

ANNEX 2

Resolution MEPC 16(22)

ADOPTION OF AMENDMENTS TO THE ANNEX OF THE PROTOCOL OF 1978 RELATING TO THE INTERNATIONAL CONVENTION FOR THE PREVENTION OF POLLUTION FROM SHIPS, 1973 (RELATING TO ANNEX II OF THE INTERNATIONAL CONVENTION FOR THE PREVENTION OF POLLUTION FROM SHIPS, 1973 AS MODIFIED BY THE PROTOCOL OF 1978 RELATING THERETO)

adopted on 5 December 1985

THE MARINE ENVIRONMENT PROTECTION COMMITTEE,

RECALLING Article 38(a) of the Convention of the International Maritime Organization concerning the function of the Committee conferred upon it by international conventions for the prevention and control of marine pollution from ships,

NOTING Article 16 of the International Convention for the Prevention of Pollution from Ships, 1973 (hereinafter referred to as the "1973 Convention") and Article VI of the Protocol of 1978 relating to the 1973 Convention (hereinafter referred to as the "1978 Protocol") which together specify the amendment procedure of the 1978 Protocol and confers upon the appropriate body of the Organization the function of considering and adopting amendments to the 1973 Convention, as modified by the 1978 Protocol (MARPOL 73/78),

HAVING CONSIDERED at its twenty-second session amendments to the 1978 Protocol proposed and circulated in accordance with article 16(2)(a) of the 1973 Convention,

1. ADOPTS in accordance with article 16(2)(d) of the 1973 Convention amendments to the Annex of the 1978 Protocol (relating to Annex II of MARPOL 73/78), the text of which is set out in the Annex to the present resolution;

2. DETERMINES in accordance with article 16(2)(f)(iii) of the 1973 Convention that the amendments shall be deemed to have been accepted on 5 October 1986 unless prior to this date one third or more of the Parties or the Parties the combined merchant fleets of which constitute fifty per cent or more of the gross tonnage of the world's merchant fleet, have communicated to the Organization their objections to the amendments;
  3. INVITES the Parties to note that in accordance with article 16(2)(g)(ii) of the 1973 Convention the amendments shall enter into force on 6 April 1987 upon their acceptance in accordance with paragraph 2 above;
  4. REQUESTS the Secretary-General in conformity with article 16(2)(e) of the 1973 Convention to transmit to all Parties to the 1978 Protocol certified copies of the present resolution and the text of the amendments contained in the Annex;
  5. FURTHER REQUESTS the Secretary-General to transmit to the Members of the Organization which are not Parties to the 1978 Protocol copies of the resolution and its Annex.
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ANNEX

AMENDMENTS TO THE ANNEX OF THE PROTOCOL OF 1978 RELATING  
TO THE INTERNATIONAL CONVENTION FOR THE PREVENTION  
OF POLLUTION FROM SHIPS, 1973

ANNEX II

REGULATIONS FOR THE CONTROL OF POLLUTION BY  
NOXIOUS LIQUID SUBSTANCES IN BULK

Regulation 1

Definitions

The following new paragraphs (10) to (14) are added to the existing text:

"(10) 'International Bulk Chemical Code' means the International Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk adopted by the Marine Environment Protection Committee of the Organization by resolution MEPC 19(22), as may be amended by the Organization, provided that such amendments are adopted and brought into force in accordance with the provisions of Article 16 of the present Convention concerning amendment procedures applicable to an Appendix to an Annex.

(11) 'Bulk Chemical Code' means the Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk adopted by the Marine Environment Protection Committee of the Organization by resolution MEPC 20(22), as may be amended by the Organization, provided that such amendments are adopted and brought into force in accordance with the provisions of Article 16 of the present Convention concerning amendment procedures applicable to an Appendix to an Annex.

(12) 'Ship constructed' means a ship the keel of which is laid or which is at a similar stage of construction. A ship converted to a chemical tanker, irrespective of the date of construction, shall be treated as a chemical tanker constructed on the date on which such conversion commenced. This conversion provision shall not apply to the modification of a ship which complies with all of the following conditions:

- (a) the ship is constructed before 1 July 1986; and
  - (b) the ship is certified under the Bulk Chemical Code to carry only those products identified by the Code as substances with pollution hazards only.
- (13) 'Similar stage of construction' means the stage at which:
- (a) construction identifiable with a specific ship begins; and
  - (b) assembly of that ship has commenced comprising at least 50 tons or one per cent of the estimated mass of all structural material, whichever is less.

#### Regulation 2

#### Application

The following new paragraphs (4), (5), and (6) are added to the existing text:

"(4) For ships constructed before 1 July 1986, the provisions of Regulation 5 of this Annex in respect of the requirement to discharge below the waterline and maximum concentration in the wake astern of the ship shall apply as from 1 January 1988.

(5) The Administration may allow any fitting, material, appliance or apparatus to be fitted in a ship as an alternative to that required by this Annex if such fitting, material, appliance or apparatus is at least as effective as that required by this Annex. This authority of the Administration shall not extend to the substitution of operational methods to effect the control of discharge of noxious liquid substances as equivalent to those design and construction features which are prescribed by Regulations in this Annex.

(6) The Administration which allows a fitting, material, appliance or apparatus as alternative to that required by this Annex, under paragraph (5) of this Regulation, shall communicate to the Organization for circulation to the Parties to the Convention, particulars thereof, for their information and appropriate action, if any."

### Regulation 3

#### Categorization and Listing of Noxious Liquid Substances

In paragraph (1) of the existing text, the phrase "except Regulation 13", is deleted.

### Regulation 5

#### Discharge of Noxious Liquid Substances

In paragraph (1) the existing text of the last sentence before sub-paragraph (a) is replaced by: "Any water subsequently added to the tank may be discharged into the sea when all the following conditions are satisfied:"

In paragraph (5) the existing text of the third sentence is replaced by: "Any water subsequently introduced into the tank shall be regarded as clean and shall not be subject to paragraph (1), (2), (3) or (4) of this Regulation."

In paragraph (7) the existing text of the last sentence before sub-paragraph (a) is replaced by: "Any water subsequently added to the tank may be discharged into the sea when all the following conditions are satisfied:"

In paragraph (8) the existing text of paragraph (a) is replaced by:

"(a) the tank has been prewashed in accordance with the procedure approved by the Administration and based on standards developed by the Organization and the resulting tank washings have been discharged to a reception facility."

In paragraph (10) the third sentence of the existing text is replaced by: "Any water subsequently introduced into the tank shall be regarded as clean and shall not be subject to paragraph (7), (8) or (9) of this Regulation."

The following new Regulation 5A is added to the existing text:

"Regulation 5A

Pumping, Piping and Unloading Arrangements

(1) Every ship constructed on or after 1 July 1986 shall be provided with pumping and piping arrangements to ensure, through testing under favourable pumping conditions, that each tank designated for the carriage of a Category B substance does not retain a quantity of residue in excess of 0.1 cubic metres in the tank's associated piping and in the immediate vicinity of that tank's suction point.

- (2)(a) Subject to the provisions of sub-paragraph (b) of this paragraph, every ship constructed before 1 July 1986 shall be provided with pumping and piping arrangements to ensure, through testing under favourable pumping conditions, that each tank designated for the carriage of a Category B substance does not retain a quantity of residue in excess of 0.3 cubic metres in the tank's associated piping and in the immediate vicinity of that tank's suction point.
- (b) Until 2 October 1994 ships referred to in sub-paragraph (a) of this paragraph if not in compliance with the requirements of that sub-paragraph shall, as a minimum, be provided with pumping and piping arrangements to ensure, through testing under favourable pumping conditions and surface residue assessment, that each tank designated for the carriage of a Category B substance does not retain a quantity of residue in excess of 1 cubic metre or 1/3000 of the tank capacity in cubic metres, whichever is greater, in that tank and the associated piping.
- (3) Every ship constructed on or after 1 July 1986 shall be provided with pumping and piping arrangements to ensure, through testing under favourable pumping conditions, that each tank designated for the carriage of a Category C substance does not retain a quantity of residue in excess of 0.3 cubic metres in the tank's associated piping and in the immediate vicinity of that tank's suction point.
- (4)(a) Subject to the provisions of sub-paragraph (b) of this paragraph, every ship constructed before 1 July 1986 shall be provided with pumping and piping arrangements to ensure, through testing under favourable pumping conditions, that each tank designated for the carriage of a Category C substance does not retain a quantity of residue in excess of 0.9 cubic metres in the tank's associated piping and in the immediate vicinity of that tank's suction point.
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(b) Until 2 October 1994 the ships referred to in sub-paragraph (a) of this paragraph if not in compliance with the requirements of that sub-paragraph shall as a minimum, be provided with pumping and piping arrangements to ensure, through testing under favourable pumping conditions and surface residue assessment, that each tank designated for the carriage of a Category C substance does not retain a quantity of residue in excess of 3 cubic metres or 1/1000 of the tank capacity in cubic metres, whichever is greater, in that tank and the associated piping.

