



TÜRKİYE TAŞKÖMÜRÜ KURUMU ZONGULDAK PORT

DANGEROUS CARGO HANDLING GUIDE



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(See revisions page for revisions.)

Port and Railway Operations Manager
Metin ŞAHİN

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LIST OF ABBREVIATIONS

BLU Code; Code of Practice for the Safe Loading and Unloading of Bulk Carriers

BSCN; Bulk Cargo Shipping Name

CSC; International Convention for Safe Containers

CTU Code; Code of Practice for Packing of Cargo Transport Units

DGSA; Dangerous Goods Safety Advisor

EmS; Emergency Response Procedures for Ships Carrying Dangerous Goods (The EmS Guide)

GHS; Globally Harmonized System of Classification and Labelling of Chemicals, published by IMO

IBC Code; the International Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk

IGC Code; The International Code of the Construction and Equipment of Ships Carrying Liquefied Gases in Bulk

IMDG Code; International Maritime Dangerous Goods Code

IMO; International Maritime Organization

IMSBC Code; International Maritime Solid Bulk Cargoes Code

ISPS Code; International Ship and Port Facility Security

MARPOL; International Convention for the Prevention of Pollution from Ships

MFAG; Medical First Aid Guide for use in Accidents Involving Dangerous Goods

MHB; Materials Hazardous Only in Bulk

SOLAS; International Convention for the Safety of Life at Sea

TML; Transportable Moisture Limit

UNECE; United Nations Economic Commission for Europe

DEFINITIONS

Administration; General Directorate of Maritime Affairs,

Bulk cargo; a structural part of the ship or on the ship or in a warehouse located in a fixed tank or permanently, without planned to move directly to the enclosure solid, liquid and gaseous substances,

Cargo transport unit (CTU); means a road transport tank or freight vehicle, a railway transport tank or freight wagon, a multimodal freight container or portable tank, or an MEGC.

Carrier; the actual carrier, broker, ship owner, transport works organizer, transportation works broker, ship agent who receives, bids and accepts the offer for the transportation of all kinds of dangerous cargo on their own behalf or on behalf of third parties and the real and legal persons who carry out the transportation of dangerous cargo by road or rail as well as by sea within the scope of combined transportation,

Coastal facility; a port, dock, pier, berthing place, fuel oil, liquefied gas or chemical pipeline buoy or platform, including storage areas, where ships or vessels may safely exchange cargo or be accommodated,

Container; cargo handling equipment certified in accordance with the applicable standards under the International Convention on Safe Containers (CSC Convention),

Dangerous cargo;

- Petroleum and petroleum products included in Annex I, Annex 1 to Annex 73/78 of the International Convention on the Prevention of Pollution of the Seas by Ships (MARPOL),
- Packaged goods and articles supplied in IMDG Code Part 3,
- Bulk cargoes marked "B" and "A and B" in the group box in the characteristic table of cargoes given in Annex 1 of the IMSBC Code,
- Liquid goods marked "S" or "S/P" in column "d" of the table titled "hazards" in IBC Code Section 17,
- Gaseous substances given in Chapter 19 of the IGC Code,

Dangerous Goods Certificate of Conformity; the document issued by the Administration and required to be obtained by coastal facilities engaged in the handling of dangerous goods in packaged or bulk form,

Fumigation; the process of delivering a certain amount of a fumigant acting in a gaseous state to a closed environment at a certain temperature in order to destroy harmful organisms and keeping it in the environment for a certain period of time,

Load related; the sender, receiver, representative or organizer of the transport of the dangerous cargo,

Loading safety; the safe fastening and stacking of the cargo carrying unit or cargo loaded in the ship's hold or on the ship's deck and the safe fastening and stacking of the cargo to be loaded on the cargo transport unit,

Ministry; Ministry of Transport and Infrastructure,

Moisture content (MC); means that portion of a representative sample consisting of water, ice or other liquid expressed as a percentage of the total wet mass of that sample,

Packing; the package in which the dangerous cargo is placed, as defined in IMDG Code Chapter 6,

Shipowner; natural or legal persons who equip, operate, lessee, master or agents and authorized to represent the equipping person,


Shipper; means any person by whom or in whose name, or on whose behalf, a contract of carriage of goods by sea has been concluded with a carrier, or any person by whom or in whose name, or on whose behalf, the goods are actually delivered to the carrier in relation to the contract of carriage by sea.

Ships; ships that fall within the scope of legislation or international agreements to which we are a party,

Transportable moisture limit (TML); of a cargo which may liquefy means the maximum moisture content of the cargo which is considered safe for carriage in ships not complying with the special provisions of 7.3.2. It is determined by the test procedures, approved by a competent authority, such as those specified in paragraph 1 of appendix 2,

UN number; four-digit dangerous goods number assigned by the United Nations,

REVISION PAGE

| No | Revision No | The Content of the Revision | Revision Date | Revision Issuer | |
|----|-------------|---|---------------|-----------------|---|
| | | | | Name Surname | Signature |
| 1 | 1 | Due to the change in legislation, it has been made suitable for the new format. | 30.05.2022 | Serkan DİMDİRİ |  |
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1. INTRODUCTION

When the dangerous goods are handled or stored in entrance of port and port areas, general safety and security must be provided, the goods must be surrounded, all safety precautions must be taken for all people in or near port area and the environment must be protected, all these must be controlled.

