind; and
- (b) all equipment and fittings on the vessel are reasonably safe.

**Exhibition of warning notices**

**34.** The owner, agent or master of a vessel on which petroleum is loaded or discharged, or on which ballasting, tank-cleaning or gas-freeing operations are carried out, shall ensure that —

- (a) notices in the appropriate language prohibiting smoking, naked lights and unauthorised visitors are prominently exhibited at the gangways and every part of the vessel from which a person may gain access to the vessel; and
- (b) notices in the appropriate language prohibiting any unauthorised craft from approaching within a distance of 200 metres of the vessel are prominently exhibited on —
  - (i) the off-shore side of the vessel, where the vessel is alongside a wharf; and
  - (ii) on both sides of the vessel, in any other case.

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PART II  
CARRIAGE OF DANGEROUS CARGOES,  
DANGEROUS GOODS, ARMS  
AND EXPLOSIVES

*Division 1 — Preliminary provisions*

**Coverage of dangerous goods**

**35.** In this Part, “dangerous goods” —

- (a) means any goods to which the IMDG Code applies and that are in packaged form; and
- (b) includes empty receptacles which were previously used for the carriage of such goods unless the receptacles have been rendered safe.

**Application of IMDG Code to these Regulations**

**36.** The IMDG Code shall apply in the interpretation and construction of these Regulations except in so far as the Code may be expressly varied by anything contained in these Regulations.

**Exemption from this Part**

**37.** This Part shall not apply to —

- (a) dangerous goods forming part of the equipment or stores of vessels in which they are carried if the quantity of such goods is considered reasonable by the Authority;
- (b) small quantities of dangerous goods taken as samples for the purposes of these Regulations; or
- (c) any person or vessel exempted by the Authority under section 118 of the Act.

**Compliance with this Part**

**38.—(1)** No person shall within the port —

- (a) handle, import, export, load, discharge, transport or otherwise deal with dangerous goods; or
- (b) cause or permit dangerous goods to be handled, imported, exported, loaded, discharged, transported or otherwise dealt with,

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except in accordance with these Regulations, the IMDG Code and any other written law.

(2) In the event of any conflict between these Regulations and the IMDG Code, these Regulations shall prevail.

(3) If a vessel is carrying on board any goods of a dangerous nature to which the IMDG Code does not apply, the owner, agent or master of the vessel shall —

- (a) inform the Port Master that the goods are not expressly referred to in the IMDG Code; and
- (b) comply with all the directions of the Port Master relating to the goods.

### **Powers of entry and search**

**39.** The Port Master, an authorised officer or any public officer authorised by the Authority may —

- (a) enter any place, vessel or vehicle and search such place, vessel or vehicle or any person —
  - (i) for the purpose of ensuring that the provisions of these Regulations are complied with; or
  - (ii) if he has reasonable grounds for believing that an offence is being or was committed under these Regulations; and
- (b) seize any evidence of the commission of an offence under these Regulations.

### *Division 2 — Description, loading, discharge and movement of dangerous goods*

### **Notice of arrival**

**40.—**(1) The owner, agent or master of a vessel arriving in the port and carrying dangerous cargoes shall —

- (a) not less than 24 hours before the arrival of the vessel, give notice of its arrival to the Port Master;
- (b) furnish a list of the dangerous goods on the vessel to the Port Master stipulating the technical names, the quantity and the class of the goods according to the IMDG Code; and

(c) provide such information relating to the dangerous cargoes on the vessel, whether in bulk or packaged form, as may be required by the Port Master from time to time.

(2) Notwithstanding paragraph (1), the Port Master may require such shorter notice as he may determine.

(3) In the case of a vessel that is to be berthed at a wharf, the notice shall also be given to the terminal manager.

(4) Where it is impracticable to give notice 24 hours before the arrival of the vessel in the port as required under paragraph (1), notice of the arrival of the vessel in the port shall be given immediately upon its arrival.

### **Master to carry special list, manifest or detailed stowage plan**

**41.**—(1) The master of a vessel shall cause to be carried on the vessel —

- (a) a special list or manifest setting out the classification and location of all dangerous cargoes on board the vessel; or
- (b) a detailed stowage plan which identifies by class all dangerous cargoes on board the vessel and sets out the location of such dangerous cargoes.

(2) A copy of these documents shall be made available to the Port Master, if so required by him.

### **Packing, labelling and marking of dangerous goods**

**42.** The owner, agent or master of a vessel shall ensure that the packing, labelling and marking of dangerous goods on board the vessel is in accordance with the recommendations set out in the IMDG Code and the specific requirements of the Authority.

### **Notice and permission required for discharging of dangerous goods**

**43.**—(1) The owner, agent or master of a vessel from which dangerous goods are intended to be removed or discharged in the port shall give notice of such intention and the nature and character of the goods to —

- (a) the Port Master; and

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(b) the terminal manager or (where there is no terminal manager) the occupier of the wharf, if it is intended to remove or discharge dangerous goods at a wharf.

(2) No owner, agent or master of a vessel shall remove or discharge dangerous goods in the port unless he has obtained the permission of the Port Master and terminal manager or (where there is no terminal manager) the occupier of the wharf.

(3) The Port Master and the terminal manager or occupier of the wharf may each, in granting his permission under paragraph (2), impose such conditions as he thinks fit.

(4) The owner, agent or master of a vessel who discharges goods of a flammable, explosive or dangerous nature onto a wharf shall, if required by notice by the Port Master, remove, destroy or render innocuous the whole or any part of the goods if the goods were discharged without complying with paragraph (1) or (2).

(5) Any person who fails to comply with the notice referred to in paragraph (4) shall be guilty of an offence and shall be liable on conviction to a fine not exceeding \$10,000 and, in the case of a continuing offence, to a further fine not exceeding \$2,000 for every day or part thereof during which the notice is not complied with.

(6) Notwithstanding paragraphs (4) and (5), if the goods are not removed, destroyed or rendered innocuous within the time given in the notice under paragraph (4) —

(a) the terminal manager or (where there is no terminal manager) the occupier of the wharf may cause the goods to be disposed of or render the goods innocuous, without paying compensation; and

(b) the owner, agent or master of the vessel discharging the goods shall, in addition to any liability for damages, be liable to the terminal manager or occupier of the wharf for all expenses incurred under sub-paragraph (a).

### **Loading of dangerous cargoes and goods**

**44.**—(1) No owner, agent or master of a vessel shall permit any dangerous goods to be taken on board for carriage in the vessel unless the shipper of the dangerous goods furnishes the owner, agent or master of the vessel with a declaration that the shipment offered for carriage is properly packaged and marked, labelled or placarded —

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- (a) in accordance with these Regulations; and
  - (b) in such manner that the goods are in a fit and proper condition for carriage in accordance with the recommendations set out in the IMDG Code.
- (2) The declaration shall indicate —
- (a) the identity of the dangerous goods with the correct technical name; and
  - (b) the class to which the dangerous goods belong according to the IMDG Code.
- (3) Dangerous cargoes in bulk shall not be loaded onto a vessel for carriage in that vessel if the owner, agent or master of the vessel —
- (a) knows or ought to know that the dangerous cargoes cannot be carried safely in bulk to the destination to which they are consigned; or
  - (b) fails to comply with any provision of these Regulations and the relevant provisions of the IMO's codes for ships carrying dangerous cargoes in bulk.
- (4) The owner, agent or master of a vessel onto which dangerous goods are intended to be loaded —
- (a) shall, not less than 24 hours before the loading of the dangerous goods, give notice of that intention to the Port Master; and
  - (b) shall not load the dangerous goods until he has obtained the Port Master's permission.
- (5) Notwithstanding paragraph (4), the Port Master may, in his discretion, allow a shorter period of notice.
- (6) If the owner, agent or master intends to load dangerous goods onto a vessel at a wharf, the permission of the terminal manager shall also be obtained.

### **Passage through prohibited area**

**45.** No person shall cause or permit a vessel carrying First Schedule dangerous goods to proceed into or through a prohibited area of the port set out under regulation 45 of the Maritime and Port Authority of Singapore (Port) Regulations (Rg 7) unless he has obtained the written permission of the Port Master.

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**Restrictions on night movements of vessels carrying First Schedule dangerous goods**

**46.**—(1) No person shall, without the permission of the Port Master, cause or permit a vessel carrying First Schedule dangerous goods to be under way within the port limits between 7 p.m. and 7 a.m.

(2) Nothing in this regulation shall —

(a) prevent a vessel —

- (i) from entering the port to proceed to any quarantine anchorage or immigration anchorage; or
- (ii) from leaving the port directly from any explosives wharf, dangerous goods wharf, explosives anchorage or dangerous goods anchorage; or

(b) apply to a vessel (other than a harbour craft) —

- (i) unberthing from any explosives anchorage or dangerous goods anchorage; or
- (ii) proceeding from any explosives wharf or dangerous goods wharf to —
  - (A) any explosives anchorage or dangerous goods anchorage; or
  - (B) direct to sea.

(3) In this regulation —

“dangerous goods wharf” means a wharf approved by the Authority for the purposes of loading or unloading dangerous goods;

“explosives wharf” means a wharf approved by the Authority for the purposes of loading or unloading explosives.

**First Schedule dangerous goods prohibited alongside wharf**

**47.**—(1) No person shall cause or permit a vessel carrying First Schedule dangerous goods to be berthed alongside any wharf unless he has obtained the permission of the Port Master and the terminal manager.

(2) The Port Master and the terminal manager may each, in granting his permission, impose such conditions as he thinks fit.

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**Anchoring and mooring**

**48.**—(1) Except for the purpose of obtaining quarantine or immigration clearance, no person shall cause or permit a vessel carrying First Schedule dangerous goods to moor or anchor at any place other than an explosives anchorage or a dangerous goods anchorage unless he has obtained the permission of the Port Master.

(2) No person shall cause or permit a vessel to anchor or moor within any explosives anchorage, or dangerous goods anchorage unless —

- (a) the vessel is being used for loading, discharging or carrying explosives or dangerous goods, as the case may be; or
- (b) it is intended that the vessel be used for loading or discharging explosives or dangerous goods, as the case may be.

**Permission required for harbour craft to enter designated anchorages**

**49.**—(1) No person shall cause or permit a harbour craft to enter such places as are designated as petroleum anchorages, explosives anchorages or dangerous goods anchorages unless he has obtained the permission of the Port Master.

(2) The Port Master may, in granting his permission, impose such conditions as he thinks fit.

**First Schedule dangerous goods to be conveyed to harbour craft at anchorage or landing place**

**50.**—(1) No person shall cause or permit a harbour craft to carry First Schedule dangerous goods within the limits of the port unless the harbour craft is —

- (a) licensed under the Maritime and Port Authority of Singapore (Harbour Craft) Regulations (Rg 3); and
- (b) permitted by the Port Master to carry First Schedule dangerous goods.

(2) Subject to regulation 49 —

- (a) First Schedule dangerous goods shall only be conveyed directly to a harbour craft referred to in paragraph (1) from any other vessel or to any other vessel from such harbour craft; and

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(b) such conveyance shall only be permitted in an anchorage or at a landing place designated from time to time by the Port Master for the loading or discharging of First Schedule dangerous goods and explosives.

(3) No person shall cause or permit a harbour craft containing dangerous goods to be loaded in such a manner as to cause any portion of the band specified in item 35 in the First Schedule to the Maritime and Port Authority of Singapore (Port) Regulations (Rg 7) to be submerged.

### **Handling of dangerous goods at wharf**

**51.**—(1) The owner or person in control of dangerous goods shall ensure that any dangerous goods that are discharged onto any wharf are removed from the wharf with all convenient speed.