(5) Pumping conditions referred to in paragraphs (1), (2), (3) and (4) of this Regulation shall be approved by the Administration and based on standards developed by the Organization. Pumping efficiency tests referred to in paragraphs (1), (2), (3) and (4) of this Regulation shall use water as the test medium and shall be approved by the Administration and based on standards developed by the Organization. The residues on cargo tank surfaces, referred to in paragraphs (2)(b) and (4)(b) of this Regulation shall be determined based on standards developed by the Organization.

(6)(a) Subject to the provision of sub-paragraph (b) of this paragraph, the provisions of paragraphs (2) and (4) of this Regulation need not apply to a ship constructed before 1 July 1986 which is engaged in restricted voyages as determined by the Administration between:

- (i) ports or terminals within a State Party to the present Convention; or
- (ii) ports or terminals of States Parties to the present Convention.

(b) The provisions of sub-paragraph (a) of this paragraph shall only apply to a ship constructed before 1 July 1986 if:



- (i) each time a tank containing Category B or C substances or mixtures is to be washed or ballasted, the tank is washed in accordance with a prewash procedure approved by the Administration and based on Standards developed by the Organization and the tank washings are discharged to a reception facility;
- (ii) subsequent washings or ballast water are discharged to a reception facility or at sea in accordance with other provisions of this Annex;
- (iii) the adequacy of the reception facilities at the ports or terminals referred to above, for the purpose of this paragraph, is approved by the Governments of the States Parties to the present Convention within which such ports or terminals are situated;
- (iv) in the case of ships engaged in voyages to ports or terminals under the jurisdiction of other States Parties to the present Convention, the Administration communicates to the Organization, for circulation to the Parties to the Convention, particulars of the exemption, for their information and appropriate action, if any; and
- (v) the Certificate required under this Annex is endorsed to the effect that the ship is solely engaged in such restricted voyages.

(7) For a ship whose constructional and operational features are such that ballasting of cargo tanks is not required and cargo tank washing is only required for repair or dry-docking, the Administration may allow exemption from the provisions of paragraphs (1), (2), (3) and (4) of this Regulation, provided that all of the following conditions are complied with:

- (a) the design, construction and equipment of the ship are approved by the Administration, having regard to the service for which it is intended;
- (b) any effluent from tank washings which may be carried out before a repair or drydocking is discharged to a reception facility, the adequacy of which is ascertained by the Administration;
- (c) the Certificate required under this Annex indicates:
  - (i) that each cargo tank is certified for the carriage of only one named substance; and
  - (ii) the particulars of the exemption;
- (d) the ship carries a suitable operational manual approved by the Administration; and
- (e) in the case of ships engaged in voyages to ports or terminals under the jurisdiction of other States Parties to the present Convention, the Administration communicates to the Organization, for circulation to the Parties to the Convention, particulars of the exemption, for their information and appropriate action, if any."

Regulation 7

The existing title of this Regulation is replaced by "Reception Facilities and Cargo Unloading Terminal Arrangements"

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The following new paragraph (3) is added to the existing text:

"(3) The Government of each Party to the Convention shall undertake to ensure that cargo unloading terminals shall provide arrangements to facilitate stripping of cargo tanks of ships unloading noxious liquid substances at these terminals. Cargo hoses and piping systems of the terminal, containing noxious liquid substances received from ships unloading these substances at the terminal, shall not be drained back to the ship."

The existing text of paragraph (3) is renumbered as (4) and replaced by the following:

"(4) Each Party shall notify the Organization, for transmission to the Parties concerned, of any case where facilities required under paragraph (1) or arrangements required under paragraph (3) of this Regulation are alleged to be inadequate."

The existing text of Regulation 8 is replaced by the following:

### "Regulation 8

#### Measures of Control

- (1)(a) The Government of each Party to the Convention shall appoint or authorize surveyors for the purpose of implementing this Regulation. The surveyors shall execute control in accordance with control procedures developed by the Organization.
- (b) The master of a ship carrying noxious liquid substances in bulk shall ensure that the provisions of Regulation 5 and this Regulation have been complied with and that the Cargo Record Book is completed in accordance with Regulation 9 of this Annex whenever operations as referred to in that Regulation take place.

- (c) An exemption referred to in paragraph (2)(b), (5)(b), (6)(c) or (7)(c) of this Regulation may only be granted by the Government of the receiving Party to a ship engaged in voyages to ports or terminals under the jurisdiction of other States Parties to the present Convention. When such an exemption has been granted, the appropriate entry made in the Cargo Record Book shall be endorsed by the surveyor referred to in sub-paragraph (a) of this paragraph.

Category A substances in all areas

- (2) With respect to Category A substances the following provisions shall apply in all areas:
- (a) A tank which has been unloaded shall, subject to the provisions of sub-paragraph (b) of this paragraph, be washed in accordance with the requirements of paragraph (3) or (4) of this Regulation before the ship leaves the port of unloading.
- (b) At the request of the ship's master, the Government of the receiving Party may exempt the ship from the requirements referred to in sub-paragraph (a) of this paragraph, where it is satisfied that:
- (i) the tank unloaded is to be reloaded with the same substance or another substance compatible with the previous one and that the tank will not be washed or ballasted prior to loading; or
- (ii) the tank unloaded is neither washed nor ballasted at sea and the provisions of paragraph (3) or (4) of this Regulation are complied with at another port provided that it has been confirmed in writing that a reception facility at that port is available and is adequate for such a purpose; or

(iii) the cargo residues will be removed by a ventilation procedure approved by the Administration and based on standards developed by the Organization.

(3) If the tank is to be washed in accordance with sub-paragraph (2)(a) of this Regulation, the effluent from the tank washing operation shall be discharged to a reception facility at least until the concentration of the substance in the discharge, as indicated by analyses of samples of the effluent taken by the surveyor, has fallen to the residual concentration specified for that substance in Appendix II to this Annex. When the required residual concentration has been achieved, remaining tank washings shall continue to be discharged to the reception facility until the tank is empty. Appropriate entries of these operations shall be made in the Cargo Record Book and endorsed by the surveyor referred to under paragraph (1)(a) of this Regulation.

(4) Where the Government of the receiving party is satisfied that it is impracticable to measure the concentration of the substance in the effluent without causing undue delay to the ship, that Party may accept an alternative procedure as being equivalent to paragraph (3) of this Regulation provided that:

(a) The tank is prewashed in accordance with a procedure approved by the Administration and based on standards developed by the Organization; and

(b) The surveyor referred to under paragraph (1)(a) certifies in the Cargo Record Book that:

(i) the tank, its pump and piping systems have been emptied;  
and

(ii) the prewash has been carried out in accordance with the prewash procedure approved by the Administration for that tank and that substance; and

- (iii) the tank washings resulting from such prewash have been discharged to a reception facility and the tank is empty.

Category B and C substances outside Special Areas

(5) With respect to Category B and C substances, the following provisions shall apply outside Special Areas:

- (a) A tank which has been unloaded shall, subject to the provisions of sub-paragraph (b) of this paragraph, be prewashed before the ship leaves the port of unloading, whenever:
  - (i) the substance unloaded is identified in the standards developed by the Organization as resulting in a residue quantity exceeding the maximum quantity which may be discharged into the sea under Regulation 5(2) or (3) of this Annex in case of Category B or C substances respectively; or
  - (ii) the unloading is not carried out in accordance with the pumping conditions for the tank approved by the Administration and based on standards developed by the Organization as referred to under Regulation 5A(5) of this Annex, unless alternative measures are taken to the satisfaction of the surveyor referred to in paragraph (1)(a) of this Regulation, to remove the cargo residues from the ship to quantities specified in Regulation 5A of this Annex as applicable.

The prewash procedure used shall be approved by the Administration and based on standards developed by the Organization and the resulting tank washings shall be discharged to a reception facility at the port of unloading.

- (b) At the request of the ship's master, the Government of the receiving party may exempt the ship from the requirements of sub-paragraph (a) of this paragraph, where it is satisfied that:
- (i) the tank unloaded is to be reloaded with the same substance or another substance compatible with the previous one and that the tank will not be washed nor ballasted prior to loading; or
  - (ii) the tank unloaded is neither washed nor ballasted at sea and the tank is prewashed in accordance with a procedure approved by the Administration and based on standards developed by the Organization and resulting tank washings are discharged to a reception facility at another port, provided that it has been confirmed in writing that a reception facility at that port is available and adequate for such a purpose; or
  - (iii) the cargo residues will be removed by a ventilation procedure approved by the Administration and based on standards developed by the Organization.