1.1. Facility Information Form

| | | | | |
|----|---|---|---|---------------------|
| 1 | Name/title of facility operator | TÜRKİYE TAŞKÖMÜRÜ KURUMU GENEL MÜDÜRLÜĞÜ | | |
| 2 | Contact Information of facility operator | Address | : Yayla Mah. Bağlık Cad. İhsan Soyak Sok. No: 2 Merkez ZONGULDAK | |
| | | Phone | : +90 372 252 40 00 | |
| | | Fax | : +90 372 251 19 00 | |
| | | e-Mail | : zonguldaklimani@taskomuru.gov.tr | |
| | | Website | : www.taskomuru.gov.tr | |
| 3 | Name of facility | ZONGULDAK PORT | | |
| 4 | Province of the facility | ZONGULDAK | | |
| 5 | Contact Information of facility | Address | : Liman ve Demiryolu İşletme Müdürlüğü Milli Egemenlik Cad. Kargo Rihtımı No: 12 Merkez ZONGULDAK | |
| | | Phone | : +90 372 253 22 72 | |
| | | Fax | : +90 372 253 22 71 | |
| | | e-Mail | : zonguldaklimani@taskomuru.gov.tr | |
| 6 | Geographical area of facility | West Black Sea | | |
| 7 | Port Authority of facility and contact details | T.C. UAB ZONGULDAK BÖLGE LİMAN BAŞKANLIĞI | | |
| | | Address | : Yayla Mah. Ömer Kahraman Sok. No:3 Merkez ZONGULDAK | |
| | | Phone | : +90 372 253 31 43 | |
| 8 | The municipality where the facility is connected and contact details | ZONGULDAK BELEDİYE BAŞKANLIĞI | | |
| | | Address | : Terakki Mah. Belediye Bulvarı No: 1 Merkez ZONGULDAK | |
| | | Phone | : +90 372 259 67 67 | |
| | | Fax | : +90 372 259 67 68 | |
| | | e-Mail | : info@zonguldak.bel.tr | |
| | | Website | : www.zonguldak.bel.tr | |
| 9 | Name of the Free Zone or Organized Industrial Zone where the plant is located | - | | |
| 10 | Validity date of shore facility Operating Permit/Provisional Operating Permit | 30/11/2022 | | |
| 11 | Facility operating status | Own load and add.third party (X) | Own load (...) | Third part (...) |
| 12 | Name and surname of the facility manager, contact details | Metin ŞAHİN | | |
| | | Phone | : +90 372 259 46 40 | |
| | | Fax | : +90 372 253 22 71 | |
| | | e-Mail | : metin.sahin@taskomuru.gov.tr | |

| | | |
|----|---|---|
| 13 | Name and surname of responsible person for dangerous goods operation of facility, contact information | Muharrem ATAY (Occupational Safety Specialist) +90 537 571 58 65 Akif MEMİŞ (Occupational Safety Specialist) +90 532 332 32 76 Halil İbrahim ALMERAL (Port Engineer) +90 555 486 34 53 Yavuz SÜKÜT (Port Facility Security Officer) +90 541 524 88 99 Recep AKKAYA (Waste Reception Facility Manager) +90 553 565 10 30 Yılmaz ÇAPRI (Field Foreman - KARDEMİR) +90 533 282 14 97 Sercan AKAYDIN (Field Foreman - KARDEMİR) +90 543 714 46 42 Atilla REYHANOĞLU (Field Foreman - ALTUR) +90 533 499 74 00 Burak MENGÜL (Field Foreman - ALTUR) +90 536 279 88 66 Aziz ALABAŞ (Field Foreman - SOYER) +90 536 291 30 45 |
| 14 | Name and surname of Dangerous Goods Safety Advisor of Facility, contact information | Serkan DİMDİRİ Company : HAYAT TMGDK Tehlikeli Madde Güvenlik Danışmanlığı Ticaret Limited Şirketi Phone : +90 372 316 67 77 - +90 507 294 04 47 e-Mail : info@hayat-tmgdk.com |
| 15 | Marine coordinates of facility | 41° 34' 45" K - 32° 04' 30" D 41° 23' 10" K - 31° 37' 50" D |
| 16 | Type of dangerous goods handled in facility (goods under MARPOL Annex-1, IMDG Code, IBC Code, IGC Code, IMSBC Code, Grain Code, TDC Code and asphalt/bitumen and scrap goods) | Dangerous goods handling is carried out at the facility within the scope of the IMSBC Code. |
| 17 | Types of Ship berthing to facility (Loads other than the IMDG Code from the load types in the sixteenth article will be written separately. Additional cargo request will be submitted to the port authority with the Annex-1 form. It will be added to the dangerous goods handling guide when appropriate.) | COAL |
| 18 | Classes for handling cargo subject to IMDG Code | - |
| 19 | Groups in the characteristic table for handling cargo subject to IMSBC Code | Group B (and A) |
| 20 | Types of Ship berthing to facility | Ferry / Passenger Ro-Ro Ship General Cargo (Except for ships carrying dangerous goods) Solid Bulk Cargo Container Others (Ships that the Port Authority will allow) |