(2) The owner or person in control of the dangerous goods may deposit or store those goods on a wharf during transit only if —

- (a) he has obtained the permission of the Port Master and the terminal manager; and
- (b) he has complied with the requirements of any other relevant authority and any other applicable written law.

### **Landing or loading at authorised places**

**52.** Subject to regulation 47, no person shall cause or permit First Schedule dangerous goods to be loaded or discharged from a vessel at any place other than —

- (a) a landing place designated by the Port Master under regulation 50 (2); or
- (b) a petroleum anchorage, an explosives anchorage or a dangerous goods anchorage.

### **Restrictions on loading or discharging of First Schedule dangerous goods at night**

**53.**—(1) No person shall cause or permit any First Schedule dangerous goods to be loaded or discharged within the limits of the port between 7 p.m. and 7 a.m. unless he has obtained the permission of the Port Master.

(2) No person shall cause or permit any First Schedule dangerous goods to be loaded or discharged alongside any wharf between 7 p.m. and 7 a.m. unless he has obtained the permission of the Port Master.

(3) Paragraph (2) shall not apply to any First Schedule dangerous goods contained in containers or portable tanks that are 6.1 metres in length or more and equipped with corner castings to facilitate handling by mechanical equipment.

(4) Notwithstanding paragraph (3), the Port Master may prohibit the loading or discharging of the goods referred to in that paragraph if he is of the opinion that it is not safe for the goods to be loaded or discharged.

### *Division 3 — Safety (General)*

#### **Precautionary measures for carriage of spontaneously combustible substances**

**54.** No person shall cause or permit a substance capable of spontaneous combustion to be taken on board any vessel for carriage as cargo unless such precautionary measures, as may be appropriate in the circumstances of each case, are taken to prevent the spontaneous combustion of the substance.

#### **General safety precautions on vessels**

**55.** Where a vessel is engaged in the loading, discharging or carrying of dangerous goods, the owner, agent or master of the vessel shall ensure that —

- (a) the vessel is ready to shift berth at full power at immediate notice if necessary;
- (b) a ship's officer is present who —
  - (i) shall be responsible for ensuring that the prescribed safety measures are taken; and
  - (ii) shall remain on duty until relieved by an equally competent person;
- (c) an efficient ship's fire-fighting party is ready for duty instantly when required;
- (d) a regular and efficient fire patrol is maintained on board the vessel;

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- (e) an adequate pressure of water for fire-fighting is available at all times;
  - (f) at least 2 efficient fire extinguishers appropriate in the circumstances are at all times ready for use in the immediate vicinity of the place in which the dangerous goods are being transported or handled;
  - (g) a competent watchman is stationed at each gangway, and every other part of the vessel from which a person may gain access to the vessel, to prevent the boarding of the vessel by any unauthorised person;
  - (h) adequate notices in the appropriate languages with pictorial representations are posted prominently at the following places to prohibit smoking, and the use of naked lights, except in places authorised by the master of the vessel:
    - (i) on both sides of the deck of the vessel; and
    - (ii) at the forward and after end of each hold or compartment containing dangerous goods;
  - (i) an efficient anchor and cable is at all times ready to be released or cast away and, in the case of an anchor, power is available to weigh anchor immediately if required;
  - (j) no radio communication device or electronic equipment is permitted in any hold or compartment containing First Schedule dangerous goods;
  - (k) no fire alarm point or emergency call box is located where it is likely to be rendered inactive by an explosion;
  - (l) any gear required to be used in any operation involved in the loading or discharging of dangerous goods is —
    - (i) in good order and condition;
    - (ii) of sufficient strength; and
    - (iii) suitable in all other respects for the operation;
  - (m) all reasonable precautions are taken to prevent damage occurring to any package or freight container containing dangerous goods;
  - (n) the dangerous goods are not handled in weather conditions which may seriously increase the hazards presented by such goods; and
  - (o) no person, who is under the influence of alcohol or drugs to such an extent that his judgment or actions are impaired, is

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allowed to participate in any operation involving the handling of dangerous goods or be present in the immediate areas where the dangerous goods are being transported or handled.

### **Carriage of dangerous goods in passenger vessels**

**56.** No person shall cause or permit dangerous goods to be taken on board a passenger vessel for carriage in that vessel if the dangerous goods are of a kind not recommended for such carriage by IMO.

### **Dangerous goods to be removed from landing place without delay**

**57.** The Port Master and the terminal manager may each, in his discretion —

- (a) take such steps to guard, remove, destroy or otherwise dispose of any dangerous goods that are not removed from, or not loaded onto, a vessel as are provided for in these Regulations; and
- (b) recover the expenses of so doing from the owner, agent or master of the vessel as a debt.

### **Priority for loading and discharging First Schedule dangerous goods other than explosives**

**58.** The owner, agent or master of a vessel shall ensure that First Schedule dangerous goods —

- (a) are discharged from a vessel before any other goods on board the vessel, except explosives, are discharged; and
- (b) are loaded on board the vessel after the completion of all other loading operations except for the loading of explosives.

### **Dangerous goods not permitted in wharf unless properly described**

**59.** No person shall cause or permit dangerous goods to pass over the premises of a wharf unless the contents of each package are packed and labelled in accordance with the recommendations of IMO.

### **Vessel with leaking or damaged receptacle containing dangerous goods on board**

**60.—(1)** No person shall cause or permit a vessel which has on board a leaking or damaged receptacle containing dangerous goods

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to enter the port unless he has obtained the permission of the Port Master.

(2) The Port Master may, in granting his permission, impose such conditions as he thinks fit.

### **Defective or damaged receptacles**

**61.**—(1) No person shall cause or permit defective or damaged receptacles containing dangerous goods to be placed on any vessel or wharf unless he has obtained the permission of the Port Master.

(2) The Port Master may, in granting his permission, impose such conditions as he thinks fit.

### **Procedure upon discovery of leaking or damaged receptacle on vessel**

**62.** The owner, agent or master of any vessel in which there is a leaking or damaged receptacle containing dangerous goods shall —

- (a) ensure that all loading and discharging operations cease immediately on discovery of the leak or damage;
- (b) inform the Port Master of the leaking or damaged receptacle as soon as possible; and
- (c) comply with all directions of the Port Master and the terminal manager relating to the handling and storage of the leaking or damaged receptacle.

### **Inspection of packages of dangerous goods**

**63.** Where an authorised officer requires a package of dangerous goods to be opened for inspection, the owner, agent or master of the vessel shall take the package on deck for the inspection and thereafter refasten the package and restow it without delay after the examination.

### **Powers to stop operations**

**64.** The Port Master, a terminal manager, a police officer, an Inspector of Explosives or an Inspector of Dangerous Goods may —

- (a) order a complete stoppage of all movement of dangerous goods on board a vessel if, in his opinion, any action is being taken that is hazardous or in any way contrary to any provision of this Part; and
- (b) seek such assistance as is necessary to enforce the order.

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**Continuous supervision of harbour craft**

**65.**—(1) The owner, agent or master of a harbour craft that is carrying, loading or discharging dangerous goods shall ensure that the harbour craft is, at all material times, continuously under the control of a person appointed by the owner, agent or master of the harbour craft and who is fully conversant with these Regulations.

(2) The person appointed by the owner, agent or master shall ensure that all persons concerned with the carriage, loading or discharging of dangerous goods into or from a harbour craft comply with these Regulations in so far as these Regulations apply to those operations.

**Unauthorised person prohibited on board harbour craft**

**66.** Where dangerous goods are carried on a harbour craft, the person controlling, or in charge of, the harbour craft shall not permit any person, other than a representative of the Authority, if any, or a crew member authorised by the owner of the harbour craft to remain on board the harbour craft.

**Prohibition on possession of means of ignition**

**67.** No person shall have in his possession any of the following items in any harbour craft carrying, or being prepared to carry, dangerous goods of a flammable nature:

- (a) any matches, cigarette lighter or material that may be used for smoking;
- (b) any other means of ignition.

**Safe towage distance**

**68.** Where a harbour craft is carrying First Schedule dangerous goods and is under tow astern by another vessel, the person controlling, or in charge of, the towing vessel shall ensure that the harbour craft is towed at a safe distance from the towing vessel.

**Appointment of Inspectors of Dangerous Goods**

**69.** The Authority may appoint Inspectors of Dangerous Goods who may board any vessel having dangerous goods on board, or being prepared to carry dangerous goods, for the purpose of —

- (a) examining the vessel, or the vessel's cargo; or
- (b) taking samples of the dangerous goods.

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**Handling of First Schedule dangerous goods during bunkering operations**

**70.**—(1) No person shall cause or permit First Schedule dangerous goods to be loaded or discharged while bunkering is in progress.

(2) No person shall cause or permit bunkering operations to be carried out while First Schedule dangerous goods are handled unless adequate precautions are taken to prevent petroleum vapour from reaching the place in which dangerous goods are stowed.

**Prohibition of repair work**

**71.**—(1) No person shall cause or permit repair work of any kind to be carried out in a hold of a vessel if the hold contains dangerous goods, unless he has obtained the permission of the Port Master.

(2) No person shall cause or permit —

- (a) repair work which involves welding, burning or riveting; or
- (b) any other operation creating a risk of fire,

to be carried out on board any vessel when dangerous goods are on board the vessel unless he has obtained the permission of the Port Master.

(3) The Port Master may, in granting his permission under paragraph (1) or (2), impose such conditions as he thinks fit.

**Additional requirements for arms and explosives**

**72.**—(1) The provisions of this regulation shall apply where any arms or explosives are carried on board a vessel or are being loaded onto or discharged from a vessel.

(2) The owner, agent or master of a vessel, and any person engaged in the carrying or loading of any arms or explosives onto the vessel (other than safety ammunition) which he knows or ought to know present a serious risk when carried on board the vessel as cargo shall ensure that the arms or explosives are not taken on board the vessel unless the arms or explosives are —

- (a) stowed in an approved magazine that is kept securely closed while the vessel is at sea;
- (b) effectively separated from detonators; and

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- (c) stowed in a compartment in which all electrical apparatus and cables that are present in the compartment are of such design and used in such manner as to minimise the risk of fire or explosion.
- (3) The owner, agent or master of a vessel entering the port shall —
- (a) require every person on board who possesses arms or explosives to deposit the arms or explosives with the owner, agent or master of the vessel, as the case may be;
  - (b) in the case of arms or explosives belonging to a person disembarking in Singapore, as soon as possible after arrival, deliver the arms or explosives to a police officer not below the rank of sergeant who shall deposit the arms or explosives immediately with the Licensing Officer appointed under section 4 of the Arms and Explosives Act (Cap. 13); and
  - (c) in the case of arms or explosives belonging to a person not disembarking in Singapore, deposit or place the arms or explosives in an approved strong-room or safe on board the vessel and keep the arms or explosives there until the vessel leaves the port.
- (4) The owner, agent or master of a harbour craft on which explosives are carried and any person engaged in the carrying or loading of arms or explosives onto the harbour craft shall ensure that the following substances and articles are not carried on board the harbour craft:
- (a) bi-sulphide of carbon, petroleum, paraffin, naphtha or other mineral oil;
  - (b) spirit or any liquid or substance liable to give off flammable vapour;
  - (c) any substance liable to spontaneous ignition;
  - (d) any article which in the opinion of the Port Master, an authorised officer or an Inspector of Explosives as conveyed to the owner, agent or master or the person engaged in the carrying or loading of explosives, is liable to cause fire or explosion; or
  - (e) any other goods or articles except —
    - (i) such articles as may be necessary for ensuring the safety of the goods and the harbour craft;
    - (ii) food which does not require cooking; and

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(iii) clothing required by a person on board the vessel for his personal use.