Category B substances within Special Areas

- (6) With respect to Category B substances, the following provisions shall apply within Special Areas:
- (a) A tank which has been unloaded shall, subject to the provisions of sub-paragraph (b) and (c), be prewashed before the ship leaves the port of unloading. The prewash procedure used shall be approved by the Administration and based on standards developed by the Organization and the resulting tank washings shall be discharged to a reception facility at the port of unloading.

- (b) The requirements of sub-paragraph (a) of this paragraph do not apply when all the following conditions are satisfied:
- (i) the Category B substance unloaded is identified in the standards developed by the Organization as resulting in a residue quantity not exceeding the maximum quantity which may be discharged into the sea outside Special Areas under Regulation 5(2) of this Annex, and the residues are retained on board for subsequent discharge into the sea outside the Special Area in compliance with Regulation 5(2) of this Annex; and
  - (ii) the unloading is carried out in accordance with the pumping conditions for the tank approved by the Administration and based on standards developed by the Organization as referred to under Regulation 5A(5) of this Annex, or failing to comply with the approved pumping conditions, alternative measures are taken to the satisfaction of the surveyor referred to in paragraph (1)(a) of this Regulation, to remove the cargo residues from the ship to quantities specified in Regulation 5A of this Annex as applicable.
- (c) At the request of the ship's master, the Government of the receiving party may exempt the ship from the requirements of sub-paragraph (a) of this paragraph, where it is satisfied that:
- (i) the tank unloaded is to be reloaded with the same substance or another substance compatible with the previous one and that the tank will not be washed or ballasted prior to loading; or



- (ii) the tank unloaded is neither washed nor ballasted at sea and the tank is prewashed in accordance with a procedure approved by the Administration and based on standards developed by the Organization and resulting tank washings are discharged to a reception facility at another port, provided that it has been confirmed in writing that a reception facility at that port is available and adequate for such a purpose; or
- (iii) the cargo residues will be removed by a ventilation procedure approved by the Administration and based on standards developed by the Organization.

Category C substances within Special Areas

- (7) With respect to Category C substances, the following provisions shall apply within Special Areas:
- (a) A tank which has been unloaded shall, subject to the provisions of sub-paragraphs (b) and (c) of this paragraph, be prewashed before the ship leaves the port of unloading, whenever:
    - (i) the Category C substance unloaded is identified in the standards developed by the Organization as resulting in a residue quantity exceeding the maximum quantity which may be discharged into the sea under Regulation 5(9) of this Annex; or
    - (ii) the unloading is not carried out in accordance with the pumping conditions for the tank approved by the Administration and based on standards developed by the Organization as referred to under Regulation 5A(5) of this Annex, unless alternative measures are taken to the satisfaction of the surveyor referred to in paragraph (1)(a) of this Regulation, to remove the cargo residues from the ship to quantities specified in Regulation 5A of this Annex as applicable.

The prewash procedure used shall be approved by the Administration and based on standards developed by the Organization and the resulting tank washings shall be discharged to a reception facility at the port of unloading.

(b) The requirements of sub-paragraph (a) of this paragraph do not apply when all the following conditions are satisfied:

(i) the Category C substance unloaded is identified in the standards developed by the Organization as resulting in a residue quantity not exceeding the maximum quantity which may be discharged into the sea outside Special Areas under Regulation 5(3) of this Annex, and the residues are retained on board for subsequent discharge into the sea outside the Special Area in compliance with Regulation 5(3) of this Annex; and

(ii) the unloading is carried out in accordance with the pumping conditions for the tank approved by the Administration and based on standards developed by the Organization as referred to under Regulation 5A(5) of this Annex, or failing to comply with the approved pumping conditions, alternative measures are taken to the satisfaction of the surveyor referred to in paragraph (1)(a) of this Regulation, to remove the cargo residues from the ship to quantities specified in Regulation 5A of this Annex as applicable.

(c) At the request of the ship's master, the Government of the receiving party may exempt the ship from the requirements of sub-paragraph (a) of this paragraph, where it is satisfied that:

(i) the tank unloaded is to be reloaded with the same substance or another substance compatible with the previous one and that the tank will not be washed or ballasted prior to loading; or

- (ii) the tank unloaded is neither washed nor ballasted at sea and the tank is prewashed in accordance with a procedure approved by the Administration and based on standards developed by the Organization and resulting tank washings are discharged to a reception facility at another port, provided that it has been confirmed in writing that a reception facility at that port is available and adequate for such a purpose; or
- (iii) the cargo residues will be removed by a ventilation procedure approved by the Administration and based on standards developed by the Organization.

Category D substances in all areas

(8) With respect to Category D substances, a tank which has been unloaded shall either be washed and the resulting tank washings shall be discharged to a reception facility, or the remaining residues in the tank shall be diluted and discharged into the sea in accordance with Regulation 5(4) of this Annex.

Discharge from a slop tank

(9) Any residues retained on board in a slop tank, including those from cargo pump room bilges, which contain a Category A substance, or within a special area either a Category A or a Category B substance, shall be discharged to a reception facility in accordance with the provisions of Regulation 5(1), (7) or (8) of this Annex, whichever is applicable."

Regulation 9

Cargo Record Book

The existing text of sub-paragraph (2)(i) to (ix) is replaced by the following:

- "(i) loading of cargo;
- (ii) internal transfer of cargo;
- (iii) unloading of cargo;
- (iv) cleaning of cargo tanks;
- (v) ballasting of cargo tanks;
- (vi) discharge of ballast from cargo tanks;
- (vii) disposal of residues to reception facilities;
- (viii) discharge into the sea or removal by ventilation, in accordance with Regulation 5 of this Annex."

In the existing text of paragraph (3), reference to "Article 7" is replaced by "Article 8".

In the second sentence of the existing text of paragraph (5), the words "when the ship is manned" are deleted.

In the third sentence of the existing text of paragraph (5), "(1973)" is deleted and the words "or a Certificate referred to in Regulation 12A of this Annex" are inserted.

In the second sentence of the existing text of paragraph (6), the word "two" is replaced by the word "three".

The existing texts of Regulations 10 to 12 is replaced by the following:

"Regulation 10

Surveys

- (1) Ships carrying noxious liquid substances in bulk shall be subject to the surveys specified below:
- (a) An initial survey before the ship is put in service or before the Certificate required under Regulation 11 of this Annex is issued for the first time, and which shall include a complete survey of its structure, equipment, systems, fittings, arrangements and material in so far as the ship is covered by this Annex. This survey shall be such as to ensure that the structure, equipment, systems, fittings, arrangements and material fully comply with the applicable requirements of this Annex.
  - (b) Periodical surveys at intervals specified by the Administration, but not exceeding five years, and which shall be such as to ensure that the structure, equipment, systems, fittings, arrangements and material fully comply with the requirements of this Annex.
  - (c) A minimum of one intermediate survey during the period of validity of the Certificate and which shall be such as to ensure that the equipment and associated pump and piping systems fully comply with the applicable requirements of this Annex and are in good working order. In cases where only one such intermediate survey is carried out in any one Certificate validity period, it shall be held not before six months prior to, nor later than six months after the half-way date of the Certificate's period of validity. Such intermediate surveys shall be endorsed on the Certificate issued under Regulation 11 of this Annex.
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- (d) An annual survey within 3 months before or after the day and the month of the date of issue of the Certificate and which shall include a general examination to ensure that the structure, fittings, arrangements and materials remain in all respects satisfactory for the service for which the ship is intended. Such annual surveys shall be endorsed on the Certificate issued under Regulation 11 of this Annex.
- (2) (a) Surveys of ships as regards the enforcement of the provisions of this Annex shall be carried out by officers of the Administration. The Administration may, however, entrust the surveys either to surveyors nominated for the purpose or to organizations recognized by it.
- (b) An Administration nominating surveyors or recognizing organizations to conduct surveys and inspections as set forth in sub-paragraph (a) of this paragraph, shall as a minimum empower any nominated surveyor or recognized organization to:
- (i) require repairs to a ship; and
  - (ii) carry out surveys and inspections if requested by the appropriate authorities of a port State.

The Administration shall notify the Organization of the specific responsibilities and conditions of the authority delegated to the nominated surveyors or recognized organizations, for circulation to Parties to the present Convention for the information of their officers.

- (c) When a nominated surveyor or recognized organization determines that the condition of the ship or its equipment does not correspond substantially with the particulars of the Certificate, or is such that the ship is not fit to proceed to sea without presenting an unreasonable threat of harm to the marine environment, such surveyor or organization shall immediately ensure that corrective action is taken and shall in

due course notify the Administration. If such corrective action is not taken the Certificate should be withdrawn and the Administration shall be notified immediately; and if the ship is in a port of another Party, the appropriate authorities of the port State shall also be notified immediately. When an officer of the Administration, a nominated surveyor or recognized organization has notified the appropriate authorities of the port State, the Government of the port State concerned shall give such officer, surveyor, or organization any necessary assistance to carry out their obligations under this Regulation. When applicable, the Government of the port State concerned shall take such steps as will ensure that the ship shall not sail until it can proceed to sea or leave the port for the purpose of proceeding to the nearest appropriate repair yard available without presenting an unreasonable threat of harm to the marine environment.