| 21 | Facility's distance to main road (kilometer) | 0 km | | | | | | | | | | |
|-------------|---|---|---------------|-----------------------------|-----------------------------|---|-------------|-------------------|-----------|-------------------|------------|-------------------|
| 22 | Facility's distance to railway (km) or railway connection (Yes/No) | Railway Connection YES "Zonguldak TCDD Station" is 1.1 km away. | | | | | | | | | | |
| 23 | Facility's distance to closest airport (km) and its name | The distance to "Çaycuma Saltukova Airport" is 65 km. | | | | | | | | | | |
| 24 | Goods handling capacity of facility (Ton/Year; TEU/Year; Vehicle/Year) | Solid Bulk Cargo : 1.575.000 Ton/Year General Cargo : 1.125.000 Ton/Year Vehicle : 90.000 Vehicle/Year | | | | | | | | | | |
| 25 | Scrap handling made/not made in facility | Scrap Handling is not done. | | | | | | | | | | |
| 26 | Is there border crossing? (Yes/No) | YES | | | | | | | | | | |
| 27 | Is there a bonded areas? (Yes/No) | YES | | | | | | | | | | |
| 28 | Goods Handling equipment and capacity | Two electric cranes with a capacity of 15 and 5 tons Four mobile cranes with a capacity of 15 and 20 tons One mobile crane with a capacity of 40 tons One mobile port crane - MHC 130 One container handling stacker Four forklifts and two loaders Handling activities at Zonguldak Port are carried out by third party companies that have an agreement with our institution. | | | | | | | | | | |
| 29 | Storage tank capacity (m ³) | - | | | | | | | | | | |
| 30 | Open storage area (m ²) | 77.750 m ² | | | | | | | | | | |
| 31 | Semi-closed storage area (m ²) | - | | | | | | | | | | |
| 32 | Closed storage area (m ²) | 3.300 m ² | | | | | | | | | | |
| 33 | Determined fumigation and/or decontamination from fumigation area (m ²) | - | | | | | | | | | | |
| 34 | Name/title of pilotage and towage service provider, contact information | Türkiye Taşkömürü Kurumu Zonguldak Limanı Kılavuzluk Teşkilatı | | | | | | | | | | |
| 35 | Have Security Plan was created? (Yes No) | YES | | | | | | | | | | |
| 36 | Capacity of Waste Acceptance Facility (This part will be issued separately according to the waste accepted by facility) | <table border="1"> <thead> <tr> <th>Waste Type</th> <th>Capacity (m³)</th> </tr> </thead> <tbody> <tr> <td>Sludge</td> <td>20 m³</td> </tr> <tr> <td>Bilge Water</td> <td>40 m³</td> </tr> <tr> <td>Waste Oil</td> <td>20 m³</td> </tr> <tr> <td>Waste Tank</td> <td>40 m³</td> </tr> </tbody> </table> | Waste Type | Capacity (m ³) | Sludge | 20 m ³ | Bilge Water | 40 m ³ | Waste Oil | 20 m ³ | Waste Tank | 40 m ³ |
| Waste Type | Capacity (m ³) | | | | | | | | | | | |
| Sludge | 20 m ³ | | | | | | | | | | | |
| Bilge Water | 40 m ³ | | | | | | | | | | | |
| Waste Oil | 20 m ³ | | | | | | | | | | | |
| Waste Tank | 40 m ³ | | | | | | | | | | | |
| 37 | Characteristics of berth/jetty etc. areas | | | | | | | | | | | |
| | Berth/Jetty No | Height (meter) | Width (meter) | Maximum water depth (meter) | Minimum water depth (meter) | Tonnage and height of the largest ship berthed (DWT-GT/meter) | | | | | | |
| | Cargo Berth | 215 m | 50 m | 7,50 m | - | 28.000 DWT | | | | | | |
| | Bulk Cargo Dock | 360 m | 75 m | 7,30 m | - | 20.000 DWT | | | | | | |
| | Ro-Ro Dock | 125 m | 75 m | 8,50 m | - | 10.000 DWT | | | | | | |
| | The name of the pipeline (in the plant) | | Count (Piece) | Length (Meter) | Diameter of (Inch) | | | | | | | |
| | - | | - | - | - | | | | | | | |

1.2. Loading/Unloading, Handling and Storage Procedures for Dangerous Cargoes Handled and Temporarily Stored at the Port Facility

In the Port Facility, collection/discharge, handling, stacking and temporary storage activities are carried out within the scope of the IMSBC Code of the SOLAS Convention and our relevant National Regulations.

Our main objectives are to ensure compliance with the relevant service conditions for bulk carriers and our terminal where loading and unloading are carried out, to ensure cooperation between ships and our terminal with specified methods, and to reduce the risks of excessive stress and physical damage to the structure of the ship during loading and unloading.

The regulations that are obliged to carry out dangerous goods in our enterprise are as follows:

National Regulations

- Regulation on the Transport of Dangerous Cargo by Sea and the Safety of Loading
- Regulation on the Safe Loading and Unloading of Bulk Cargo Vessels
- Directive on the Issuance of Port Facility Dangerous Cargo Conformity Certificate

International Regulations

- International Convention for the Prevention of Pollution from Ships, MARPOL
- International Convention for the Safety of Life at Sea, SOLAS
- International Maritime Solid Bulk Cargoes Code, IMSBC Code
- Code of Practice for the Safe Loading and Unloading of Bulk Carriers, BLU Code
- International Maritime Dangerous Goods Code, IMDG Code
- International Ship and Port Facility Security Code, ISPS Code
- Revised Recommendations On The Safe Transport Of Dangerous Cargoes And Related Activities In Port Areas, MSC/CIRC 1216

1.2.1. General Considerations for Loading/Unloading, Handling and Storage of Dangerous Solid Bulk Cargoes

The hazards of Solid Bulk Cargo to be handled at the Port Facility are specified in the Safety Data Sheet of the relevant cargo and in the IMSBC Code book. However, regardless of the characteristics of the dangerous goods, the precautions for the following hazards will be taken for all cargoes:

Emissions of Hazardous Dusts

Where transport, transport or stacking of dangerous bulk solids may cause dust emissions, all necessary precautions shall be taken to prevent or minimize dust emissions and to protect people and the environment from such emissions.

Personal washing and hygiene will be notified to all employees who need to be washed after the handling of dangerous goods. Appropriate protective clothing, depending on the type of skin being handled during handling, will be provided to employees by providing respiratory protection and protective creams when needed.

Hazardous Steam Emissions/Oxygen Inadequacy

Where transport, transport or stacking of dangerous solid bulk can cause toxic or flammable vapor emissions, all necessary precautions shall be taken to prevent or minimize the occurrence of such vapor emissions and to protect persons and the environment from such emissions.

Appropriate equipment shall be available to measure toxic or flammable vapor concentration when dangerous solid bulk is to be transported, transported or stacked, which may release toxic or flammable vapors

Except in an emergency situation; Nobody will be introduced into a covered area where dangerous bulk solids burdened with such toxic or flammable vapor are deposited or oxygen is inadequate unless the atmosphere in the area is determined to be dangerous for human health or safety. If it is necessary to enter this area during an emergency, an individual breathing apparatus shall be used in accordance with enclosed area entry procedures.