(5) The owner, agent or master of a harbour craft and any person engaged in the carrying or loading of arms or explosives onto the harbour craft shall ensure that no fulminate, ammunition (which contains its own means of ignition) or fireworks shall be carried on board the harbour craft unless —

- (a) the fulminate, ammunition or fireworks are separated from any explosives that are not of the same class so as to prevent a fire or explosion occurring in one explosive from spreading to the other substances; and
- (b) the separation is made to the satisfaction of the Port Master, an authorised officer or an Inspector of Explosives.

(6) The owner, agent or master of a harbour craft onto or from which explosives are loaded, discharged or conveyed and any person engaged in the carrying or loading of arms or explosives onto the harbour craft shall ensure that, except with the written permission of the Port Master, no goods other than explosives shall be carried on board the harbour craft.

(7) The owner, agent or master of a vessel and any person engaged in the carrying, loading or discharging of arms and explosives onto or from the vessel shall ensure that no radio communication device or any electronic equipment is operated when —

- (a) explosives are handled; or
- (b) compartments containing explosives are uncovered.

(8) The owner, agent or master of a vessel and any person engaged in the carrying or loading of arms or explosives onto the vessel shall ensure that the explosives under various hazard divisions and the maximum quantity of such explosives that are carried on board the vessel at an explosives anchorage or at a wharf shall be as specified by the Port Master by notification in the *Gazette*.

(9) If, through accident or in case of emergency, an explosive is dropped into the sea, the master of the vessel from which the explosive was dropped shall —

- (a) take immediate steps to recover the explosive by the safest possible means; and
- (b) inform the Port Master of the explosive dropping into the sea immediately by the most direct means.

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(10) The owner, agent or master of any vessel carrying explosives shall ensure that —

- (a) efficient lightning conductors shall be fitted to all wooden and steel masts on the vessel where the electrical conductivity of the rigging is defective; and
- (b) in the case of steel ships, steel masts shall be bonded to the hull or be provided with efficient lightning conductors.

### **Limitation of maximum quantities of First Schedule dangerous goods**

**73.** Notwithstanding any of the provisions of this Part —

- (a) First Schedule dangerous goods in such quantity as may be specified by the Port Master by notification in the *Gazette* may remain on board a vessel within the port limits; and
- (b) such goods may, whenever it is necessary, be loaded, discharged or otherwise handled at any approved wharf.

## PART III

### GENERAL

### **Dangerous cargoes to be handled only in approved wharves**

**74.** No person shall undertake, cause or permit any activity relating to dangerous cargoes at any wharf unless such wharf is an approved wharf.

### **Notices, approvals, permissions, submissions and other communication**

**75.** In these Regulations, unless the context otherwise requires, any notice, approval, permission, submission or any other communication may be given, made or conveyed in such manner and by such means, including electronic means, as the Port Master may determine.

### **Port Master may permit use of vessel or port otherwise than in accordance with these Regulations**

**76.—**(1) The Port Master may, in his discretion, permit —

- (a) a person to use a vessel or the port; or
- (b) a vessel to be used within the port,

otherwise than in accordance with these Regulations.

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(2) The Port Master may, in granting his permission under paragraph (1), impose such terms and conditions as he thinks fit.

(3) Notwithstanding anything in these Regulations, the Port Master may impose any additional conditions for the loading, discharging, transportation, storage, deposit or handling of dangerous goods as he thinks fit in the circumstances of each case.

### **Responsibility of owner, agent or master**

77. Notwithstanding anything in these Regulations, the owner, agent or master of a vessel shall be responsible for the observance of, and compliance with, these Regulations in so far as they relate to the vessel.

### **General penalty**

78. Any person who —

- (a) without lawful excuse fails to comply with the requirements of any notice served on him; or
- (b) contravenes any of the provisions of these Regulations, or any condition or direction issued thereunder,

shall be guilty of an offence and shall be liable on conviction, where no penalty is expressly provided, to a fine not exceeding \$5,000 and, in the case of a continuing offence, to a further fine not exceeding \$1,000 for every day or part thereof during which the offence continues after conviction.

### **Application to vessels belonging to Singapore Armed Forces**

79. Regulations 48 and 52 shall apply to a vessel belonging to the Singapore Armed Forces and the officer in command of such a vessel shall ensure that the requirements of those regulations are complied with.

### **Revocation**

80. The Maritime and Port Authority of Singapore (Dangerous Goods, Petroleum and Explosives) Regulations (Rg 2) are revoked.

### **Savings**

81.—(1) Any notice, order, permission, approval or certificate given, issued or made under the revoked Maritime and Port Authority of

Singapore (Dangerous Goods, Petroleum and Explosives) Regulations (Rg 2) that is in force immediately before 31st January 2005 and that could have been given, issued or made under a corresponding provision of these Regulations shall be deemed to have been given, issued or made under the corresponding provision of these Regulations.

(2) Any appointment or authorisation of a person under the revoked Maritime and Port Authority of Singapore (Dangerous Goods, Petroleum and Explosives) Regulations that is in force immediately before 31st January 2005 and that could have been made or given under a corresponding provision of these Regulations shall be deemed to have been made or given under the corresponding provision of these Regulations.

## FIRST SCHEDULE

Regulation 2 (1)

## DANGEROUS GOODS

<i>S/No.</i>	<i>Substance/Article</i>	<i>IMO Class</i>	<i>UN No.</i>
1	SAMPLES, EXPLOSIVE other than initiating explosive	1	0190
2	DIAZODINITROPHENOL, WETTED with not less than 40% water or mixture of alcohol and water, by mass	1.1A	0074
3	GUANYL NITROSAMINO GUANYLIDENE HYDRAZINE, WETTED with not less than 30% water, by mass	1.1A	0113
4	GUANYL NITROSAMINO GUANYLTETRAZENE, WETTED with not less than 30% water or mixture of alcohol and water, by mass	1.1A	0114
5	TETRAZENE, WETTED with not less than 30% water or mixture of alcohol and water, by mass	1.1A	0114
6	LEAD AZIDE, WETTED with not less than 20% water or mixture of alcohol and water, by mass	1.1A	0129
7	LEAD STYPHNATE, WETTED with not less than 20% water or mixture of alcohol and water, by mass	1.1A	0130
8	LEAD TRINITRORESORCINATE, WETTED with not less than 20% water or mixture of alcohol and water, by mass	1.1A	0130
9	MERCURY FULMINATE, WETTED with not less than 20% water or mixture of alcohol and water, by mass	1.1A	0135
10	BARIUM AZIDE dry or containing less than 50% water, by mass	1.1A	0224

FIRST SCHEDULE — *continued*

<i>S/No.</i>	<i>Substance/Article</i>	<i>IMO Class</i>	<i>UN No.</i>
11	SUBSTANCES, EXPLOSIVE, N.O.S.	1.1A	0473
12	DETONATORS, NON-ELECTRIC for blasting	1.1B	0029
13	DETONATORS, ELECTRIC for blasting	1.1B	0030
14	DETONATORS FOR AMMUNITION	1.1B	0073
15	FUZES, DETONATING	1.1B	0106
16	BOOSTERS, WITH DETONATOR	1.1B	0225
17	DETONATOR ASSEMBLIES, NON-ELECTRIC for blasting	1.1B	0360
18	PRIMERS, CAP TYPE	1.1B	0377
19	COMPONENTS, EXPLOSIVE TRAIN, N.O.S.	1.1B	0461
20	POWDER, SMOKELESS	1.1C	0160
21	CHARGES, PROPELLING	1.1C	0271
22	CHARGES, PROPELLING, FOR CANNON	1.1C	0279
23	ROCKET MOTORS	1.1C	0280
24	CARTRIDGES FOR WEAPONS, BLANK	1.1C	0326
25	POWDER CAKE, WETTED with not less than 17% alcohol, by mass	1.1C	0433
26	POWDER PASTE, WETTED with not less than 17% alcohol, by mass	1.1C	0433
27	ARTICLES, EXPLOSIVE, N.O.S.	1.1C	0462
28	SUBSTANCES, EXPLOSIVE, N.O.S.	1.1C	0474
29	PROPELLANT, LIQUID	1.1C	0497
30	PROPELLANT, SOLID	1.1C	0498
31	AMMONIUM PICRATE, dry or wetted with less than 10% water, by mass	1.1D	0004
32	BLACK POWDER, granular, or as a meal	1.1D	0027
33	GUNPOWDER, granular, or as a meal	1.1D	0027
34	BLACK POWDER IN PELLETS	1.1D	0028
35	BLACK POWDER, COMPRESSED	1.1D	0028

FIRST SCHEDULE — *continued*

<i>S/No.</i>	<i>Substance/Article</i>	<i>IMO Class</i>	<i>UN No.</i>
36	GUNPOWDER IN PELLETS	1.1D	0028
37	GUNPOWDER, COMPRESSED	1.1D	0028
38	BOMBS, with bursting charge	1.1D	0034
39	BOMBS, PHOTO-FLASH	1.1D	0038
40	BOOSTERS, without detonator	1.1D	0042
41	BURSTERS, explosive	1.1D	0043
42	CHARGES, DEMOLITION	1.1D	0048
43	CHARGES, DEPTH	1.1D	0056
44	CHARGES, SHAPED, without detonator	1.1D	0059
45	CHARGES, SUPPLEMENTARY, EXPLOSIVE	1.1D	0060
46	CORD, DETONATING, flexible	1.1D	0065
47	CYCLONITE, WETTED with not less than 15% water, by mass	1.1D	0072
48	CYCLOTRIMETHYLENETRINITRAMINE, WETTED with not less than 15% water, by mass	1.1D	0072
49	HEXOGEN, WETTED with not less than 15% water, by mass	1.1D	0072
50	RDX, WETTED with not less than 15% water, by mass	1.1D	0072
51	DIETHYLENEGLYCOLDINITRATE, DESENSITIZED with not less than 25% non-volatile water-insoluble phlegmatizer, by mass	1.1D	0075
52	DINITROPHENOL, dry or wetted with less than 5% water, by mass	1.1D	0076
53	DINITRORESORCINOL, dry or wetted with less than 15% water, by mass	1.1D	0078
54	DIPICRYLAMINE	1.1D	0079
55	HEXANITRODIPHENYLAMINE	1.1D	0079
56	HEXYL	1.1D	0079
57	EXPLOSIVE, BLASTING, TYPE A	1.1D	0081
58	EXPLOSIVE, BLASTING, TYPE B	1.1D	0082

FIRST SCHEDULE — *continued*

<i>S/No.</i>	<i>Substance/Article</i>	<i>IMO Class</i>	<i>UN No.</i>
59	EXPLOSIVE, BLASTING, TYPE C	1.1D	0083
60	EXPLOSIVE, BLASTING, TYPE D	1.1D	0084
61	FRACTURING DEVICES, EXPLOSIVE for oil wells, without detonator	1.1D	0099
62	HEXOLITE (HEXOTOL) dry or wetted with less than 15% water, by mass	1.1D	0118
63	JET PERFORATING GUNS, CHARGED oil well, without detonator	1.1D	0124
64	MANNITOL HEXANITRATE, WETTED with not less than 40% water or mixture of alcohol and water, by mass	1.1D	0133
65	NITROMANNITE, WETTED with not less than 40% water or mixture of alcohol and water, by mass	1.1D	0133
66	MINES, with bursting charge	1.1D	0137
67	NITROGLYCERIN, DESENSITIZED with not less than 40% non-volatile water-insoluble phlegmatizer, by mass	1.1D	0143
68	NITROGLYCERIN SOLUTION IN ALCOHOL with more than 1% but not more than 10% nitroglycerin	1.1D	0144
69	NITROSTARCH dry or wetted with less than 20% water, by mass	1.1D	0146
70	NITRO UREA	1.1D	0147
71	PENTAERYTHRITE TETRANITRATE (PENTAERYTHRITOL TETRANITRATE; PETN), DESENSITIZED with not less than 15% phlegmatizer, by mass	1.1D	0150
72	PENTAERYTHRITE TETRANITRATE (PENTAERYTHRITOL TETRANITRATE; PETN), WETTED with not less than 25% water, by mass	1.1D	0150
73	PENTOLITE dry or wetted with less than 15% water, by mass	1.1D	0151
74	PICRAMIDE	1.1D	0153
75	TRINITROANILINE	1.1D	0153
76	PICRIC ACID dry or wetted with less than 30% water, by mass	1.1D	0154