- (d) In every case, the Administration concerned shall fully guarantee the completeness and efficiency of the survey and inspection and shall undertake to ensure the necessary arrangements to satisfy this obligation.
- (3) (a) The condition of the ship and its equipment shall be maintained to conform with the provisions of the present Convention to ensure that the ship in all respects will remain fit to proceed to sea without presenting an unreasonable threat of harm to the marine environment.
- (b) After any survey of the ship under paragraph (1) of this Regulation has been completed, no change shall be made in the structure, equipment, systems, fittings, arrangements or material covered by the survey, without the sanction of the Administration, except the direct replacement of such equipment and fittings.
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- (c) Whenever an accident occurs to a ship or a defect is discovered which substantially affects the integrity of the ship or the efficiency or completeness of its equipment covered by this Annex, the master or owner of the ship shall report at the earliest opportunity to the Administration, the recognized organization or the nominated surveyor responsible for issuing the relevant Certificate, who shall cause investigations to be initiated to determine whether a survey as required by paragraph (1) of this Regulation is necessary. If the ship is in a port of another Party, the master or owner shall also report immediately to the appropriate authorities of the port State and the nominated surveyor or recognized organization shall ascertain that such report has been made.

### Regulation 11

#### Issue of Certificate

- (1) An International Pollution Prevention Certificate for the Carriage of Noxious Liquid Substances in Bulk shall be issued, after survey in accordance with the provisions of Regulation 10 of this Annex, to any ship carrying noxious liquid substances in bulk and which is engaged in voyages to ports or terminals under the jurisdiction of other Parties to the Convention.
- (2) Such Certificate shall be issued either by the Administration or by any person or organization duly authorized by it. In every case, the Administration assumes full responsibility for the Certificate.
- (3) (a) The Government of a Party to the Convention may, at the request of the Administration, cause a ship to be surveyed and, if satisfied that the provisions of this Annex are complied with, shall issue or authorize the issue of an International Pollution Prevention Certificate for the Carriage of Noxious Liquid Substances in Bulk to the ship in accordance with this Annex.
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- (b) A copy of the Certificate and a copy of the survey report shall be transmitted as soon as possible to the requesting Administration.
- (c) A Certificate so issued shall contain a statement to the effect that it has been issued at the request of the Administration and it shall have the same force and receive the same recognition as the Certificate issued under paragraph (1) of this Regulation.
- (d) No International Pollution Prevention Certificate for the Carriage of Noxious Liquid Substances in Bulk shall be issued to a ship which is entitled to fly the flag of a State which is not a Party.

(4) The International Pollution Prevention Certificate for the Carriage of Noxious Liquid Substances in Bulk shall be drawn up in an official language of the issuing country in the form corresponding to the model given in Appendix V to this Annex. If the language used is neither English nor French, the text shall include a translation into one of these languages.

### Regulation 12

#### Duration of Certificate

- (1) An International Pollution Prevention Certificate for the Carriage of Noxious Liquid Substances in Bulk shall be issued for a period specified by the Administration, which shall not exceed five years from the date of issue.
- (2) A Certificate shall cease to be valid if significant alterations have taken place in the construction, equipment, systems, fittings, arrangements or material required without the sanction of the Administration, except the direct replacement of such equipment or fittings, or if intermediate or annual surveys as specified by the Administration under Regulation 10(1)(c) or (d) of this Annex are not carried out.

(3) A Certificate issued to a ship shall also cease to be valid upon transfer of the ship to the flag of another State. A new Certificate shall be issued only when the Government issuing the new Certificate is fully satisfied that the ship is in full compliance with the requirements of Regulation 10(3)(a) and (b) of this Annex. In the case of a transfer between Parties, if requested within three months after the transfer has taken place, the Government of the Party whose flag the ship was formerly entitled to fly shall transmit as soon as possible to the Administration a copy of the Certificate carried by the ship before the transfer and, if available, a copy of the relevant survey report."

The following new Regulation 12A is added to the existing text:

**"Regulation 12A**

**Survey and Certification of Chemical Tankers**

Notwithstanding the provisions of Regulations 10, 11 and 12 of this Annex, chemical tankers which have been surveyed and certified by States Parties to the present Convention in accordance with the provisions of the International Bulk Chemical Code or the Bulk Chemical Code, as applicable, shall be deemed to have complied with the provisions of the said Regulations, and the Certificate issued under that Code shall have the same force and receive the same recognition as the Certificate issued under Regulation 11 of this Annex."

**Regulation 13**

**Requirements for Minimizing Accidental Pollution**

The existing text of Regulation 13 is replaced by the following:

"(1) The design, construction, equipment and operation of ships carrying noxious liquid substances of Category A, B or C in bulk, shall be such as to minimize the uncontrolled discharge into the sea of such substances.

(2) Chemical tankers constructed on or after 1 July 1986 shall comply with the requirements of the International Bulk Chemical Code.

(3) Chemical tankers constructed before 1 July 1986 shall comply with the following requirements:

(a) The following chemical tankers shall comply with the requirements of the Bulk Chemical Code as applicable to ships referred to in 1.7.2 of that Code:

(i) ships for which the building contract is placed on or after 2 November 1973 and which are engaged on voyages to ports or terminals under the jurisdiction of other States Parties to the Convention; and

(ii) ships constructed on or after 1 July 1983 which are engaged solely on voyages between ports or terminals within the State the flag of which the ship is entitled to fly;

(b) The following chemical tankers shall comply with the requirements of the Bulk Chemical Code as applicable to ships referred to in 1.7.3 of that Code:

(i) ships for which the building contract is placed before 2 November 1973 and which are engaged on voyages to ports or terminals under the jurisdiction of other States Parties to the Convention; and

(ii) ships constructed before 1 July 1983 which are engaged on voyages between ports or terminals within the State the flag of which the ship is entitled to fly, except that for ships of less than 1,600 tons gross tonnage compliance with the Code in respect of construction and equipment shall take effect not later than 1 July 1994.

(4) In respect of ships other than chemical tankers carrying noxious liquid substances of Category A, B or C in bulk, the Administration shall establish appropriate measures based on the Guidelines developed by the Organization in order to ensure that the provisions of paragraph (1) of this Regulation are complied with."

The following new Regulation 14 is added to the existing text:

"Regulation 14

Carriage and Discharge of Oil-like Substances

Notwithstanding the provisions of other Regulations of this Annex, noxious liquid substances designated in Appendix II of this Annex as falling under Category C or D and identified by the Organization as oil-like substances under the criteria developed by the Organization, may be carried on an oil tanker as defined in Annex I of the Convention and discharged in accordance with the provisions of Annex I of the present Convention, provided that all of the following conditions are complied with:

- (a) the ship complies with the provisions of Annex I of the present Convention as applicable to product carriers as defined in that Annex;
- (b) the ship carries an International Oil Pollution Prevention Certificate and its Supplement B and the Certificate is endorsed to indicate that the ship may carry oil-like substances in conformity with this Regulation and the endorsement includes a list of oil-like substances the ship is allowed to carry;
- (c) in the case of Category C substances the ship complies with the ship type 3 damage stability requirements of:

- (i) the International Bulk Chemical Code in the case of a ship constructed on or after 1 July 1986; or
  - (ii) the Bulk Chemical Code, as applicable under Regulation 13 of this Annex, in the case of a ship constructed before 1 July 1986; and
  - (d) the oil content meter in the oil discharge monitoring and control system of the ship is approved by the Administration for use in monitoring the oil-like substances to be carried."
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APPENDIX II

LIST OF NOXIOUS LIQUID SUBSTANCES CARRIED IN BULK

Existing list is replaced by the following:

Substance	UN Number	Pollution Category for operational discharge		Residual concentration (per cent by weight)		
		(Regulation 3 of Annex II)		(Regulation 5(1)) of Annex II)	Regulation 5(7) of Annex II)	
		I	II	III	IV	
				Outside special areas	Within special areas	
Acetaldehyde	1089		C			
Acetic acid	2789* 2790*		C			
Acetic anhydride	1715		C			
Acetone cyanohydrin	1541		A	0.1	0.05	
Acetophenone			D			
Acetyl chloride	1717		C			
Acrylamide solution (50% or less)	2074		D			
Acrylic acid	2218		D			
Acrylonitrile	1093		B			
Adiponitrile	2205		D			

Pollution Category in brackets indicates that the substance has been provisionally included in this list and that further data are necessary in order to complete the evaluation of its environmental hazards, particularly in relation to living resources. Until the hazard evaluation is completed the Pollution Category assigned shall be used.