Explosive Powder Emissions

All necessary applicable precautions shall be taken to minimize the effects of the detonation when dangerous solid bulk loads, which may be responsible for the explosion in connection with the detonation, are transported or transported, to prevent such explosions and to occur.

The precautions to be taken include ventilation of the enclosed space to limit the concentration of dust in the atmosphere, inhibition of ignition sources, reduction of the material wall thickness and withdrawal with no suction.

Simultaneously Flammable Substances and Substances Which React with Water

Hazardous solid bulk products which, if brought into contact with water, may become flammable or toxic vapors or cause simultaneous explosion shall be kept as dry as possible. Such cargoes will only be transported under dry weather conditions.

Oxidizing Substances

Hazardous solid bulk, an oxidizing agent, will be transported, transported and stacked to prevent contamination with flammable or carbon containing materials. The oxidizing substances shall be kept away from any heat or ignition source.

Ineligible Materials

Hazardous solid bulk loads shall not be transported, transported or stacked to prevent dangerous interaction with unsuitable materials.

1.2.2. Procedure for Handling Dangerous Solid Bulk Cargo

The following matters shall be fulfilled in terms of the safety of port facilities, employees and vessels in port in cases such as the handling of dangerous cargoes coming to Liman, temporary suspension of port, sorting and sorting, storage:

1. A coordination meeting shall be held at least 1 day before the arrival of the dangerous cargo at the port facility. This meeting will be attended by Operations, Field Planning, Health Safety Environment, DGSA and other interested parties. (The decision to conduct this meeting for routine cargo handling hazardous loads accepted by the Liman may be given by Operation or HSE/DGSA.)
2. At the coordination meeting; The following items regarding the dangerous cargoes to be accepted in the port facility will be discussed in the scope of IMSBC CODE documents and the acceptance/rejection of the material or the removal of managerial decision will be discussed:
 - Risk from dangerous load,
 - Interference with dangerous cargoes present in the port,
 - Interaction with the cargoes planned to be accepted in the near future,
 - Stacking and decomposition conditions,
 - The need for materials and equipment due to the urgent intervention,
 - Adequacy of emergency response teams,
 - Interaction from neighboring facilities.
3. If the decision is made to accept the dangerous load, the management, operation, storage, security, emergency response units will be informed and the preparation and acceptance process will be started.
4. Port acceptance If the information of the Harbor Master is needed, the Harbor Master will be notified in writing to the Harbor Master with the grounds.
5. MSDS (Material Safety Data Sheet) of the material will be provided before handling, IMSBC Code will be examined and the precautions to be taken in case of fire and leakage of dangerous material will be determined and ready to be used at any time on the scaffolding where they are handled.
6. According to the possible hazards for emergency first aid, the relevant tables and annexes of the MFAG in will be prepared.
7. The protective clothing to be used in the event of an accident or in case of an accident will be determined in accordance with the load type and the use will be made available.
8. Measuring devices/modules shall be available to ensure proper measurement by determining the gases to be inadequate in terms of dust emissions, toxic flammable vapor emissions and oxygen according to the specifications of the hazardous substance being handled.
9. All personnel (including car / truck operators) who will take part in the handling before the start of the handling will be informed about the hazards of the hazardous material and warning signs indicating the danger to the areas handled will be posted.
10. The control of the existing alarm system and the camera system which will be in control and recording will be done.
11. The Hazardous Matter will be checked to ensure that it does not interfere with the means of transport to leave the port as soon as possible.
12. Before handling, the details of the loading/unloading plan with the master will be discussed, confirmation of whether there is any previous burdens or other dangerous cargoes that

need to be separated in the warehouses, and whether the master or the ship's personnel are the foundation of the danger of the dangerous cargo being handed over.

13. In order to prevent the burden from being poured into the sea and pier during the loading/unloading, necessary precautions shall be taken with the fixed / mobile systems, the operators shall be warned about the handling and if the accidental hazardous material is poured into the scaffold, the personnel shall be assigned immediately for proper collection.
14. It will be ensured that the dangerous substance is transported by means of appropriate labels and plates and equipment fitted with the necessary equipment.
15. Handling of dangerous solid bulk cargoes will be carried out within the framework of the relevant legislation related to loading/unloading.

1.2.3. Cooperation Between Bulk Carriers and Terminals

The master of bulk carriers and terminal representatives cooperate with each other in accordance with the following procedures.

1. The master and the terminal representative agree on the loading or unloading plan in accordance with the provisions of Chapter VI Rule 7.3 of the SOLAS Contract before the solid bulk cargoes are loaded or unloaded. The loading or unloading plan shall be prepared in accordance with Annex-2 to the BLU Code and shall include the IMO number of the bulk carrier concerned. The master and the terminal representative confirm the agreed plan by signing it.
2. If any change to the plan is of a nature that may affect the safety of the ship or crew, it is prepared and approved by the parties in the form of a revised plan. The agreed loading or unloading plan and any changes subsequently accepted are retained by the ship and the terminal for six months for review by the relevant authorities if necessary.
3. Before the start of loading or unloading, the ship/shore safety checklist is completed and signed jointly by the master and the terminal representative in accordance with the principles in Annex-4 to the BLU Code.
4. An effective communication system is established between the ship and the terminal during the loading or unloading process and is maintained until the loading or unloading is completed. The request of the master or terminal representative to stop loading or unloading shall be complied with immediately.
5. The master and the terminal representative carry out the loading or unloading operations in accordance with the agreed plan. The terminal representative is responsible for loading or unloading the solid bulk cargo in terms of the amount and speed of loading or unloading and the order of the warehouses specified in the plan. Unless there is a written agreement between the master and the terminal representative, the agreed loading or unloading plan is followed.
6. Upon completion of loading or unloading, the master and terminal representative must prepare and sign a work completion document stating that the loading or unloading process has been carried out in accordance with the loading or unloading plan, including any changes agreed. In the case of unloading, the document contains a record that the cargo holds have been emptied and cleaned at the request of the master, and indicates any damage to the ship and any repairs made.