FIRST SCHEDULE — *continued*

<i>S/No.</i>	<i>Substance/Article</i>	<i>IMO Class</i>	<i>UN No.</i>
77	TRINITROPHENOL dry or wetted with less than 30% water, by mass	1.1D	0154
78	PICRYL CHLORIDE	1.1D	0155
79	TRINITROCHLOROBENZENE	1.1D	0155
80	PROJECTILES with bursting charge	1.1D	0168
81	TETRANITROANILINE	1.1D	0207
82	TETRYL	1.1D	0208
83	TRINITROPHENYLMETHYLNITRAMINE	1.1D	0208
84	TNT dry or wetted with less than 30% water, by mass	1.1D	0209
85	TRINITROTOLUENE dry or wetted with less than 30% water, by mass	1.1D	0209
86	TRINITROANISOLE	1.1D	0213
87	TRINITROBENZENE dry or wetted with less than 30% water, by mass	1.1D	0214
88	TRINITROBENZOIC ACID dry or wetted with less than 30% water, by mass	1.1D	0215
89	TRINITRO- <i>meta</i> -CRESOL	1.1D	0216
90	TRINITRONAPHTHALENE	1.1D	0217
91	TRINITROPHENETOLE	1.1D	0218
92	STYPHNIC ACID dry or wetted with less than 20% water or mixture of alcohol and water, by mass	1.1D	0219
93	TRINITRORESORCINOL dry or wetted with less than 20% water or mixture of alcohol and water, by mass	1.1D	0219
94	UREA NITRATE, dry or wetted, with less than 20% water, by mass	1.1D	0220
95	WARHEADS, TORPEDO with bursting charge	1.1D	0221
96	AMMONIUM NITRATE with more than 0.2% by mass of combustible substances, including any organic substance calculated as carbon, to the exclusion of any other added substances	1.1D	0222

FIRST SCHEDULE — *continued*

<i>S/No.</i>	<i>Substance/Article</i>	<i>IMO Class</i>	<i>UN No.</i>
97	AMMONIUM NITRATE FERTILIZER which is more liable to explode than ammonium nitrate with 0.2% combustible substances, including any organic substance calculated as carbon, to the exclusion of any other added substance	1.1D	0223
98	CYCLOTETRAMETHYLENETETRANITRAMINE, WETTED with not less than 15% water, by mass	1.1D	0226
99	HMX, WETTED with not less than 15% water, by mass	1.1D	0226
100	OCTOGEN, WETTED with not less than 15% water, by mass	1.1D	0226
101	EXPLOSIVE, BLASTING, TYPE E	1.1D	0241
102	OCTOL dry or wetted with less than 15% water, by mass	1.1D	0266
103	OCTOLITE dry or wetted with less than 15% water, by mass	1.1D	0266
104	NITROGUANIDINE dry or wetted with less than 20% water, by mass	1.1D	0282
105	PICRITE dry or wetted with less than 20% water, by mass	1.1D	0282
106	GRENADES hand or rifle, with bursting charge	1.1D	0284
107	WARHEADS, ROCKET with bursting charge	1.1D	0286
108	CHARGES, SHAPED, FLEXIBLE, LINEAR	1.1D	0288
109	CORD, DETONATING metal clad	1.1D	0290
110	FUSE, DETONATING metal clad	1.1D	0290
111	NITROCELLULOSE dry or wetted with less than 25% alcohol, by mass	1.1D	0340
112	NITROCELLULOSE dry or wetted with less than 25% water, by mass	1.1D	0340
113	NITROCELLULOSE unmodified or plasticized with less than 18% plasticizing substance, by mass	1.1D	0341
114	5-NITROBENZOTRIAZOL	1.1D	0385
115	TRINITROBENZENESULPHONIC ACID	1.1D	0386
116	TRINITROFLUORENONE	1.1D	0387
117	TNT AND HEXANITROSTILBENE, MIXTURES	1.1D	0388

FIRST SCHEDULE — *continued*

<i>S/No.</i>	<i>Substance/Article</i>	<i>IMO Class</i>	<i>UN No.</i>
118	TNT AND TRINITROBENZENE, MIXTURES	1.1D	0388
119	TRINITROTOLUENE AND HEXANITROSTILBENE, MIXTURES	1.1D	0388
120	TRINITROTOLUENE AND TRINITROBENZENE MIXTURES	1.1D	0388
121	TNT MIXTURES CONTAINING TRINITROBENZENE AND HEXANITROSTILBENE	1.1D	0389
122	TRINITROTOLUENE MIXTURES CONTAINING TRINITROBENZENE AND HEXANITROSTILBENE	1.1D	0389
123	TRITONAL	1.1D	0390
124	CYCLOTRIMETHYLENETRINITRAMINE (CYCLONITE; HEXOGEN; RDX) AND CYCLOTETRAMETHYLENETETRA-NITRAMINE (HMX; OCTOGEN) MIXTURE, WETTED with not less than 15% water, by mass	1.1D	0391
125	CYCLOTRIMETHYLENETRINITRAMINE (CYCLONITE; HEXOGEN; RDX) AND CYCLOTETRAMETHYLENETETRA-NITRAMINE (HMX; OCTOGEN) MIXTURE, DESENSITIZED with not less than 10% phlegmatizer, by mass	1.1D	0391
126	HEXANITROSTILBENE	1.1D	0392
127	HEXOTONAL	1.1D	0393
128	STYPHNIC ACID, WETTED with not less than 20% water, or mixture of alcohol and water, by mass	1.1D	0394
129	TRINITRORESORCINOL, WETTED with not less than 20% water, or mixture of alcohol and water, by mass	1.1D	0394
130	DIPICRYL SULPHIDE dry or wetted with less than 10% water, by mass	1.1D	0401
131	AMMONIUM PERCHLORATE	1.1D	0402
132	FUZES, DETONATING with protective features	1.1D	0408
133	PENTAERYTHRITOL TETRANITRATE with not less than 7% wax, by mass	1.1D	0411
134	PENTAERYTHRITOL TETRANITRATE with not less than 7% wax, by mass	1.1D	0411

FIRST SCHEDULE — *continued*

<i>S/No.</i>	<i>Substance/Article</i>	<i>IMO Class</i>	<i>UN No.</i>
135	PETN with not less than 7% wax, by mass	1.1D	0411
136	CHARGES, EXPLOSIVE, COMMERCIAL without detonator	1.1D	0442
137	TORPEDOES with bursting charge	1.1D	0451
138	CHARGES, BURSTING, PLASTICS-BONDED	1.1D	0457
139	ARTICLES, EXPLOSIVE, N.O.S.	1.1D	0463
140	SUBSTANCES, EXPLOSIVE, N.O.S.	1.1D	0475
141	CYCLONITE, DESENSITIZED	1.1D	0483
142	CYCLOTRIMETHYLENETRINITRAMINE, DESENSITIZED	1.1D	0483
143	HEXOGEN, DESENSITIZED	1.1D	0483
144	RDX, DESENSITIZED	1.1D	0483
145	CYCLOTETRAMETHYLENETETRANITRAMINE, DESENSITIZED	1.1D	0484
146	HMX, DESENSITIZED	1.1D	0484
147	OCTOGEN, DESENSITIZED	1.1D	0484
148	DINGU	1.1D	0489
149	DINITROGLYCOLURIL	1.1D	0489
150	NITROTRIAZOLONE	1.1D	0490
151	NTO	1.1D	0490
152	OCTONAL	1.1D	0496
153	1H-TETRAZOLE	1.1D	0504
154	CARTRIDGES FOR WEAPONS, with bursting charge	1.1E	0006
155	ROCKETS with bursting charge	1.1E	0181
156	TORPEDOES with bursting charge	1.1E	0329
157	SOUNDING DEVICES, EXPLOSIVE	1.1E	0374
158	ARTICLES, EXPLOSIVE, N.O.S.	1.1E	0464
159	CARTRIDGES FOR WEAPONS, with bursting charge	1.1F	0005
160	BOMBS, with bursting charge	1.1F	0033

FIRST SCHEDULE — *continued*

<i>S/No.</i>	<i>Substance/Article</i>	<i>IMO Class</i>	<i>UN No.</i>
161	BOMBS, PHOTO-FLASH	1.1F	0037
162	MINES, with bursting charge	1.1F	0136
163	PROJECTILES with bursting charge	1.1F	0167
164	ROCKETS with bursting charge	1.1F	0180
165	GRENADES hand or rifle, with bursting charge	1.1F	0292
166	SOUNDING DEVICES, EXPLOSIVE	1.1F	0296
167	TORPEDOES with bursting charge	1.1F	0330
168	WARHEADS, ROCKET with bursting charge	1.1F	0369
169	ARTICLES, EXPLOSIVE, N.O.S.	1.1F	0465
170	CARTRIDGES, FLASH	1.1G	0049
171	FLASH POWDER	1.1G	0094
172	IGNITERS	1.1G	0121
173	SIGNALS, RAILWAY TRACK, EXPLOSIVE	1.1G	0192
174	SIGNALS, DISTRESS, ship	1.1G	0194
175	SIGNALS, SMOKE	1.1G	0196
176	FIREWORKS	1.1G	0333
177	FLARES, SURFACE	1.1G	0418
178	FLARES, AERIAL	1.1G	0420
179	ARTICLES, PYROTECHNIC for technical purposes	1.1G	0428
180	SUBSTANCES, EXPLOSIVE, N.O.S.	1.1G	0476
181	ROCKETS, LIQUID FUELLED with bursting charge	1.1J	0397
182	BOMBS WITH FLAMMABLE LIQUID with bursting charge	1.1J	0399
183	TORPEDOES, LIQUID FUELLED with or without bursting charge	1.1J	0449
184	ARTICLES, EXPLOSIVE, N.O.S.	1.1L	0354
185	SUBSTANCES, EXPLOSIVE, N.O.S.	1.1L	0357
186	FUZES, DETONATING	1.2B	0107
187	BOOSTERS, WITH DETONATOR	1.2B	0268

FIRST SCHEDULE — *continued*

<i>S/No.</i>	<i>Substance/Article</i>	<i>IMO Class</i>	<i>UN No.</i>
188	DETONATORS FOR AMMUNITION	1.2B	0364
189	COMPONENTS, EXPLOSIVE TRAIN, N.O.S.	1.2B	0382
190	ROCKET MOTORS	1.2C	0281
191	CARTRIDGES FOR WEAPONS, INERT PROJECTILE	1.2C	0328
192	CARTRIDGES, POWER DEVICE	1.2C	0381
193	CARTRIDGES FOR WEAPONS, BLANK	1.2C	0413
194	CHARGES, PROPELLING, FOR CANNON	1.2C	0414
195	CHARGES, PROPELLING	1.2C	0415
196	ROCKETS with expelling charge	1.2C	0436
197	ARTICLES, EXPLOSIVE, N.O.S.	1.2C	0466
198	ROCKETS with inert head	1.2C	0502
199	BOMBS, with bursting charge	1.2D	0035
200	CORD, DETONATING, metal clad	1.2D	0102
201	FUSE, DETONATING, metal clad	1.2D	0102
202	MINES, with bursting charge	1.2D	0138
203	PROJECTILES with bursting charge	1.2D	0169
204	BOOSTERS without detonator	1.2D	0283
205	GRENADES hand or rifle, with bursting charge	1.2D	0285
206	WARHEADS, ROCKET with bursting charge	1.2D	0287
207	PROJECTILES with bursting or expelling charge	1.2D	0346
208	FUZES, DETONATING with protective features	1.2D	0409
209	CHARGES, SHAPED without detonator	1.2D	0439
210	CHARGES, EXPLOSIVE, COMMERCIAL without detonator	1.2D	0443
211	CHARGES, BURSTING, PLASTICS-BONDED	1.2D	0458
212	ARTICLES, EXPLOSIVE, N.O.S.	1.2D	0467
213	ROCKETS with bursting charge	1.2E	0182
214	CARTRIDGES FOR WEAPONS with bursting charge	1.2E	0321