\* UN Number 2789 refers to more than 80% solution and 2790 between 10% and 80% solution.

	I	II	III	IV
Alcohols, C <sub>4</sub> , C <sub>5</sub> , C <sub>6</sub> mixtures		D		
Alcohols, C <sub>5</sub> , C <sub>6</sub> as individual alcohols		D		
Alcohols C <sub>7</sub> , C <sub>8</sub> , C <sub>9</sub> as individuals and mixtures		C		
Alcohols C <sub>10</sub> , C <sub>11</sub> , C <sub>12</sub> as individuals and mixtures		B		
Alcohol ethoxylate (higher secondary)		D		
Alcohol (C <sub>13</sub> /C <sub>15</sub> ) poly(3-11)ethoxylates		B		
Alkyl acrylate vinyl pyridine copolymer in toluene		(C)		
Alkylamine mixtures		C		
Alkyl (C <sub>9</sub> -C <sub>17</sub> ) benzene mixtures (straight or branched chain)		D		
Alkyl benzene sulphonate (branched chain)		B		
Alkyl benzene sulphonate (straight chain)		C		
Alkyl benzene sulphonic acid	2584 2586	C		
Allyl alcohol	1098	B		
Allyl chloride	1100	B		
2-(2-Aminoethoxy)ethanol	3055	D		
Aminoethylethanolamine		(D)		
N-Aminoethylpiperazine	2815	D		
Ammonia aqueous (28% or less)	2672*	C		

\* UN number refers to 10-35%

	I	II	III	IV
Ammonium nitrate solution (93% or less)	2426	D		
Ammonium sulphate solution		D		
Ammonium sulphide solution (45% or less)	2683	B		
Amyl acetate, commercial	1104	C		
n-Amyl acetate	1104	C		
sec-Amyl acetate	1104	C		
n-Amyl alcohol	1105	D		
sec-Amyl alcohol	1105	D		
Amyl alcohol, primary	1105	D		
Aniline	1547	C		
Benzaldehyde		C		
Benzene and mixtures having 10% benzene or more	1114*	C		
Benzene sulphonyl chloride	2225	D		
Benzyl acetate		C		
Benzyl alcohol		C		
Benzyl chloride	1738	B		
Butene oligomer		D		
n-Butyl acetate	1123	C		
sec-Butyl acetate	1123	D		
n-Butyl acrylate	2348	D		
Butylamine (all isomers)	1125 (normal) 1214 (iso)	C		

\* UN number 1114 applies to Benzene



	I	II	III	IV
Butyl benzyl phthalate		A	0.1	0.05
n-Butyl butyrate		(B)		
Butyl/Decyl/Cetyl/Eicosyl methacrylate mixture		D		
Butylene glycol		D		
1,2-Butylene oxide	3022	C		
n-Butyl ether	1149	C		
Butyl lactate		D		
Butyl methacrylate	2227	D		
n-Butyraldehyde	1129	B		
n-Butyric acid	2820	B		
gamma-Butyrolactone		D		
Calcium alkyl salicylate		D		
Calcium chloride solution		D		
Calcium hydroxide solution		D		
Calcium hypochlorite solution		B		
Calcium naphthenate in mineral oil		A	0.1	0.05
Camphor oil	1130	B		
Caprolactam		D		
Carbolic oil		A	0.1	0.05
Carbon disulphide	1131	A	0.01	0.005
Carbon tetrachloride	1846	B		

	I	II	III	IV
Cashew nut shell oil (untreated)		D		
Castor oil		D		
Chloroacetic acid	1750	C		
Chloroacetone	1695	C		
Chlorobenzene	1134	B		
Chloroform	1888	B		
1-Chloroheptane		A	0.1	0.05
Chlorohydrins, crude		(D)		
o-Chloronitrobenzene	1578	B		
2-Chloropropionic acid	2511	(C)		
3-Chloropropionic acid		(C)		
Chlorosulphonic acid	1754	C		
m-Chlorotoluene	2238	B		
o-Chlorotoluene	2238	A	0.1	0.05
p-Chlorotoluene	2238	B		
Chlorotoluene (mixed isomers)	2238	A	0.1	0.05
Choline chloride solution		D		
Citric acid		D		
Coal tar naphtha solvent		B		
Cobalt naphthenate in solvent naphtha		A	0.1	0.05
Coconut oil		D		
Coconut oil, fatty acid methyl ester		D		
Cod liver oil		D		

	I	II	III	IV
Corn oil		D		
Cotton seed oil		D		
Creosote (coal tar)		(C)		
Creosote (wood)		A	0.1	0.05
Cresol (mixed isomers)	2076	A	0.1	0.05
Cresyl diphenyl phosphate		A	0.1	0.05
Cresylic acid	2022	A	0.1	0.05
Crotonaldehyde	1143	B		
Cycloheptane	2241	D		
Cyclohexane	1145	C		
Cyclohexane/Cyclohexanol mixture		C		
Cyclohexanol		C		
Cyclohexanone	1915	D		
Cyclohexylamine	2357	C		
p-Cymene	2046	C		
Decahydronaphthalene	1147	(D)		
n-Decaldehyde		B		
Decane		(D)		
Decene		B		
Decyl acrylate		A	0.1	0.05
Decyl alcohol (all isomers)		B		
Diacetone alcohol	1148	D		

	I	II	III	IV
Dialkyl (C <sub>7</sub> -C <sub>9</sub> ) phthalates		(D)		
Dialkyl (C <sub>9</sub> -C <sub>13</sub> ) phthalates		D		
Dibenzyl ether		(C)		
Dibutylamine		C		
Dibutyl phthalate		A	0.1	0.05
m-Dichlorobenzene		B		
o-Dichlorobenzene	1591	B		
1,1-Dichloroethane	2362	B		
1,2-Dichloroethylene	1150	(D)		
Dichloroethyl ether	1916	B		
1,6-Dichlorohexane		B		
2,2-Dichloroisopropyl ether	2490	C		
Dichloromethane	1593	D		
2,4-Dichlorophenol	2021	A	0.1	0.05
2,4-Dichlorophenoxy- acetic acid		(A)	0.1	0.05
2,4-Dichlorophenoxy- acetic acid, diethanol- amine salt solution		(A)	0.1	0.05
2,4-Dichlorophenoxy- acetic acid, dimethyl- amine salt (70% or less) solution		(A)	0.1	0.05
2,4-Dichlorophenoxy- acetic acid, triiso- propanolamine salt solution		(A)	0.1	0.05
1,1-Dichloropropane		B		
1,2-Dichloropropane	1279	B		
1,3-Dichloropropane		B		

	I	II	III	IV
1,3-Dichloropropene	2047	B		
Dichloropropene/ Dichloropropane mixtures		B		
2,2-Dichloropropionic acid		D		
Dichloropropyl ether		(B)		
Diethylamine	1154	C		
Diethylaminoethanol	2686	C		
Diethylbenzene	2049	C		
Diethyl carbonate	2366	D		
Diethylene glycol dibutyl ether		D		
Diethylene glycol butyl ether acetate		(D)		
Diethylene glycol ethyl ether acetate		(D)		
Diethylene glycol methyl ether		C		
Diethylene glycol methyl ether acetate		(D)		
Diethylenetriamine	2079	(D)		
Di(2-ethylhexyl) adipate		D		
Di(2-ethylhexyl) phosphoric acid	1902	C		
Di(2-ethylhexyl) phthalate		D		
Diethyl malonate		C		
Diethyl phthalate		C		
Diethyl sulphate	1594	(B)		

	I	II	III	IV
Diglycidyl ether of Bisphenol A		B		
1,4-Dihydro-9,10-dihydroxy anthracene, disodium salt solution		D		
Diisobutylamine	2361	(C)		
Diisobutylene	2050	B		
Diisobutyl ketone	1157	D		
Diisobutyl phthalate		B		
Diisodecyl phthalate		D		
Diisononyl adipate		(D)		
Diisononyl phthalate		D		
Diisopropanolamine		C		
Diisopropylamine	1158	C		
Diisopropylbenzene (all isomers)		A	0.1	0.05
Diisopropyl naphthalene		D		
Dimethyl acetamide		(B)		
Dimethylamine solution (45% or less)	1160	C		
Dimethylamine solution (greater than 45% but not greater than 55%)	1160	C		
Dimethylamine solution (greater than 55% but not greater than 65%)	1160	C		
N,N-Dimethylcyclohexylamine	2264	C		
Dimethylethanolamine	2051	D		
Dimethylformamide	2265	D		