1.2.4. Considerations to be Taken into Consideration in the Loading/Unloading, Handling and Storage of Contaminants According to IMSBC Code

Coal (bituminous and anthracite) is a natural, solid, combustible material consisting of amorphous carbon and hydro Carbons. The characteristic properties of coal are as follows:

- Coals may emit methane, a flammable gas. A methane/air mixture containing between 5% and 16% methane constitutes an explosive atmosphere which can be ignited by sparks or naked flame, e.g., electrical or frictional sparks, a match or lighted cigarette. Methane is lighter than air and may, therefore, accumulate in the upper region of the cargo space or other enclosed spaces. If the cargo space boundaries are not tight, methane can seep through into spaces adjacent to the cargo space.
- Coals may be subject to oxidation, leading to depletion of oxygen and an increase in carbon dioxide or carbon monoxide concentrations in the cargo space. Carbon monoxide is an odorless gas, slightly lighter than air, and has flammable limits in air of 12% to 75% by volume. It is toxic by inhalation with an affinity for blood hemoglobin over 200 times that of oxygen.
- Some coals may heat spontaneously and the spontaneous heating may lead to spontaneous combustion in the cargo space. Flammable and toxic gases, including carbon monoxide, may be produced.
- Some coals may be liable to react with water and produce acids which may cause corrosion. Flammable and toxic gases, including hydrogen, may be produced. Hydrogen is an odorless gas, much lighter than air, and has flammable limits in air of 4% to 75% by volume.

Table 1 - Characteristics of Coal (IMSBC Code 2019)

| Physical properties | | | |
|-----------------------|----------------------|-------------------------------------|-------------------------------------|
| Size | Angle of repose | Bulk density kg/m ³ | Stowage factor m ³ /t |
| Up to 50 mm | Not applicable | 654 to 1.266 | 0,79 to 1,53 |
| Hazard classification | | | |
| Class | Subsidiary hazard(s) | MHB Group | Group |
| Not applicable | Not applicable | CB and/or SH and/or WF and/or CR | B (and A) |

Hazards

Coal may create flammable atmospheres, may heat spontaneously, may deplete the oxygen concentration, may corrode metal structures.

Coal may liquefy if shipped at a moisture content in excess of its transportable moisture limit (TML).

Segregation and stowage requirements

The following points must be agreed with the master:

- Unless expressly provided otherwise, boundaries of cargo spaces where this cargo is carried shall be resistant to fire and liquids.
- This cargo shall be "separated from" goods of classes 1 (division 1.4), 2, 3, 4 and 5 in packaged form and "separated from" solid bulk materials of classes 4 and 5.1.
- Stowage of goods of class 5.1 in packaged form or solid bulk materials of class 5.1 above or below this cargo shall be prohibited.
- The master shall ensure that this cargo is not stowed adjacent to hot areas.
- This cargo shall be "separated longitudinally by an intervening complete compartment or hold from" goods of class 1 other than division 1.4.

General requirements

1. Prior to loading, the shipper or his appointed agent shall provide in writing to the master the Characteristics of the cargo and the recommended safe handling procedures for loading and transport of the cargo. As a minimum, the cargo's contract specifications for moisture content, sulphur content and size shall be stated, and especially whether the cargo may be liable to emit methane or self-heat.
2. Before loading, the master shall ensure the following:
 - All cargo spaces and bilge wells are clean and dry. Any residue of waste material or previous cargo is removed, including removable cargo battens; and
 - All electrical cables and components situated in cargo spaces and adjacent enclosed spaces are free from defects. Such cables and electrical components are safe for use in an explosive atmosphere or positively isolated. The provisions of this clause need not apply to engine-rooms where the engine-room is separated from the cargo space by a gastight bulkhead with no direct access.
3. The ship shall be suitably fitted and carry on board appropriate instruments for measuring the following without requiring entry in the cargo space:
 - Concentration of methane in the atmosphere;
 - Concentration of oxygen in the atmosphere;
 - Concentration of carbon monoxide in the atmosphere; and
 - pH value of cargo space bilge samples.
4. These instruments shall be regularly serviced and calibrated. Ship personnel shall be trained in the use of such instruments. Details of gas measurement procedures are given at the end of this appendix.
5. It is recommended that means be provided for measuring the temperature of the cargo in the range 0°C to 100°C to enable the measurement of temperature of the cargo while being loaded and during the voyage without requiring entry into the cargo space.
6. Smoking and the use of naked flames shall not be permitted in the cargo areas and adjacent spaces and appropriate warning notices shall be posted in conspicuous places. Burning, cutting, chipping, welding or other sources of ignition shall not be permitted in the vicinity of cargo spaces or in other adjacent spaces, unless the space has been properly ventilated and the methane gas measurements indicate it is safe to do so.