FIRST SCHEDULE — *continued*

<i>S/No.</i>	<i>Substance/Article</i>	<i>IMO Class</i>	<i>UN No.</i>
215	SOUNDING DEVICES, EXPLOSIVE	1.2E	0375
216	ARTICLES, EXPLOSIVE, N.O.S.	1.2E	0468
217	CARTRIDGES FOR WEAPONS, with bursting charge	1.2F	0007
218	SOUNDING DEVICES, EXPLOSIVE	1.2F	0204
219	BOMBS with bursting charge	1.2F	0291
220	GRENADES hand or rifle, with bursting charge	1.2F	0293
221	MINES with bursting charge	1.2F	0294
222	ROCKETS with bursting charge	1.2F	0295
223	PROJECTILES with bursting charge	1.2F	0324
224	PROJECTILES with burster or expelling charge	1.2F	0426
225	ARTICLES, EXPLOSIVE, N.O.S.	1.2F	0469
226	AMMUNITION, INCENDIARY, with or without burster, expelling charge or propelling charge	1.2G	0009
227	AMMUNITION, SMOKE, with or without burster, expelling charge or propelling charge	1.2G	0015
228	AMMUNITION, TEAR-PRODUCING, with burster, expelling charge or propelling charge	1.2G	0018
229	BOMBS, PHOTO-FLASH	1.2G	0039
230	AMMUNITION, ILLUMINATING with or without burster, expelling charge or propelling charge	1.2G	0171
231	ROCKETS, LINE THROWING	1.2G	0238
232	SIGNALS, SMOKE	1.2G	0313
233	IGNITERS	1.2G	0314
234	FIREWORKS	1.2G	0334
235	GRENADES, PRACTICE hand or rifle	1.2G	0372
236	FLARES, SURFACE	1.2G	0419
237	FLARES, AERIAL	1.2G	0421
238	ARTICLES, PYROTECHNIC for technical purposes	1.2G	0429
239	PROJECTILES with burster or expelling charge	1.2G	0434

FIRST SCHEDULE — *continued*

<i>S/No.</i>	<i>Substance/Article</i>	<i>IMO Class</i>	<i>UN No.</i>
240	AMMUNITION, INCENDIARY, WHITE PHOSPHORUS with burster, expelling charge or propelling charge	1.2H	0243
241	AMMUNITION, SMOKE, WHITE PHOSPHORUS, with burster, expelling charge or propelling charge	1.2H	0245
242	ROCKET MOTORS, LIQUID FUELLED	1.2J	0395
243	ROCKETS, LIQUID FUELLED with bursting charge	1.2J	0398
244	BOMBS WITH FLAMMABLE LIQUID with bursting charge	1.2J	0400
245	AMMUNITION, TOXIC, with burster, expelling charge or propelling charge	1.2K	0020
246	CONTRIVANCES, WATER-ACTIVATED, with burster, expelling charge or propelling charge	1.2L	0248
247	ROCKET MOTORS, WITH HYPERGOLIC LIQUIDS with or without an expelling charge	1.2L	0322
248	ARTICLES, EXPLOSIVE, N.O.S.	1.2L	0355
249	SUBSTANCES, EXPLOSIVE, N.O.S.	1.2L	0358
250	ARTICLES, PYROPHORIC	1.2L	0380
251	DINITROPHENOLATES alkali metals, dry or wetted with less than 15% water, by mass	1.3C	0077
252	DEFLAGRATING METAL SALTS OF AROMATIC NITRO-DERIVATIVES, N.O.S.	1.3C	0132
253	POWDER CAKE, WETTED with not less than 25% water, by mass	1.3C	0159
254	POWDER PASTE, WETTED, with not less than 25% water, by mass	1.3C	0159
255	POWDER, SMOKELESS	1.3C	0161
256	ROCKETS with inert head	1.3C	0183
257	ROCKET MOTORS	1.3C	0186
258	SODIUM DINITRO- <i>ortho</i> -CRESOLATE dry or wetted with less than 15% water, by mass	1.3C	0234
259	SODIUM PICRAMATE dry or wetted with less than 20% water, by mass	1.3C	0235

FIRST SCHEDULE — *continued*

<i>S/No.</i>	<i>Substance/Article</i>	<i>IMO Class</i>	<i>UN No.</i>
260	ZIRCONIUM PICRAMATE dry or wetted with less than 20% water, by mass	1.3C	0236
261	CHARGES, PROPELLING, FOR CANNON	1.3C	0242
262	CHARGES, PROPELLING	1.3C	0272
263	CARTRIDGES, POWER DEVICE	1.3C	0275
264	CARTRIDGES, OIL WELL	1.3C	0277
265	CARTRIDGES FOR WEAPONS, BLANK	1.3C	0327
266	CARTRIDGES, SMALL ARMS, BLANK	1.3C	0327
267	NITROCELLULOSE, WETTED with not less than 25% alcohol, by mass	1.3C	0342
268	NITROCELLULOSE PLASTICIZED with not less than 18% plasticizing substance, by mass	1.3C	0343
269	DINITROBENZENE	1.3C	0406
270	CARTRIDGES FOR WEAPONS, INERT PROJECTILE	1.3C	0417
271	CARTRIDGES, SMALL ARMS	1.3C	0417
272	ROCKETS with expelling charge	1.3C	0437
273	CASES, COMBUSTIBLE, EMPTY, WITHOUT PRIMER	1.3C	0447
274	ARTICLES, EXPLOSIVE, N.O.S.	1.3C	0470
275	SUBSTANCES, EXPLOSIVE, N.O.S.	1.3C	0477
276	PROPELLANT, LIQUID	1.3C	0495
277	PROPELLANT, SOLID	1.3C	0499
278	AMMUNITION, INCENDIARY, with or without burster, expelling charge or propelling charge	1.3G	0010
279	AMMUNITION, SMOKE, with or without burster, expelling charge or propelling charge	1.3G	0016
280	AMMUNITION, TEAR-PRODUCING, with burster, expelling charge or propelling charge	1.3G	0019
281	CARTRIDGES, FLASH	1.3G	0050
282	CARTRIDGES, SIGNAL	1.3G	0054

FIRST SCHEDULE — *continued*

<i>S/No.</i>	<i>Substance/Article</i>	<i>IMO Class</i>	<i>UN No.</i>
283	FLARES, SURFACE	1.3G	0092
284	FLARES, AERIAL	1.3G	0093
285	FUSE, NON-DETONATING	1.3G	0101
286	SIGNALS, DISTRESS, ship	1.3G	0195
287	TRACERS FOR AMMUNITION	1.3G	0212
288	ROCKETS, LINE THROWING	1.3G	0240
289	AMMUNITION, ILLUMINATING with or without burster, expelling charge or propelling charge	1.3G	0254
290	BOMBS, PHOTO-FLASH	1.3G	0299
291	FLASH POWDER	1.3G	0305
292	IGNITERS	1.3G	0315
293	FUZES, IGNITING	1.3G	0316
294	GRENADES, PRACTICE hand or rifle	1.3G	0318
295	PRIMERS, TUBULAR	1.3G	0319
296	FIREWORKS	1.3G	0335
297	PROJECTILES inert, with tracer	1.3G	0424
298	ARTICLES, PYROTECHNIC for technical purposes	1.3G	0430
299	SUBSTANCES, EXPLOSIVE, N.O.S.	1.3G	0478
300	SIGNALS, SMOKE	1.3G	0487
301	AMMUNITION, PRACTICE	1.3G	0488
302	SIGNALS, RAILWAY TRACK, EXPLOSIVE	1.3G	0492
303	AMMUNITION, INCENDIARY, WHITE PHOSPHORUS with burster, expelling charge or propelling charge	1.3H	0244
304	AMMUNITION, SMOKE, WHITE PHOSPHORUS, with burster, expelling charge or propelling charge	1.3H	0246
305	AMMUNITION, INCENDIARY liquid or gel, with burster, expelling charge or propelling charge	1.3J	0247
306	ROCKET MOTORS, LIQUID FUELLED	1.3J	0396
307	TORPEDOES, LIQUID FUELLED with inert head	1.3J	0450

FIRST SCHEDULE — *continued*

<i>S/No.</i>	<i>Substance/Article</i>	<i>IMO Class</i>	<i>UN No.</i>
308	AMMUNITION, TOXIC, with burster, expelling charge or propelling charge	1.3K	0021
309	CONTRIVANCES, WATER-ACTIVATED, with burster, expelling charge or propelling charge	1.3L	0249
310	ROCKET MOTORS, WITH HYPERGOLIC LIQUIDS with or without an expelling charge	1.3L	0250
311	ARTICLES, EXPLOSIVE, N.O.S.	1.3L	0356
312	SUBSTANCES, EXPLOSIVE, N.O.S.	1.3L	0359
313	DETONATORS, ELECTRIC for blasting	1.4B	0255
314	FUZES, DETONATING	1.4B	0257
315	DETONATORS, NON-ELECTRIC for blasting	1.4B	0267
316	ARTICLES, EXPLOSIVE, N.O.S.	1.4B	0350
317	DETONATOR ASSEMBLIES, NON-ELECTRIC for blasting	1.4B	0361
318	DETONATORS FOR AMMUNITION	1.4B	0365
319	PRIMERS, CAP TYPE	1.4B	0378
320	COMPONENTS, EXPLOSIVE TRAIN, N.O.S.	1.4B	0383
321	CARTRIDGES, POWER DEVICE	1.4C	0276
322	CARTRIDGES, OIL WELL	1.4C	0278
323	CARTRIDGES FOR WEAPONS, BLANK	1.4C	0338
324	CARTRIDGES, SMALL ARMS, BLANK	1.4C	0338
325	CARTRIDGES FOR WEAPONS, INERT PROJECTILE	1.4C	0339
326	CARTRIDGES, SMALL ARMS	1.4C	0339
327	ARTICLES, EXPLOSIVE, N.O.S.	1.4C	0351
328	CASES, CARTRIDGE, EMPTY, WITH PRIMER	1.4C	0379
329	TETRAZOL-1-ACETIC ACID	1.4C	0407
330	ROCKETS with expelling charge	1.4C	0438
331	CASES, COMBUSTIBLE, EMPTY, WITHOUT PRIMER	1.4C	0446