	I	II	III	IV
Dimethyl phthalate		C		
Dinitrotoluene (molten)	1600	B		
Dinonyl phthalate		D		
1,4-Dioxane	1165	D		
Dipentene	2052	C		
Diphenyl/Diphenyl oxide mixtures		A	0.1	0.05
Diphenyl ether		A	0.1	0.05
Diphenylmethane diisocyanate	2489	(B)		
Diphenyl oxide/Diphenyl phenyl ether mixture		A	0.1	0.05
Di-n-propylamine	2383	C		
Dipropylene glycol methyl ether		(D)		
Ditridecyl phthalate		D		
Diundecyl phthalate		D		
Divinyl acetylene		(D)		
Dodecane		(D)		
Dodecene (all isomers)		B		
Dodecyl alcohol		B		
Dodecylbenzene		C		
Dodecyl diphenyl oxide disulphonate solution		B		
Dodecylphenol		A	0.1	0.05
Epichlorohydrin	2023	C		
Ethanolamine	2491	D		

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	I	II	III	IV
2-Ethoxyethanol	1171	D		
2-Ethoxyethyl acetate	1172	C		
Ethyl acetate	1173	D		
Ethyl acetoacetate		(D)		
Ethyl acrylate	1917	B		
Ethylamine	1036	C		
Ethylamine solutions (72% or less)	2270	C		
Ethyl amyl ketone	2271	C		
Ethylbenzene	1175	C		
N-Ethylbutylamine		(C)		
Ethylcyclohexane		D		
N-Ethylcyclohexylamine		D		
Ethylene chlorohydrin	1135	C		
Ethylene cyanohydrin		(D)		
Ethylenediamine	1604	C		
Ethylenediamine, tetraacetic acid, tetrasodium salt solution		D		
Ethylene dibromide	1605	B		
Ethylene dichloride	1184	B		
Ethylene glycol		D		
Ethylene glycol methyl butyl ether		D		
Ethylene glycol acetate		(D)		
Ethylene glycol butyl ether acetate		D		

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	I	II	III	IV
Ethylene glycol methyl ether	1188	D		
Ethylene glycol methyl ether acetate	1189	D		
Ethylene glycol phenyl ether		D		
Ethylene glycol phenyl ether/Diethylene glycol phenyl ether mixture		D		
Ethylene oxide/Propylene oxide mixtures with an ethylene oxide content of not more than 30% by weight	2983	D		
2-Ethylhexanoic acid		D		
2-Ethylhexyl acrylate		D		
2-Ethylhexylamine	2276	B		
Ethylidene norbornene		B		
Ethyl lactate	1192	D		
Ethyl methacrylate	2277	(D)		
o-Ethyl phenol		(A)	0.1	0.05
2-Ethyl-3-propylacrolein		B		
Ethyltoluene		(B)		
Fatty alcohols (C <sub>12</sub> -C <sub>20</sub> )		B		
Ferric chloride solution	2582	C		
Ferric hydroxyethyl ethylenediamine triacetic acid, trisodium salt solution		D		
Fish oil		D		

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	I	II	III	IV
Formaldehyde solutions (45% or less)	1198	C		
Formamide		D		
Formic acid	1779	D		
Fumaric adduct of rosin, water dispersion		B		
Furfural	1199	C		
Furfuryl alcohol	2874	C		
Glutaraldehyde solutions (50% or less)		D		
Glycidyl ester of C <sub>10</sub> trialkyl acetic acid		B		
Ground nut oil		D		
Heptanoic acid		(D)		
Heptanol (all isomers)		C		
Heptene (mixed isomers)		C		
Heptyl acetate		(B)		
Hexahydrocymene		(C)		
Hexamethylenediamine solution	1783	C		
Hexamethylenediamine adipate (50% in water)		D		
Hexamethyleneimine	2493	C		
1-Hexanol	2282	D		
1-Hexene	2370	C		
Hexyl acetate	1233	B		
Hydrochloric acid	1789	D		
Hydrogen peroxide solutions (over 60% but not over 70%)	2015	C		

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	I	II	III	IV
Hydrogen peroxide solutions (over 8% but not over 60%)	2014 2984	C		
2-Hydroxyethyl acrylate		B		
N-(Hydroxyethyl)ethylene diamine triacetic acid, trisodium salt solution		D		
Iron chloride, Copper chloride mixture		A	0.1	0.05
Isoamyl acetate	1104	C		
Isoamyl alcohol	1105	D		
Isobutyl acetate	1213	C		
Isobutyl acrylate	2527	D		
Isobutyl formate	2393	D		
Isobutyl formate/ Isobutanol mixtures		(C)		
Isobutyl methacrylate	2283	D		
Isobutyraldehyde	2045	C		
Isodecaldehyde		C		
Isodecyl acrylate		A	0.1	0.05
Isononanoic acid		D		
Isooctane	1262	(D)		
Isopentane	1265	D		
Isophorone		D		
Isophorone diamine	2289	D		
Isophorone diisocyanate	2290	B		
Isoprene	1218	C		
Isopropanolamine		C		

	I	II	III	IV
Isopropylamine	1221	C		
Isopropylbenzene	1918	B		
Isopropyl cyclohexane		D		
Isopropyl ether	1159	D		
Isovaleraldehyde	2058	C		
Lactic acid		D		
Lactonitrile solution (80% or less)		B		
Latex (ammonia inhibited)		D		
Linseed oil		D		
Maleic anhydride	2215	D		
Mercaptobenzothiazol, sodium salt solution		(B)		
Mesityl oxide	1229	D		
Methacrylic acid	2531	D		
Methacrylic resin in 1,2-Dichloroethane solution		(D)		
Methacrylonitrile		(B)		
Methanethiol		A	0.1	0.05
3-Methoxybutyl acetate	2708	D		
Methyl acrylate	1919	C		
Methylamine solutions (42% or less)	1235	C		
Methylamyl acetate	1233	(C)		
Methylamyl alcohol	2053	(C)		
Methyl amyl ketone	1110	(C)		
Methyl benzoate	2938	B		

	I	II	III	IV
Methyl tert-butyl ether	2398	D		
2-Methyl butyraldehyde		(C)		
4,4'-Methylene dianiline and its higher molecular weight polymers/ o-Dichlorobenzene mixtures		B		
Methylethanolamine		C		3
2-Methyl-6-ethylaniline		C		
Methyl ethyl ketone	1193	D		
2-Methyl-5-ethyl pyridine	2300	(B)		
Methyl formate	1243	D		
Methyl isobutyl ketone	1245	D		
Methyl methacrylate	1247	D		
alpha-Methylnaphthalene		A	0.1	0.05
beta-Methylnaphthalene		(A)	0.1	0.05
Methyl naphthalene		A	0.1	0.05
2-Methyl-1-pentene	2288	C		
Methylpropyl ketone	1249	D		
2-Methylpyridine	2313	B		
4-Methylpyridine	2313	B		
N-Methyl-2-pyrrolidone		B		
Methyl salicylate		(B)		
alpha-Methylstyrene	2303	A	0.1	0.05
Morpholine	2054	D		

	I	II	III	IV
Motor fuel anti-knock compounds	1649	A	0.1	0.05
Naphthalene (molten)	2304	A	0.1	0.05
Naphthenic acids		(A)	0.1	0.05
Neodecanoic acid		(B)		
Nitrating acid (mixture of sulphuric and nitric acids)	1796	(C)		
Nitric acid (less than 70%)	2031	C		
Nitric acid, (70% and over)	2031 2032	C		
Nitrilotriacetic acid, trisodium salt solution		D		
Nitrobenzene	1662	B		
Nitroethane	2842	(D)		
Nitromethane	1261	(D)		
o-Nitrophenol (molten)	1663	B		
1- or 2-Nitropropane	2608	D		
Nitropropane (60%)/ Nitroethane (40%) mixture	1993	D		
Nitrotoluenes	1664	C		
Nonane	1920	(D)		
Nonanoic acid		D		
Nonene		B		
Nonyl alcohol		C		
Nonylphenol		A	0.1	0.05

	I	II	III	IV
Nonylphenol poly(4-12) ethoxylates		B		
9,12-Octadecadienoic acid (Linoleic acid)		D		
9,12,15-Octadecatrienoic acid (Linolenic acid)		D		
Octane	1262	(D)		
Octanol (all isomers)		C		
Octene (all isomers)		B		
n-Octyl acetate		(D)		
Octyl decyl phthalate		D		
Olefins, straight chain, mixtures		B		
Olefins (C <sub>6</sub> -C <sub>8</sub> mixtures)		B		
alpha-Olefins (C <sub>6</sub> -C <sub>18</sub> mixtures)		B		
Oleic acid		(D)		
Oleum	1831	C		
Olive oil		D		
Oxalic acid (10-25%)		D		
Palm nut oil		D		
Palm oil		D		
Palm oil, methyl ester		D		
Palm stearin		D		
n-Paraffins (C <sub>10</sub> -C <sub>20</sub> )		(D)		
Paraldehyde	1264	C		
Pentachloroethane	1669	B		