7. Prior to departure, the master shall be satisfied that the surface of the material has been trimmed reasonably level to the boundaries of the cargo space to avoid the formation of gas pockets and to prevent air from permeating the body of the briquettes. Casings leading into the cargo space shall be adequately sealed. The shipper shall ensure that the master receives the necessary co-operation from the loading terminal.
8. The atmosphere in the space above the cargo in each space shall be regularly monitored for the concentration of methane, oxygen and carbon monoxide. Details of gas monitoring procedures are given at the end of this appendix. The results of monitoring shall be recorded. The frequency of the monitoring shall be determined based upon the information provided by the shipper and the information obtained through the analysis of the atmosphere in the cargo space.
9. Unless expressly provided otherwise, surface ventilation shall be conducted in all cargo spaces carrying this cargo for the first 24 hours after departure from the loading port. During this period, the atmosphere in the cargo spaces shall be monitored once from one sample point per cargo space and for the purpose of the gas monitoring, the ventilation shall be stopped for an appropriate period prior to the gas monitoring.
10. When the methane concentrations monitored within 24 hours after departure are at an acceptably low level, the ventilation openings shall be closed and the atmosphere in the cargo spaces shall be monitored. When the methane concentrations monitored within 24 hours after departure are not at an acceptably low level, surface ventilation shall be maintained, except for an appropriate period for gas monitoring, and the atmosphere in the cargo spaces shall be monitored. This procedure shall be followed until the methane concentrations become acceptably low level. In any event, the atmosphere in the cargo spaces shall be monitored on a daily basis.
11. When significant concentrations of methane are subsequently observed in unventilated cargo spaces, the appropriate special Precautions for coals emitting methane shall apply.
12. The master shall ensure, as far as practicable, that any gases which may be emitted from this cargo do not accumulate in adjacent enclosed spaces.
13. The master shall ensure that enclosed working spaces such as storerooms, carpenter's shop, passageways, tunnels, etc. are regularly monitored for the presence of methane, oxygen and carbon monoxide. Such spaces shall be adequately ventilated.
14. Regular hold bilge testing shall be systematically carried out during the voyage carrying this cargo. If the pH monitoring indicates that a corrosion risk exists, bilges shall be frequently pumped out during the voyage in order to avoid possible accumulation of acids on tank tops and in the bilge system.
15. If the behavior of the cargo during the voyage differs from that specified in the cargo declaration, the master shall report such differences to the shipper. Such reports will enable the shipper to maintain records on the behavior of the coal cargoes, so that the information provided to the master can be reviewed in the light of transport experience.

Weather Precautions

When a cargo may liquefy during the voyage in case that the moisture content of the cargo is in excess of its TML and the cargo is carried in a ship other than a ship complying with the requirements in IMSBC Code, the following provisions shall be complied with (these matters shall also be taken into account by the port facility during handling or temporary storage):

- The moisture content of the cargo shall be kept less than its TML during the loading operations and the voyage;
- Unless expressly provided otherwise in this individual schedule, the cargo shall not be handled during precipitation;
- Unless expressly provided otherwise in this individual schedule, during handling of the cargo, all non-working hatches of the cargo spaces into which the cargo is loaded or to be loaded shall be closed;
- The cargo may be handled during precipitation under the conditions stated in the procedures required in IMSBC Code; and
- The cargo in a cargo space may be discharged during precipitation provided that the total amounts of the cargo in the cargo space is to be discharged in the port.

Loading

Trim in accordance with the relevant provisions required in IMSBC Code. Without reasonable trimming, vertical cracks into the body of the coal may form permitting oxygen circulation and possible self-heating. Due consideration shall be given to moisture migration and formation of dangerous wet base when blended coals are loaded.

Emergency Action in the Event of Fire

- Batten down. Exclusion of air may be sufficient to control the fire.
- Do not use water.
- The use of CO₂ or inert gas, if available, should be withheld until fire is apparent.
- Seek expert advice and consider heading the ship to the nearest port..

Coals Emitting Methane

When the shipper has informed that the cargo is liable to emit methane or analysis of the atmosphere in the cargo space indicates the presence of methane in excess of 20% of the Lower Explosion Limit (LEL), the following additional Precautions shall be taken:

1. Adequate surface ventilation shall be maintained, except for an appropriate period for the purpose of gas monitoring.
2. Care shall be taken to remove any accumulated gases prior to operation of the hatch covers or other openings for any reason, including discharging. Care shall be taken to operate hatch covers of the cargo spaces and other openings to avoid creating sparks. Smoking and the use of naked flame shall be prohibited.
3. Personnel shall not be permitted to enter the cargo space or enclosed adjacent spaces unless the space has been ventilated and the atmosphere tested and found to be gas free

and to have sufficient oxygen to support life. Notwithstanding these provisions, emergency entry into the cargo space may be permitted without ventilation, testing the atmosphere or the both, provided that the entry into the cargo space is undertaken only by trained personnel wearing self-contained breathing apparatus under the supervision of a responsible officer and special Precautions are observed to ensure that no source of ignition is carried into the space.

4. The master shall ensure that enclosed working spaces such as storerooms, carpenter's shops, passageways, tunnels, etc. are regularly monitored for the presence of methane. Such spaces shall be adequately ventilated and, in the case of mechanical ventilation, only equipment safe for use in an explosive atmosphere shall be used.

Self-Heating Coals

When the shipper has informed that the cargo is likely to self-heat or analysis of the atmosphere in the cargo space indicates an increasing concentration of carbon monoxide, then the following additional Precautions shall be taken:

1. The cargo spaces shall be closed immediately after completion of loading in each cargo space. The hatch covers may also be additionally sealed with a suitable sealing tape. Only natural surface ventilation shall be permitted and ventilation shall be limited to the absolute minimum time necessary to remove methane which may have accumulated.
2. Personnel shall not enter the cargo space during the voyage, unless they are wearing self-contained breathing apparatus and access is critical to safety of life and the safety of the ship.
3. Prior to loading, temperature of this cargo shall be monitored. This cargo shall only be accepted for loading when the temperature of the cargo is not higher than 55°C.
4. When the carbon monoxide level is increasing steadily, a potential self-heating may be developing. In such a case, the cargo space shall be completely closed and all ventilation ceased, and the master shall seek expert advice immediately. Water shall not be used for cooling material or fighting coal cargo fires at sea, but may be used for cooling the boundaries of the cargo space.
5. When the carbon monoxide level in any cargo space reaches 50 ppm or exhibits a steady rise over three consecutive days, a self-heating condition may be developing and the master shall inform the shipper and the company (Refer to SOLAS regulation IX/1.2) of, at least, the following information if an accurate assessment of the situation is to be achieved:
 - Identity of the cargo spaces involved; monitoring results covering carbon monoxide, methane and oxygen concentrations;
 - If available, temperature of the cargo, location and method used to obtain results;
 - Time gas sample taken (monitoring routine);
 - Time ventilators opened/closed;
 - Quantity of coal in hold(s) involved;
 - Type of coal as per cargo information, and any special Precautions indicated on information;
 - Date loaded, and ETA at intended discharge port (which shall be specified); and
 - Comments or observations from the ship's master.