FIRST SCHEDULE — *continued*

<i>S/No.</i>	<i>Substance/Article</i>	<i>IMO Class</i>	<i>UN No.</i>
332	5-MERCAPTOTETRAZOL-1-ACETIC ACID	1.4C	0448
333	SUBSTANCES, EXPLOSIVE, N.O.S.	1.4C	0479
334	CHARGES, PROPELLING	1.4C	0491
335	PROPELLANT, SOLID	1.4C	0501
336	CORD, DETONATING, MILD EFFECT, metal clad	1.4D	0104
337	FUSE, DETONATING, MILD EFFECT, metal clad	1.4D	0104
338	CHARGES, SHAPED, FLEXIBLE, LINEAR	1.4D	0237
339	CORD, DETONATING flexible	1.4D	0289
340	PROJECTILES with bursting charge	1.4D	0344
341	PROJECTILES with bursting or expelling charge	1.4D	0347
342	ARTICLES, EXPLOSIVE, N.O.S.	1.4D	0352
343	WARHEADS, ROCKET with burster or expelling charge	1.4D	0370
344	FUZES, DETONATING with protective features	1.4D	0410
345	CHARGES, SHAPED without detonator	1.4D	0440
346	CHARGES, EXPLOSIVE, COMMERCIAL without detonator	1.4D	0444
347	CHARGES, BURSTING, PLASTICS-BONDED	1.4D	0459
348	SUBSTANCES, EXPLOSIVE, N.O.S.	1.4D	0480
349	JET PERFORATING GUNS, CHARGED oil well, without detonator	1.4D	0494
350	CARTRIDGES FOR WEAPONS with bursting charge	1.4E	0412
351	ARTICLES, EXPLOSIVE, N.O.S.	1.4E	0471
352	CARTRIDGES FOR WEAPONS with bursting charge	1.4F	0348
353	WARHEADS, ROCKET with burster or expelling charge	1.4F	0371
354	PROJECTILES with burster or expelling charge	1.4F	0427
355	ARTICLES, EXPLOSIVE, N.O.S.	1.4F	0472
356	CORD, IGNITER	1.4G	0066
357	FUSE, IGNITER tubular, metal clad	1.4G	0103
358	SIGNAL DEVICES, HAND	1.4G	0191

FIRST SCHEDULE — *continued*

<i>S/No.</i>	<i>Substance/Article</i>	<i>IMO Class</i>	<i>UN No.</i>
359	SIGNALS, SMOKE	1.4G	0197
360	AMMUNITION, ILLUMINATING with or without burster, expelling charge or propelling charge	1.4G	0297
361	AMMUNITION, INCENDIARY with or without burster, expelling charge or propelling charge	1.4G	0300
362	AMMUNITION, TEAR-PRODUCING with burster, expelling charge or propelling charge	1.4G	0301
363	AMMUNITION, SMOKE with or without burster, expelling charge or propelling charge	1.4G	0303
364	TRACERS FOR AMMUNITION	1.4G	0306
365	CARTRIDGES, SIGNAL	1.4G	0312
366	FUZES, IGNITING	1.4G	0317
367	PRIMERS, TUBULAR	1.4G	0320
368	IGNITERS	1.4G	0325
369	FIREWORKS	1.4G	0336
370	ARTICLES, EXPLOSIVE, N.O.S.	1.4G	0353
371	AMMUNITION, PRACTICE	1.4G	0362
372	AMMUNITION, PROOF	1.4G	0363
373	FLARES, AERIAL	1.4G	0403
374	PROJECTILES inert, with tracer	1.4G	0425
375	ARTICLES, PYROTECHNIC for technical purposes	1.4G	0431
376	PROJECTILES with burster or expelling charge	1.4G	0435
377	GRENADES, PRACTICE hand or rifle	1.4G	0452
378	ROCKETS, LINE THROWING	1.4G	0453
379	SUBSTANCES, EXPLOSIVE, N.O.S.	1.4G	0485
380	SIGNALS, RAILWAY TRACK, EXPLOSIVE	1.4G	0493
381	AIR BAG INFLATORS PYROTECHNIC or AIR BAG MODULES PYROTECHNIC or SEAT-BELT PRETENSIONERS PYROTECHNIC	1.4G	0503

FIRST SCHEDULE — *continued*

<i>S/No.</i>	<i>Substance/Article</i>	<i>IMO Class</i>	<i>UN No.</i>
382	CARTRIDGES FOR WEAPONS, INERT PROJECTILE	1.4S	0012
383	CARTRIDGES, SMALL ARMS	1.4S	0012
384	CARTRIDGES FOR WEAPONS, BLANK	1.4S	0014
385	CARTRIDGES, SMALL ARMS, BLANK	1.4S	0014
386	PRIMERS, CAP TYPE	1.4S	0044
387	CASES, CARTRIDGE, EMPTY, WITH PRIMER	1.4S	0055
388	CUTTERS, CABLE, EXPLOSIVE	1.4S	0070
389	FUSE, SAFETY	1.4S	0105
390	GRENADES, PRACTICE hand or rifle	1.4S	0110
391	LIGHTERS, FUSE	1.4S	0131
392	RELEASE DEVICES, EXPLOSIVE	1.4S	0173
393	RIVETS, EXPLOSIVE	1.4S	0174
394	SIGNALS, RAILWAY TRACK, EXPLOSIVE	1.4S	0193
395	CARTRIDGES, POWER DEVICE	1.4S	0323
396	FIREWORKS	1.4S	0337
397	PROJECTILES inert, with tracer	1.4S	0345
398	ARTICLES, EXPLOSIVE, N.O.S.	1.4S	0349
399	DETONATORS FOR AMMUNITION	1.4S	0366
400	FUZES, DETONATING	1.4S	0367
401	FUZES, IGNITING	1.4S	0368
402	SIGNAL DEVICES, HAND	1.4S	0373
403	PRIMERS, TUBULAR	1.4S	0376
404	COMPONENTS, EXPLOSIVE TRAIN, N.O.S.	1.4S	0384
405	FLARES, AERIAL	1.4S	0404
406	CARTRIDGES, SIGNAL	1.4S	0405
407	ARTICLES, PYROTECHNIC for technical purposes	1.4S	0432
408	CHARGES, SHAPED without detonator	1.4S	0441

FIRST SCHEDULE — *continued*

<i>S/No.</i>	<i>Substance/Article</i>	<i>IMO Class</i>	<i>UN No.</i>
409	CHARGES, EXPLOSIVE, COMMERCIAL without detonator	1.4S	0445
410	IGNITERS	1.4S	0454
411	DETONATORS, NON-ELECTRIC for blasting	1.4S	0455
412	DETONATORS, ELECTRIC for blasting	1.4S	0456
413	CHARGES, BURSTING, PLASTICS-BONDED	1.4S	0460
414	SUBSTANCES, EXPLOSIVE, N.O.S.	1.4S	0481
415	DETONATOR ASSEMBLIES, NON-ELECTRIC for blasting	1.4S	0500
416	EXPLOSIVE, BLASTING, TYPE B	1.5D	0331
417	EXPLOSIVE, BLASTING, TYPE E	1.5D	0332
418	SUBSTANCES, EVI, N.O.S.	1.5D	0482
419	SUBSTANCES, EXPLOSIVE, VERY INSENSITIVE (SUBSTANCES, EVI) N.O.S.	1.5D	0482
420	ARTICLES, EEI	1.6N	0486
421	ARTICLES, EXPLOSIVE, EXTREMELY INSENSITIVE	1.6N	0486
422	ACETYLENE, DISSOLVED	2.1	1001
423	BUTADIENE, STABILIZED	2.1	1010
424	DIVINYL, STABILIZED	2.1	1010
425	BUTANE	2.1	1011
426	BUTENE	2.1	1012
427	BUTYLENE	2.1	1012
428	CYCLOPROPANE	2.1	1027
429	1,1-DIFLUOROETHANE	2.1	1030
430	ETHYLENE FLUORIDE	2.1	1030
431	ETHYLIDENE DIFLOURIDE	2.1	1030
432	ETHYLIDENE FLUORIDE	2.1	1030
433	REFRIGERANT GAS R 152a	2.1	1030

FIRST SCHEDULE — *continued*

<i>S/No.</i>	<i>Substance/Article</i>	<i>IMO Class</i>	<i>UN No.</i>
434	DIMETHYLAMINE, ANHYDROUS	2.1	1032
435	DIMETHYL ETHER	2.1	1033
436	METHYL ETHER	2.1	1033
437	ETHANE	2.1	1035
438	AMINOETHANE	2.1	1036
439	ETHYLAMINE	2.1	1036
440	MONOETHYLAMINE	2.1	1036
441	CHLOROETHANE	2.1	1037
442	ETHYL CHLORIDE	2.1	1037
443	ETHYLENE, REFRIGERATED LIQUID	2.1	1038
444	ETHYL METHYL ETHER	2.1	1039
445	METHOXYETHANE	2.1	1039
446	METHYL ETHYL ETHER	2.1	1039
447	ETHYLENE OXIDE AND CARBON DIOXIDE MIXTURE with more than 9% but not more than 87% ethylene oxide	2.1	1041
448	HYDROGEN, COMPRESSED	2.1	1049
449	ISOBUTENE	2.1	1055
450	ISOBUTYLENE	2.1	1055
451	METHYLACETYLENE AND PROPADIENE MIXTURE, STABILIZED	2.1	1060
452	AMINOMETHANE, ANHYDROUS	2.1	1061
453	METHYLAMINE, ANHYDROUS	2.1	1061
454	MONOMETHYLAMINE, ANHYDROUS	2.1	1061
455	CHLOROMETHANE	2.1	1063
456	METHYL CHLORIDE	2.1	1063
457	REFRIGERANT GAS R 40	2.1	1063
458	PETROLEUM GASES, LIQUEFIED	2.1	1075
459	PROPENE	2.1	1077

FIRST SCHEDULE — *continued*

<i>S/No.</i>	<i>Substance/Article</i>	<i>IMO Class</i>	<i>UN No.</i>
460	PROPYLENE	2.1	1077
461	TETRAFLUOROETHYLENE, STABILIZED	2.1	1081
462	TRIMETHYLAMINE, ANHYDROUS	2.1	1083
463	VINYL BROMIDE, STABILIZED	2.1	1085
464	VINYL CHLORIDE, STABILIZED	2.1	1086
465	VINYL METHYL ETHER, STABILIZED	2.1	1087
466	VINYL FLUORIDE, STABILIZED	2.1	1860
467	METHYL CHLORIDE AND METHYLENE CHLORIDE, MIXTURE	2.1	1912
468	COMPRESSED GAS, FLAMMABLE, N.O.S.	2.1	1954
469	DEUTERIUM, COMPRESSED	2.1	1957
470	HEAVY HYDROGEN, COMPRESSED	2.1	1957
471	1,1-DIFLUOROETHYLENE	2.1	1959
472	REFRIGERANT GAS R 1132a	2.1	1959
473	VINYLDENE FLUORIDE	2.1	1959
474	ETHANE, REFRIGERATED LIQUID	2.1	1961
475	ETHYLENE, COMPRESSED	2.1	1962
476	HYDROCARBON GAS, MIXTURE, COMPRESSED, N.O.S.	2.1	1964
477	HYDROCARBON GAS MIXTURE, LIQUEFIED, N.O.S.	2.1	1965
478	HYDROGEN, REFRIGERATED LIQUID	2.1	1966
479	ISOBUTANE	2.1	1969
480	METHANE, COMPRESSED	2.1	1971
481	NATURAL GAS, COMPRESSED with high methane content	2.1	1971
482	METHANE, REFRIGERATED LIQUID	2.1	1972
483	NATURAL GAS, REFRIGERATED LIQUID with high methane content	2.1	1972
484	PROPANE	2.1	1978