	I	II	III	IV
1,3-Pentadiene		C		
Pentaethylenehexamine/ Tetraethylenepentamine mixture		D		
n-Pentane	1265	C		
1-Pentanol	1105	D		
2-Pentanol	1105	(D)		
3-Pentanol	1105	(D)		
Pentene (all isomers)		C		
Perchloroethylene	1897	B		
Phenol	2312	B		
1-Phenyl-1-xylyl ethane		C		
Phosphoric acid	1805	D		
Phosphorus, yellow or white	2447	A	0.01	0.005
Phosphorus oxychloride	1810	D		
Phosphorus trichloride	1809	D		
Phthalic anhydride	2214	C		
Pinene	2368	A	0.1	0.05
Polyalkylene glycol butyl ether		(D)		
Polyethylene polyamines	2734 2735	(C)		
Polymethylene polyphenyl isocyanate	2206 2207	D		
Polypropylene glycols		D		
Potassium hydroxide solution	1814	C		
Potassium silicate solution		(D)		



	I	II	III	IV
n-Propanolamine		C		
beta-Propiolactone		D		
Propionaldehyde	1275	D		
Propionic acid	1848	D		
Propionic anhydride	2496	C		
Propionitrile	2404	C		
n-Propyl acetate	1276	D		
n-Propyl alcohol	1274	D		
n-Propylamine	1277	C		
n-Propyl benzene	2364	(C)		
n-Propyl chloride	1278	B		
Propylene dimer		(C)		
Propylene glycol ethyl ether		(D)		
Propylene glycol methyl ether		(D)		
Propylene oxide	1280	D		
Propylene trimer	2057	B		
Pyridine	1282	B		
Rape seed oil		D		
Rice bran oil		D		
Rosin		A	0.1	0.05
Rosin soap (disproportionated) solution		B		
Safflower oil		D		
Sesame oil		D		

	I	II	III	IV
Silicon tetrachloride	1818	D		
Sodium aluminate solution	1819	C		
Sodium borohydride (15% or less)/Sodium hydroxide solution		C		
Sodium dichromate solution (70% or less)		B		
Sodium hydrogen sulphite solution	2693	D		
Sodium hydrosulphide solution (45% or less)	2949	B		
Sodium hydrosulphide/Ammonium sulphide solution		B		
Sodium hydroxide solution	1824	D		
Sodium hypochlorite solution (15% or less)	1791	B		
Sodium nitrite solution	1577	B		
Sodium silicate solution		D		
Sodium sulphide solution	1849	B		
Sodium sulphite solution		(C)		
Soya bean oil		D		
Sperm oil		D		
Styrene monomer	2055	B		
Sulphuric acid	1830	C		
Sulphuric acid, spent	1832	C		
Sulphurous acid	1833	(C)		
Sunflower oil		D		

	I	II	III	IV
Tall oil, crude and distilled		A	0.1	0.05
Tall oil fatty acid (resin acids less than 20%)		(C)		
Tall oil soap (disproportionated) solution		B		
Tallow		D		
Tannic acid		C		
Tetrachloroethane	1702	B		
Tetraethylenepentamine	2320	D		
Tetrahydrofuran	2056	D		
Tetrahydronaphthalene		C		
1,2,3,5-Tetramethyl benzene		(C)		
Titanium tetrachloride	1838	D		
Toluene	1294	C		
Toluenediamine	1709	C		
Toluene diisocyanate	2078	C		
o-Toluidine	1708	C		
Tributyl phosphate		B		
1,2,4-Trichlorobenzene	2321	B		
1,1,1-Trichloroethane	2831	B		
1,1,2-Trichloroethane		B		
Trichloroethylene	1710	B		
1,2,3-Trichloropropane		B		
1,1,2-Trichloro-1,2,2-trifluoroethane		C		

	I	II	III	IV
Tricresyl phosphate (containing less than 1% ortho-isomer)		A	0.1	0.05
Tricresyl phosphate (containing 1% or more ortho-isomer)	2574*	A	0.1	0.05
Triethanolamine		D		
Triethylamine	1296	C		
Triethylbenzene		A	0.1	0.05
Triethylene glycol methyl ether		(D)		
Triethylenetetramine	2259	D		
Triethyl phosphate		D		
Triisopropanolamine		D		
Trimethylacetic acid		D		
Trimethylamine		C		
1,2,3-Trimethylbenzene		(B)		
1,2,4-Trimethylbenzene		B		
1,3,5-Trimethylbenzene	2325	(B)		
Trimethylhexamethylene diamine (2,2,4- and 2,4,4- isomers)	2327	D		
Trimethylhexamethylene diisocyanate (2,2,4- and 2,4,4- isomers)	2328	B		
Trimethylol propane polyethoxylate		D		

\* UN number 2574 applies to Tricresyl phosphate containing more than 3% ortho-isomer.

	I	II	III	IV
2,2,4-Trimethyl-1,3-pentanediol-1-iso-butyrate		C		
Tripropylene glycol methyl ether		(D)		
Trixylyl phosphate		A	0.1	0.05
Tung oil		D		
Turpentine	1299	B		
Undecane	2330	(D)		
1-Undecene		B		
Undecyl alcohol		B		
Urea, Ammonium nitrate solution		D		
Urea, Ammonium phosphate solution		D		
Urea, Ammonium nitrate solution (containing aqua Ammonia)		C		
n-Valeraldehyde	2058	D		
Vinyl acetate	1301	C		
Vinyl ethyl ether	1302	C		
Vinylidene chloride	1303	B		
Vinyl neodecanoate		C		
Vinyl toluene	2618	A	0.1	0.05
White spirit, low (15-20%) aromatic	1300	(B)		
Xylene	1307	C		
Xylenol	2261	B		

APPENDIX III

LIST OF OTHER LIQUID SUBSTANCES

Existing list is replaced by the following:

Substance	UN Number
Acetone	1090
Acetonitrile	1648
Alcohols, C <sub>1</sub> , C <sub>2</sub> , C <sub>3</sub> as individuals and mixtures	
Alcohols, C <sub>4</sub>	
Alcohols, C <sub>13</sub> and above as individuals and mixtures	
Alum (15% solution)	
tert-Amyl alcohol	1105
n-Butyl alcohol	1120
sec-Butyl alcohol	1120
tert-Butyl alcohol	1120
Butyl stearate	
Calcium bromide solution	
Cetyl/Eicosyl methacrylate mixture	
Citric juice	
Dextrose solution	
Dibutyl sebacate	
Dicyclopentadiene	2048
Diethanolamine	
Diethylene glycol	
Diethylene glycol diethyl ether	
Diethylene glycol butyl ether	
Diethylene glycol ethyl ether	

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Substance	UN Number
Diethylenetriamine pentaacetic acid, pentasodium salt solution	
Diethyl ether	1155
Diethyl ketone	1156
Diheptyl phthalate	
Dihexyl phthalate	
Diisooctyl phthalate	
Dioctyl phthalate	
Dipropylene glycol	
Dodecyl methacrylate	
Dodecyl/Pentadecyl methacrylate mixture	
Ethyl alcohol	1170
Ethylene carbonate	
Ethylene glycol butyl ether	2369
Ethylene glycol tertiary butyl ether	
Ethylene-vinylacetate copolymer (emulsion)	
Glycerin	
Glycine sodium salt solution	
1-Heptadecene	
n-Heptane	1206
1-Hexadecene	
n-Hexane	1208
Hexylene glycol	
Isobutyl alcohol	1212
Isopropyl acetate	1220
Isopropyl alcohol	1219
Lard	

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Substance	UN Number
Latex (carboxylated styrene/butadiene copolymer)	
Lignin sulphonic acid, salt (low COD) solution	
Magnesium chloride solution	
Magnesium hydroxide slurry	
3-Methoxy-1-butanol	
Methyl acetate	1231
Methyl alcohol	1230
2-Methyl-2-hydroxy-3-butyne	
3-Methyl-3-methoxy butanol	
3-Methyl-3-methoxy butyl acetate	
2-Methylpentane*	1208
Milk	
Molasses	
1-Octadecanol	
Olefins (C <sub>13</sub> and above, all isomers)	
Paraffin wax	
1-Pentadecene	
Petroleum spirit	1271
Polyaluminium chloride solution	
Polybutene	
Polyethylene glycols	
Polyethylene glycol dimethyl ether	

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\* Asterisk indicates that the substance has been provisionally included in this list and that further data are necessary in order to complete the evaluation of its environmental hazards, particularly in relation to living resources.