2. RESPONSIBILITIES

Activity all parties in the transport of hazardous cargoes; transportation safe, secure, and make it harmless to the environment, prevent accidents when there is an accident must take all necessary precautions to minimize damage as much as possible. In this context, the responsibilities in the third part of the Regulation on the Transportation of Hazardous Cargoes by Sea and the Safety of Loading are stated below:

2.1. General Responsibilities

The general responsibilities of all parties involved in the hazardous cargoes transportation activity are as follows:

- a. They are obliged to take all necessary precautions to make the transportation safe, secure and harmless to the environment, to prevent accidents and to minimize the damage as much as possible when an accident occurs.
- b. In case of emergency situations such as fire, leakage, debris that occur during the transportation of hazardous cargoes, they benefit from the EMS Guide, which contains Emergency Response Methods and Emergency Charts for Ships Carrying Dangerous Goods.
- c. In order to provide the necessary medical first aid to people affected by the damages of hazardous cargoes and the health problems caused by accidents involving these loads, they benefit from the Medical First Aid Guide (MFAG) contained in the IMDG Code annex in order to provide the necessary medical first aid appropriately.

2.2. Responsibilities of the Shipper

The responsibilities of the shipper related are stated below:

- a. Prepares and prepares mandatory documents, information and documents related to hazardous cargoes and ensures that these documents are present with the cargo during the transportation activity.
- b. Provides classification, packaging, marking, labeling and labeling of hazardous cargoes in accordance with their type.
- c. Ensures that hazardous cargoes are loaded, stacked and securely fastened in approved packaging and cargo handling units in a compliant and safe manner.

2.3. Responsibilities of the Carrier

The responsibilities of the carrier related are stated below:

- a. Requests mandatory documents, information and documents related to hazardous cargoes from the cargo owner and ensures that they are present with the cargo during the transportation activity.
- b. Checks the regulatory compliance of hazardous cargoes classified, packaged, marked, labelled and plated by the cargo subject.
- c. Checks that hazardous cargoes are packaged in accordance with the rules using approved packaging and cargo handling units, that they are safely loaded into the cargo transport unit and that they are securely fastened..

2.4. Responsibilities of the Port Facility

The port facility is responsible for ensuring that all relevant equipment for the regulation of the TYUB received for the port facility is appropriate and operational, that the necessary maintenance, attitude and repairs are carried out and that they are kept in a safe and continuous condition, and in case they lose their operational ability for any reason, they are obliged to notify the regional port authority and the ships and cargo related persons they serve if equipment failures prevent the operation of the facility.

The responsibilities of the Port Facility are as follows:

- a. Does not dock the ships carrying dangerous goods without the permission of the Port Authority.
- b. Gives written information to the ship that will dock at its facility within the scope of facility rules, cargo handling rules and relevant legislation.
- c. Does not handle dangerous cargoes that it has not received a handling permit from the General Directorate of Maritime Affairs, and does not victimize ships that will dock by planning in this context.
- ç. Requests mandatory documents, information and documents related to dangerous cargoes from the cargo owner and ensures that they are found together with the cargo. In the event that the relevant documents, information and documents cannot be provided by the cargo person, it is not obliged to accept or handle the dangerous cargo to the facility.
- d. Shares all the data that may be required according to the characteristics of the cargo with the ship owner and performs the loading or unloading operation according to the agreement to be reached. The ship does not make changes in the operation without the knowledge of the person concerned.
- e. Determines the operating limits taking into account the safe working capacity of the facility and weather forecasts, takes the necessary precautions to ensure that the ship is safely connected at the dock and handling is carried out.
- f. Checks the transport document containing information that the dangerous cargoes arriving at the facility have been properly classified, packaged, marked, labelled, plated and safely loaded into the cargo transport unit.
- g. Ensures that the personnel involved in the handling of dangerous goods and the planning of this handling are certified by receiving the necessary trainings and does not assign the personnel who do not have documents in these operations.
- ğ. Ensures that the dangerous goods handling equipment in the facility is in working order and that the relevant personnel are trained and documented on the use of these equipment.
- h. Ensures that personnel use personal protective equipment appropriate to the physical and chemical characteristics of the hazardous cargo by taking occupational safety precautions at the Port Facility.
- ı. Performs activities related to dangerous goods at docks, piers and warehouses established in accordance with these works.
- i. Equips berths and piers reserved for ships that will load or unload dangerous liquid bulk cargoes with suitable installations and equipment for this work.

- j. Keeps an up-to-date list of all dangerous cargoes on board ships docked at its facility and in indoor and outdoor areas at its facility and provides this information to the relevant persons upon request.
- k. Informs the Port Authority of the immediate risk posed by the dangerous cargoes handled or temporarily stored in the facility and the precautions taken for this purpose.
- l. Reports accidents related to dangerous cargoes, including accidents at the entrance to closed areas, to the Port Authority.
- m. Provides the necessary support and cooperation in the controls and inspections carried out by the General Directorate of Maritime Affairs and the Port Authority.
- n. Ensures that Class 1 (except Class 1 Compatibility Group 1.4 S), Class 6.2 and Class 7 dangerous goods, which are not allowed to be stored temporarily, are transported out of the Port Facility as soon as possible, and in cases where it is necessary to wait, it applies to the General Directorate of Maritime Affairs for permission.
- o. Stores the cargo transportation units where dangerous cargoes are transported temporarily in accordance with the separation and stacking rules and takes fire, environmental and other safety precautions appropriate to the class of dangerous cargo in the storage area. Keeps fire extinguishing systems and first aid units ready for use at any time in the areas where dangerous cargoes are handled and makes the necessary controls periodically.
- ö. Gets permission from the Port Authority before the hot work and operations to be carried out in the areas where dangerous cargoes are handled and temporarily stored.
- p. Prepares an emergency evacuation plan for the evacuation of ships from the Port Facility in case of emergency and submits it to the Port Authority and informs the relevant people about the plan approved by the Port Authority.
- r. Ensures internal loading of load carrying units in accordance with loading safety rules at the plant.