FIRST SCHEDULE — *continued*

<i>S/No.</i>	<i>Substance/Article</i>	<i>IMO Class</i>	<i>UN No.</i>
485	HYDROGEN AND METHANE MIXTURES, COMPRESSED	2.1	2034
486	1,1,1-TRIFLUOROETHANE	2.1	2035
487	REFRIGERANT GAS R 143a	2.1	2035
488	2,2-DIMETHYLPROPANE	2.1	2044
489	NEOPENTANE	2.1	2044
490	ALLENE, STABILIZED	2.1	2200
491	PROPADIENE, STABILIZED	2.1	2200
492	HYDROGEN SILICIDE, COMPRESSED	2.1	2203
493	SILANE, COMPRESSED	2.1	2203
494	SILICON TETRAHYDRIDE, COMPRESSED	2.1	2203
495	BROMOTRIFLUOROETHYLENE	2.1	2419
496	1-BUTYNE, STABILIZED	2.1	2452
497	BUT-1-YNE, STABILIZED	2.1	2452
498	ETHYL ACETYLENE, STABILIZED	2.1	2452
499	ETHYL FLUORIDE	2.1	2453
500	FLUOROETHANE	2.1	2453
501	REFRIGERANT GAS R 161	2.1	2453
502	FLUOROMETHANE	2.1	2454
503	METHYL FLUORIDE	2.1	2454
504	REFRIGERANT GAS R 41	2.1	2454
505	1-CHLORO-1,1-DIFLUOROETHANE	2.1	2517
506	DIFLUOROCHLOROETHANE	2.1	2517
507	REFRIGERANT GAS R 142b	2.1	2517
508	CYCLOBUTANE	2.1	2601
509	TETRAMETHYLENE	2.1	2601

FIRST SCHEDULE — *continued*

<i>S/No.</i>	<i>Substance/Article</i>	<i>IMO Class</i>	<i>UN No.</i>
510	ETHYLENE, ACETYLENE AND PROPYLENE MIXTURES, REFRIGERATED LIQUID containing at least 71.5% ethylene, with not more than 22.5% acetylene and not more than 6% propylene	2.1	3138
511	DEVICES, SMALL, HYDROCARBON GAS POWERED	2.1	3150
512	HYDROCARBON GAS REFILLS FOR SMALL DEVICES, with release device	2.1	3150
513	PERFLUORO(METHYL VINYL ETHER)	2.1	3153
514	TRIFLUOROMETHOXYTRIFLUOROETHYLENE	2.1	3153
515	TRIFLUOROMETHYL TRIFLUOROVINYL ETHER	2.1	3153
516	PENTAFLUOROETHOXYTRIFLUOROETHYLENE	2.1	3154
517	PENTAFLUOROETHYL TRIFLUOROVINYL ETHER	2.1	3154
518	PERFLUORO(ETHYL VINYL ETHER)	2.1	3154
519	LIQUEFIED GAS, FLAMMABLE, N.O.S.	2.1	3161
520	GAS SAMPLE, NON-PRESSURIZED, FLAMMABLE, N.O.S., not refrigerated liquid	2.1	3167
521	DIFLUOROMETHANE	2.1	3252
522	REFRIGERANT GAS R 32	2.1	3252
523	GAS, REFRIGERATED LIQUID, FLAMMABLE, N.O.S.	2.1	3312
524	INSECTICIDE GAS, FLAMMABLE, N.O.S.	2.1	3354
525	REFRIGERATING MACHINES containing flammable, non-toxic, liquefied gas	2.1	3358
526	ACETYLENE, SOLVENT FREE	2.1	3374
527	HYDROGEN IN A METAL HYDRIDE STORAGE SYSTEM	2.1	3468
528	COAL GAS, COMPRESSED	2.3	1023
529	OIL GAS, COMPRESSED	2.3	1071
530	BOROETHANE, COMPRESSED	2.3	1911
531	DIBORANE, COMPRESSED	2.3	1911

FIRST SCHEDULE — *continued*

<i>S/No.</i>	<i>Substance/Article</i>	<i>IMO Class</i>	<i>UN No.</i>
532	COMPRESSED GAS, TOXIC, FLAMMABLE, N.O.S.	2.3	1953
533	COMPRESSED GAS, TOXIC, N.O.S.	2.3	1955
534	INSECTICIDE GAS, TOXIC, N.O.S.	2.3	1967
535	LIQUEFIED GAS, TOXIC, FLAMMABLE, N.O.S.	2.3	3160
536	LIQUEFIED GAS, TOXIC, N.O.S.	2.3	3162
537	GAS SAMPLE, NON-PRESSURIZED, TOXIC, FLAMMABLE, N.O.S., not refrigerated liquid	2.3	3168
538	GAS SAMPLE, NON-PRESSURIZED, TOXIC, N.O.S., not refrigerated liquid	2.3	3169
539	COMPRESSED GAS, TOXIC, OXIDIZING, N.O.S.	2.3	3303
540	COMPRESSED GAS, TOXIC, CORROSIVE, N.O.S.	2.3	3304
541	COMPRESSED GAS, TOXIC, FLAMMABLE, CORROSIVE, N.O.S.	2.3	3305
542	COMPRESSED GAS, TOXIC, OXIDIZING, CORROSIVE, N.O.S.	2.3	3306
543	LIQUEFIED GAS, TOXIC, OXIDIZING, N.O.S.	2.3	3307
544	LIQUEFIED GAS, TOXIC, CORROSIVE, N.O.S.	2.3	3308
545	LIQUEFIED GAS, TOXIC, FLAMMABLE, CORROSIVE, N.O.S.	2.3	3309
546	LIQUEFIED GAS, TOXIC, OXIDIZING, CORROSIVE, N.O.S.	2.3	3310
547	INSECTICIDE GAS, TOXIC, FLAMMABLE, N.O.S.	2.3	3355
548	FLAMMABLE LIQUIDS with flashpoint below -26°C	3	-
549	ISOCYANATES, SOLUTION, FLAMMABLE, TOXIC, N.O.S.	3	2478
550	ISOCYANATES, FLAMMABLE, TOXIC, N.O.S.	3	2478
551	ETHYL ISOCYANATE	3	2481
552	DIETHYLZINC	4.2	1366
553	ZINC DIETHYL	4.2	1366
554	ZINC ETHYL	4.2	1366

FIRST SCHEDULE — *continued*

<i>S/No.</i>	<i>Substance/Article</i>	<i>IMO Class</i>	<i>UN No.</i>
555	DIMETHYLZINC	4.2	1370
556	ZINC DIMETHYL	4.2	1370
557	PENTABORANE	4.2	1380
558	DIPHENYLMAGNESIUM	4.2	2005
559	MAGNESIUM DIPHENYL	4.2	2005
560	LITHIUM ALKYL, LIQUID	4.2	2445
561	PYROPHORIC LIQUID, ORGANIC, N.O.S.	4.2	2845
562	PYROPHORIC SOLID, ORGANIC, N.O.S.	4.2	2846
563	ALUMINIUM BOROXYDRIDE	4.2	2870
564	ALUMINIUM BOROXYDRIDE IN DEVICES	4.2	2870
565	ALUMINIUM ALKYL	4.2	3051
566	TRIBUTYLALUMINIUM	4.2	3051
567	TRIETHYLALUMINIUM	4.2	3051
568	TRIMETHYLALUMINIUM	4.2	3051
569	TRIPROPYLALUMINIUM	4.2	3051
570	TRIISSOBUTYLALUMINIUM	4.2	3051
571	ALUMINIUM ALKYL BROMIDES	4.2	3052
572	ALUMINIUM ALKYL CHLORIDES	4.2	3052
573	ALUMINIUM ALKYL HALIDES, LIQUID	4.2	3052
574	DIETHYLALUMINIUM CHLORIDE	4.2	3052
575	ETHYLALUMINIUM CHLORIDE	4.2	3052
576	ETHYLALUMINIUM SESQUICHLORIDE	4.2	3052
577	METHYLALUMINIUM SESQUIBROMIDE	4.2	3052
578	METHYLALUMINIUM SESQUICHLORIDE	4.2	3052
579	DIETHYLMAGNESIUM	4.2	3053
580	DIMETHYLMAGNESIUM	4.2	3053
581	MAGNESIUM ALKYL	4.2	3053
582	ALUMINIUM ALKYL HYDRIDES	4.2	3076

FIRST SCHEDULE — *continued*

<i>S/No.</i>	<i>Substance/Article</i>	<i>IMO Class</i>	<i>UN No.</i>
583	PYROPHORIC LIQUID, INORGANIC, N.O.S.	4.2	3194
584	PYROPHORIC SOLID, INORGANIC, N.O.S.	4.2	3200
585	tert-BUTYL HYPOCHLORITE	4.2	3255
586	ORGANOMETALLIC SUBSTANCE, SOLID, PYROPHORIC	4.2	3391
587	ORGANOMETALLIC SUBSTANCE, LIQUID, PYROPHORIC	4.2	3392
588	ORGANOMETALLIC SUBSTANCE, SOLID, PYROPHORIC, WATER-REACTIVE	4.2	3393
589	ORGANOMETALLIC SUBSTANCE, LIQUID, PYROPHORIC, WATER-REACTIVE	4.2	3394
590	LITHIUM ALKYL, SOLID	4.2	3433
591	ALUMINIUM ALKYL HALIDES, SOLID	4.2	3461
592	TRICHLOROSILANE	4.3	1295
593	ALKALI METAL DISPERSIONS	4.3	1391
594	ALKALINE EARTH METAL DISPERSIONS	4.3	1391
595	LITHIUM ALUMINIUM HYDRIDE, ETHEREAL	4.3	1411
596	GRIGNARD SOLUTION	4.3	1928
597	METHYLMAGNESIUM BROMIDE, IN ETHYL ETHER	4.3	1928
598	WATER-REACTIVE SOLID, N.O.S.	4.3	2813
599	WATER-REACTIVE LIQUID, CORROSIVE, N.O.S.	4.3	3129
600	WATER-REACTIVE LIQUID, TOXIC, N.O.S.	4.3	3130
601	WATER-REACTIVE SOLID, CORROSIVE, N.O.S.	4.3	3131
602	WATER-REACTIVE SOLID, FLAMMABLE, N.O.S.	4.3	3132
603	WATER-REACTIVE SOLID, OXIDIZING, N.O.S.	4.3	3133
604	WATER-REACTIVE SOLID, TOXIC, N.O.S.	4.3	3134
605	WATER-REACTIVE SOLID, SELF-HEATING, N.O.S.	4.3	3135
606	WATER-REACTIVE LIQUID, N.O.S.	4.3	3148

FIRST SCHEDULE — *continued*

<i>S/No.</i>	<i>Substance/Article</i>	<i>IMO Class</i>	<i>UN No.</i>
607	METALLIC SUBSTANCE, WATER-REACTIVE, N.O.S.	4.3	3208
608	METALLIC SUBSTANCE, WATER-REACTIVE, SELF-HEATING, N.O.S.	4.3	3209
609	ORGANOMETALLIC SUBSTANCE, SOLID, WATER-REACTIVE	4.3	3395
610	ORGANOMETALLIC SUBSTANCE, SOLID, WATER-REACTIVE, FLAMMABLE	4.3	3396
611	ORGANOMETALLIC SUBSTANCE, SOLID, WATER-REACTIVE, SELF-HEATING	4.3	3397
612	ORGANOMETALLIC SUBSTANCE, LIQUID, WATER-REACTIVE	4.3	3398
613	ORGANOMETALLIC SUBSTANCE, LIQUID, WATER-REACTIVE, FLAMMABLE	4.3	3399
614	AMMONIUM PERCHLORATE	5.1	1442
615	BORATE AND CHLORATE, MIXTURES	5.1	1458
616	CHLORATE AND BORATE, MIXTURES	5.1	1458
617	CHLORATE AND MAGNESIUM CHLORIDE MIXTURE, SOLID	5.1	1459
618	CHLORATES, INORGANIC, N.O.S.	5.1	1461
619	CHLORITES, INORGANIC, N.O.S.	5.1	1462
620	NITRATES, INORGANIC, N.O.S.	5.1	1477
621	OXIDIZING SOLID, N.O.S.	5.1	1479
622	PERCHLORATES, INORGANIC, N.O.S.	5.1	1481
623	PERMANGANATES, INORGANIC, N.O.S.	5.1	1482
624	PEROXIDES, INORGANIC, N.O.S.	5.1	1483
625	POTASSIUM CHLORATE	5.1	1485
626	SODIUM CHLORATE	5.1	1495
627	TETRANITROMETHANE	5.1	1510