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Substance	UN Number
Polypropylene glycol methyl ether	
Polysiloxane	
1,2-Propylene glycol	
Propylene tetramer	2850
Sodium alumino silicate slurry	
Sodium chlorate solution (50% or less)	2428
Sodium salicylate	
Sorbitol	
Sulpholane*	
Sulphur (molten)	2448
1-Tetradecanol	
Tetradecene	
Tridecanol	
Tridecene	
Triethylene glycol	
Triethylene glycol butyl ether	
Triisobutylene	2324
Tripropylene glycol	
Urea solution	
Urea resin solution	
Vegetable protein solution (hydrolyzed)	
Wine	

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\* Asterisk indicates that the substance has been provisionally included in this list and that further data are necessary in order to complete the evaluation of its environmental hazards, particularly in relation to living resources.

APPENDIX IV

CARGO RECORD BOOK FOR SHIPS CARRYING  
NOXIOUS LIQUID SUBSTANCES IN BULK

The existing Appendix IV is replaced by the following:

"Appendix IV

FORM OF CARGO RECORD BOOK

CARGO RECORD BOOK FOR SHIPS CARRYING  
NOXIOUS LIQUID SUBSTANCES IN BULK

Name of ship :

Distinctive number  
or letters :

Gross tonnage :

Period from: to:

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Note: Every ship carrying noxious liquid substances in bulk shall be provided with a Cargo Record Book to record relevant cargo/ballast operations.

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## INTRODUCTION

The following pages show a comprehensive list of items of cargo and ballast operations which are, when appropriate, to be recorded in the Cargo Record Book on a tank-to-tank basis in accordance with paragraph 2 of Regulation 9 of Annex II of the International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 relating thereto, as amended. The items have been grouped into operational sections, each of which is denoted by a letter.

When making entries in the Cargo Record Book, the date, operational code and item number shall be inserted in the appropriate columns and the required particulars shall be recorded chronologically in the blank spaces.

Each completed operation shall be signed for and dated by the officer or officers in charge and, if applicable, by a surveyor authorized by the competent authority of the State in which the ship is unloading. Each completed page shall be countersigned by the master of the ship.

Entries in the Cargo Record Book are required only for operations involving Categories A, B, C and D substances.

LIST OF ITEMS TO BE RECORDED

Entries are required only for operations involving Categories A, B, C and D substances.

(A) LOADING OF CARGO

1. Place of loading
2. Identify tank(s), name of substance(s) and category(ies).

(B) INTERNAL TRANSFER OF CARGO

3. Name and category of cargo(es) transferred.
4. Identity of tanks.
  - .1 From:
  - .2 To:
5. Was (were) tank(s) in 4.1 emptied?
6. If not, quantity remaining in tank(s).

(C) UNLOADING OF CARGO

7. Place of unloading
  8. Identity of tank(s) unloaded.
  9. Was (were) tank(s) emptied?
    - .1 If yes, confirm that the procedure for emptying and stripping has been performed in accordance with the ship's Procedures and Arrangements Manual (i.e., list, trim, stripping temperature).
    - .2 If not, quantity remaining in tank(s).
  10. Does the ship's Procedures and Arrangements Manual require a prewash with subsequent disposal to reception facilities?
  11. Failure of pumping and/or stripping system.
    - .1 Time and nature of failure.
    - .2 Reasons for failure.
    - .3 Time when system has been made operational.
-

(D) MANDATORY PREWASH IN ACCORDANCE WITH THE SHIP'S PROCEDURES AND ARRANGEMENTS MANUAL

12. Identify tank(s), substance(s) and category(ies).
13. Washing method:
  - .1 Number of washing machines per tank.
  - .2 Duration of wash/washing cycles.
  - .3 Hot/cold wash.
14. Prewash slops transferred to:
  - .1 Reception facility in unloading port (identify port).
  - .2 Reception facility otherwise (identify port).

(E) CLEANING OF CARGO TANKS EXCEPT MANDATORY PREWASH (OTHER PREWASH OPERATIONS, FINAL WASH, VENTILATION ETC.

15. State time, identify tank(s), substance(s) and category(ies) and state:
  - .1 Washing procedure used.
  - .2 Cleaning agent(s) (identify agent(s) and quantities.
  - .3 Dilution of cargo residues with water, state how much water used (only Category D substances).
  - .4 Ventilation procedure used (state number of fans used, duration of ventilation).
16. Tank washings transferred:
  - .1 Into the sea.
  - .2 To reception facility (identify port).
  - .3 To slops collecting tank (identify tank).

(F) DISCHARGE INTO THE SEA OF TANK WASHINGS

17. Identify tank(s).
    - .1 Were tank washings discharged during cleaning of tank(s), if so at what rate?
    - .2 Were tank washing(s) discharged from a slops collecting tank. If so, state quantity and rate of discharge.
  18. Time commenced and stopped pumping.
  19. Ship's speed during discharge.
-

(G) BALLASTING OF CARGO TANKS

20. Identity of tank(s) ballasted.
21. Time at start of ballasting.

(H) DISCHARGE OF BALLAST WATER FROM CARGO TANKS.

22. Identity of tank(s).
23. Discharge of ballast:
  - .1 Into the sea.
  - .2 To reception facilities (identify port).
24. Time commenced and stopped ballast discharge.
25. Ship's speed during discharge.

(I) ACCIDENTAL OR OTHER EXCEPTIONAL DISCHARGE

26. Time of occurrence.
27. Approximate quantity, substance(s) and category(ies).
28. Circumstances of discharge or escape and general remarks.

(J) CONTROL BY AUTHORIZED SURVEYORS

29. Identify port.
30. Identify tank(s), substance(s), category(ies) discharged ashore.
31. Have tank(s), pump(s), and piping system(s) been emptied?
32. Has a prewash in accordance with the ships' Procedures and Arrangements Manual been carried out?
33. Have tank washings resulting from the prewash been discharged ashore and is the tank empty?
34. An exemption has been granted from mandatory prewash.
35. Reasons for exemption.
36. Name and signature of authorized surveyor.
37. Organization, company, government agency for which surveyor works.

(K) ADDITIONAL OPERATIONAL PROCEDURES AND REMARKS

NAME OF SHIP: .....

DISTINCTIVE NUMBER  
OR LETTERS: .....

CARGO/BALLAST OPERATIONS

Date	Code (letter)	Item (number)	Record of operations/signature of officer in charge/ name of and signature of authorized surveyor

Signature of Master .....



APPENDIX V

FORM OF CERTIFICATE

The existing form of the Certificate is replaced by the following:

"INTERNATIONAL POLLUTION PREVENTION CERTIFICATE FOR THE  
CARRIAGE OF NOXIOUS LIQUID SUBSTANCES IN BULK

Issued under the provisions of the International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 relating thereto as amended (hereinafter referred to as "the Convention") under the authority of the Government of

.....

(full official designation of the country)

by

.....

(full official designation of the competent person or organization authorized under the provisions of the Convention)

Name of ship	Distinctive number or letters	Port of registry	Gross tonnage

THIS IS TO CERTIFY:

- 1 That the ship has been surveyed in accordance with the provisions of Regulation 10 of Annex II of the Convention.
- 2 That the survey showed that the structure, equipment, systems, fitting, arrangements and material of the ship and the condition thereof are in all respects satisfactory and that the ship complies with the applicable requirements of Annex II of the Convention.
- 3 That the ship has been provided with a manual in accordance with the standards for procedures and arrangements as called for by Regulation 5, 5A and 8 of Annex II of the Convention, and that the arrangements and equipment of the ship prescribed in the manual are in all respects satisfactory and comply with the applicable requirements of the said Standards.
- 4 That the ship is suitable for the carriage in bulk of the following noxious liquid substances, provided that all relevant operational provisions of Annex II of the Convention are observed.

Noxious liquid substances	Conditions of carriage (tank numbers etc.)
*Continued on additional signed and dated sheets	

\* Delete as necessary

This certificate is valid, until .....  
subject to surveys in accordance with Regulation 10 of Annex II of the  
Convention

Issued at .....  
(place of issue of Certificate)

..... 19.. .....  
(Date of issue) (Signature of duly authorized official  
issuing the Certificate)

(Seal or stamp of the issuing Authority, as appropriate)

ENDORSEMENT FOR ANNUAL AND INTERMEDIATE SURVEYS

THIS IS TO CERTIFY that at a survey required by Regulation 10 of Annex II of the Convention the ship was found to comply with the relevant provisions of the Convention:

Annual survey: Signed: .....  
(signature of duly authorized official)  
Place: .....  
Date: .....

(seal or stamp of the Authority, as appropriate)

Annual\*/Intermediate\* survey: Signed: .....  
(signature of duly authorized official)  
Place: .....  
Date: .....

(seal or stamp of the Authority, as appropriate)

Annual\*/Intermediate\* survey: Signed: .....  
(signature of duly authorized official)  
Place: .....  
Date: .....

(seal or stamp of the Authority, as appropriate)

Annual survey: Signed: .....  
(signature of duly authorized official)  
Place: .....  
Date: .....

(seal or stamp of the Authority, as appropriate)

\* Delete as appropriate

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