FIRST SCHEDULE — *continued*

<i>S/No.</i>	<i>Substance/Article</i>	<i>IMO Class</i>	<i>UN No.</i>
628	AMMONIUM NITRATE with not more than 0.2% total combustible material, including any organic substance, calculated as carbon to the exclusion of any other added substance	5.1	1942
629	AMMONIUM NITRATE BASED FERTILIZER	5.1	2067
630	AMMONIUM NITRATE, LIQUID (hot concentrated solution)	5.1	2426
631	NITRITES, INORGANIC, N.O.S.	5.1	2627
632	OXIDIZING SOLID, CORROSIVE, N.O.S.	5.1	3085
633	OXIDIZING SOLID, TOXIC, N.O.S.	5.1	3087
634	OXIDIZING LIQUID, CORROSIVE, N.O.S.	5.1	3098
635	OXIDIZING LIQUID, TOXIC, N.O.S.	5.1	3099
636	OXIDIZING SOLID, SELF-HEATING, N.O.S	5.1	3100
637	OXIDIZING SOLID, WATER-REACTIVE, N.O.S.	5.1	3121
638	OXIDIZING SOLID, FLAMMABLE, N.O.S.	5.1	3137
639	OXIDIZING LIQUID, N.O.S.	5.1	3139
640	CHLORATES, INORGANIC, AQUEOUS SOLUTION, N.O.S.	5.1	3210
641	PERCHLORATES, INORGANIC, AQUEOUS SOLUTION, N.O.S.	5.1	3211
642	PERMANGANATES, INORGANIC, AQUEOUS SOLUTION, N.O.S.	5.1	3214
643	NITRATES, INORGANIC, AQUEOUS SOLUTION, N.O.S.	5.1	3218
644	NITRITES, INORGANIC, AQUEOUS SOLUTION, N.O.S.	5.1	3219
645	AMMONIUM NITRATE EMULSION or SUSPENSION or GEL intermediate for blasting explosives	5.1	3375
646	CHLORATE AND MAGNESIUM CHLORIDE MIXTURE SOLUTION	5.1	3407
647	1,1-DI-(tert-BUTYLPEROXY)-3,3,5-TRIMETHYLCYCLOHEXANE (concentration >90 to 100%)	5.2	3101

FIRST SCHEDULE — *continued*

<i>S/No.</i>	<i>Substance/Article</i>	<i>IMO Class</i>	<i>UN No.</i>
648	1,1-DI-(tert-BUTYLPEROXY)CYCLOHEXANE (concentration >80 to 100%)	5.2	3101
649	METHYL ETHYL KETONE PEROXIDE(S) (concentration less than or equal to 52% with diluent Type A, available oxygen >10%)	5.2	3101
650	ORGANIC PEROXIDE TYPE B, LIQUID	5.2	3101
651	tert-AMYL PEROXY-3,5,5-TRIMETHYLHEXANOATE (concentration less than or equal to 100%)	5.2	3101
652	tert-BUTYL PEROXYACETATE (concentration >52 to 77%, with diluent Type A)	5.2	3101
653	2,2-DIHYDROPEROXYPROPANE (concentration less than or equal to 27% with inert solid)	5.2	3102
654	2,5-DIMETHYL-2,5-DI-(BENZOYLPEROXY)HEXANE (concentration >82% to 100%)	5.2	3102
655	3,3,6,6,9,9-HEXAMETHYL-1,2,4,5-TETRAOXACYCLONONANE (concentration >52% to 100%)	5.2	3102
656	3-CHLOROPEROXYBENZOIC ACID (concentration 57-86% with inert solid)	5.2	3102
657	DI-(2,4-DICHLOROBENZOYL) PEROXIDE (concentration less than or equal to 77% with water)	5.2	3102
658	DI-(2-PHENOXYETHYL) PEROXYDICARBONATE (concentration >85% to 100%)	5.2	3102
659	DIBENZOYL PEROXIDE (concentration >51-100%, with inert solid)	5.2	3102
660	DIBENZOYL PEROXIDE (concentration >77-94%, with water)	5.2	3102
661	DISUCCINIC ACID PEROXIDE (concentration >72% to 100%)	5.2	3102
662	ORGANIC PEROXIDE TYPE B, SOLID	5.2	3102
663	tert-BUTYL MONOPEROXYMALEATE (concentration >52% to 100%)	5.2	3102

FIRST SCHEDULE — *continued*

<i>S/No.</i>	<i>Substance/Article</i>	<i>IMO Class</i>	<i>UN No.</i>
664	tert-BUTYL MONOPEROXYPTHALATE (concentration less than or equal to 100%)	5.2	3102
665	DIISOBUTYRYL PEROXIDE (concentration >32 to 52% with diluent Type A or B)	5.2	3111
666	ISOPROPYL sec-BUTYL PEROXYDICARBONATE + DI-sec-BUTYL PEROXYDICARBONATE + DI-ISOPROPYL PEROXYDICARBONATE (concentration less than or equal to 52% + less than or equal to 28% + less than or equal to 22%)	5.2	3111
667	ORGANIC PEROXIDE TYPE B, LIQUID, TEMPERATURE CONTROLLED	5.2	3111
668	tert-BUTYL PEROXYISOBUTYRATE (concentration >52 to 77% with diluent Type A or B)	5.2	3111
669	ACETYL CYCLOHEXANESULPHONYL PEROXIDE (concentration less than or equal to 82%, with water)	5.2	3112
670	DI-(2-METHYLBENZOYL) PEROXIDE (concentration less than or equal to 87%, with water)	5.2	3112
671	DIBENZYL PEROXYDICARBONATE (concentration less than or equal to 87%, with water)	5.2	3112
672	DICYCLOHEXYL PEROXYDICARBONATE (concentration >91% to 100%)	5.2	3112
673	DIISOPROPYL PEROXYDICARBONATE (concentration >52% to 100%)	5.2	3112
674	ORGANIC PEROXIDE TYPE B, SOLID, TEMPERATURE CONTROLLED	5.2	3112
675	CHLOROMETHYL METHYL ETHER	6.1	1239
676	METHYL CHLOROMETHYL ETHER	6.1	1239
677	NICKEL CARBONYL	6.1	1259
678	NICKEL TETRACARBONYL	6.1	1259
679	2-PROPENYLAMINE	6.1	2334
680	3-AMINOPROPENE	6.1	2334
681	ALLYLAMINE	6.1	2334

FIRST SCHEDULE — *continued*

<i>S/No.</i>	<i>Substance/Article</i>	<i>IMO Class</i>	<i>UN No.</i>
682	METHYL ISOCYANATE OR METHYL ISOCYANATE SOLUTIONS	6.1	2480
683	METHYL ISONITRILE	6.1	2480
684	RADIOACTIVE MATERIAL, EXCEPTED PACKAGE- EMPTY PACKAGING	7	2908
685	RADIOACTIVE MATERIAL, EXCEPTED PACKAGE- ARTICLES MANUFACTURED FROM NATURAL URANIUM or DEPLETED URANIUM or NATURAL THORIUM	7	2909
686	RADIOACTIVE MATERIAL, EXCEPTED PACKAGE, LIMITED QUANTITY OF MATERIAL	7	2910
687	RADIOACTIVE MATERIAL, EXCEPTED PACKAGE- INSTRUMENTS OR ARTICLES	7	2911
688	RADIOACTIVE MATERIAL, LOW SPECIFIC ACTIVITY MATERIAL (LSA-I) non-fissile or fissile excepted	7	2912
689	RADIOACTIVE MATERIAL, SURFACE CONTAMINATED OBJECTS (SCO-I or SCO-II), non-fissile or fissile excepted	7	2913
690	RADIOACTIVE MATERIAL, TYPE A PACKAGE, non-special form, non-fissile or fissile excepted	7	2915
691	RADIOACTIVE MATERIAL, TYPE B(U) PACKAGE non-fissile or fissile excepted	7	2916
692	RADIOACTIVE MATERIAL, TYPE B(M) PACKAGE non-fissile or fissile excepted	7	2917
693	RADIOACTIVE MATERIAL TRANSPORTED UNDER SPECIAL ARRANGEMENT non-fissile or fissile excepted	7	2919
694	RADIOACTIVE MATERIAL, URANIUM HEXAFLUORIDE, FISSILE	7	2977
695	RADIOACTIVE MATERIAL, URANIUM HEXAFLUORIDE non-fissile or fissile excepted	7	2978
696	RADIOACTIVE MATERIAL, LOW SPECIFIC ACTIVITY (LSA-II), non-fissile or fissile excepted	7	3321

FIRST SCHEDULE — *continued*

<i>S/No.</i>	<i>Substance/Article</i>	<i>IMO Class</i>	<i>UN No.</i>
697	RADIOACTIVE MATERIAL, LOW SPECIFIC ACTIVITY (LSA-III), non-fissile or fissile excepted	7	3322
698	RADIOACTIVE MATERIAL, TYPE C PACKAGE non-fissile or fissile excepted	7	3323
699	RADIOACTIVE MATERIAL, LOW SPECIFIC ACTIVITY (LSA-II), FISSILE	7	3324
700	RADIOACTIVE MATERIAL, LOW SPECIFIC ACTIVITY (LSA-III), FISSILE	7	3325
701	RADIOACTIVE MATERIAL, SURFACE CONTAMINATED OBJECTS (SCO-I or SCO-II), FISSILE	7	3326
702	RADIOACTIVE MATERIAL, TYPE A PACKAGE, FISSILE non-special form	7	3327
703	RADIOACTIVE MATERIAL, TYPE B(U) PACKAGE, FISSILE	7	3328
704	RADIOACTIVE MATERIAL, TYPE B(M) PACKAGE, FISSILE	7	3329
705	RADIOACTIVE MATERIAL, TYPE C PACKAGE, FISSILE	7	3330
706	RADIOACTIVE MATERIAL, TRANSPORTED UNDER SPECIAL ARRANGEMENT, FISSILE	7	3331
707	RADIOACTIVE MATERIAL, TYPE A PACKAGE, SPECIAL FORM non-fissile or fissile excepted	7	3332
708	RADIOACTIVE MATERIAL, TYPE A PACKAGE, SPECIAL FORM, FISSILE	7	3333
709	AMINES, LIQUID, CORROSIVE, FLAMMABLE, N.O.S.	8	2734
710	POLYAMINES, LIQUID, CORROSIVE, FLAMMABLE, N.O.S.	8	2734

## SECOND SCHEDULE

Regulation 8 (a)

## DESCRIPTION OF AREA

The area enclosed by the coastline of Singapore Island contained between Berlayar Light Beacon at the western entrance of Keppel Harbour and the eastern end of the Merdeka Bridge; thence along the northern coastline of Sungei Geylang; thence along the northern coastline of Tanjong Rhu to its north-west extremity; thence along the western coastline of Tanjong Rhu, thence along the western and south-western coastline of the eastern reclaimed land to position Lat 01 degrees 17 minutes 00 seconds N, Long 103 degrees 52 minutes 48 seconds E; thence in a straight line to position Lat 01 degrees 16 minutes 00 seconds N, Long 103 degrees 51 minutes 59 seconds E; thence in a straight line to Buran Light Beacon; thence due west to meet the coastline of Sentosa; thence along the northern coastline of Sentosa to Tanjong Rimau; thence by a straight line to the point of origin.

Made this 4th day of January 2005.

PETER ONG

*Chairman,*

*Maritime and Port Authority of Singapore.*

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