2.5. Responsibilities of the Shipowner

The responsibilities of the shipowner are as follows:

- a. Ensures that the cargo to be carried by the ship is certified as suitable for transportation and that the cargo holds, cargo tanks and cargo handling equipment are suitable for cargo transportation.
- b. Requests all mandatory documents, information and documents related to dangerous cargoes from the cargo owner and ensures that they are present with the cargo during the transportation activity.
- c. Ensures that the documents, information and documents required to be present on board the ship within the scope of legislation and international conventions are appropriate and up-to-date.
- ç. Checks the transport documents containing information that the cargo handling units loaded on the ship are properly marked, plated and safely loaded.
- d. Informs the relevant ship personnel about the risks of dangerous cargoes, safety procedures, safety and emergency precautions, response methods and similar issues.
- e. It keeps up-to-date lists of all dangerous cargoes on the ship and declares them to interested parties upon request.
- f. Ensures that the loading program, if any, is approved and documented on board and that it is kept operational.

- g. Informs the Port Authority and the Port Facility of the immediate risk posed by the dangerous cargoes on board the ship berthed at the Port Facility and the precautions taken for this purpose.
- ğ. Refuses to carry dangerous cargo in the event of leakage or possibility of leakage in dangerous cargo.
- h. Notifies the Port Authority of dangerous cargo accidents that occur on its ship during the cruise or while it is at the Port Facility.
- ı. Provides the necessary support and cooperation in the controls and inspections carried out by the General Directorate of Maritime Affairs and the Port Authority.
- İ. Does not accept to carry dangerous cargoes that are not included in the ship certificates issued by the relevant institutions and organizations.
- j. Ensures that the ship people in charge of handling dangerous cargoes use personal protective equipment suitable for the physical and chemical properties of the cargo during handling.
- k. Provides the requirements for the loading safety of the cargoes loaded on its ships.

3. RULES AND PRECAUTIONS TO BE IMPLEMENTED BY THE PORT FACILITY

How the precautions related to the issues specified in the third section of the Regulation on the Transportation of Dangerous Cargoes by Sea and the Safety of Loading are carried out and how the requirements of the provisions in the fourth section will be met are explained under this section.

3.1. Loading Safety

According to Article 14 of the Regulation on the Transportation of Dangerous Goods by Sea and the Safety of Loading, the provisions on loading safety are as follows:

1. The port authority stops the handling operation at the port facility when it sees any risk and does not start it until the risk is eliminated.
2. The provisions of the BLU Code and the BLU Manual are complied with to ensure the safe loading of bulk cargoes on board.
3. Stacking of loads is carried out in accordance with the relevant legislation and international conventions to which we are a party.
4. The ship cannot be loaded more than the loading limit considering the loading limit brand.
5. The loading-unloading plan before the handling operation and the draft survey or weighbridge survey results are submitted to the port authority by the ship concerned in order to determine the amount of cargo loaded before the ship departs. The administration or the port authority may request that the draft survey or weighbridge survey report be received from an authorized surveillance company.
6. Precautions are taken to prevent the negative impact of the stability of the ship by ensuring that the cargo on bulk carriers, especially single-hold bulk carriers, is loaded in such a way that it spreads to the bottom of the hold (by trimming).
7. It is ensured that the cargo and ballast water layout is monitored throughout the loading or unloading operation so that the ship's structure is not subjected to excessive stress.

8. Attention is paid to the fact that the ship is tilted, but if a tilt (sideways tilt) is required during loading, it is ensured that it is as short as possible. In order to avoid structural damage to the vessel, the approved stability curl is ensured to be properly balanced, loading and unloading.
9. In adverse meteorological and oceanographic conditions that may affect the cargo handling operation, the handling operation is stopped by the master until the conditions improve.
10. In order to prevent situations such as placing a heavy load on a light load, placing a liquid load on a dry load, and spreading the smell of foul-smelling loads to other loads, loads with characteristics that may damage other loads are loaded by following the separation rules.
11. Loads the stack onto the ship, segregation, handling, transporting and unloading in order to ensure full implementation of the safety precautions for the continuation of Solas Chapter VI and Part A of solid and liquid bulk loads all loads except in accordance with Rule 5.6, load units and cargo transport units managed by authorized classification societies approved on behalf of the administration of binding or manual load (Cargo Securing Manual) is installed in accordance with, are stacked and safety is taken under.

3.2. Loading, Handling and Unloading Precautions

A number of accidents have occurred as a result of improper loading and unloading of solid bulk cargoes. It shall be noted that solid bulk cargoes have to be properly distributed throughout the ship to provide adequate stability and to ensure that the ship's structure is never overstressed. According to the second part of the IMSBC Code, the loading, handling and unloading precautions are as follows:

3.2.1. To Prevent the Structure Being Overstressed

- A general cargo ship is normally constructed to carry cargoes in the range of 1.39 to 1.67 cubic meters per tone when loaded to full bale and deadweight capacities.
- When loading a high density solid bulk cargo, particular attention shall be given to the distribution of weights to avoid excessive stresses, taking into account that the loading conditions may be different from those found normally and that improper distribution of such cargo may be capable of stressing either the structure under the load or the entire hull.
- To set out exact rules for the distribution of loading is not practicable for all ships because the structural arrangements of each vessel may vary greatly. The information on proper distribution of cargo may be provided in the ship's stability information booklet or may be obtained by the use of loading calculators, if available.

3.2.2. To Aid Stability

- Having regard to SOLAS regulation II-1/5-1 of SOLAS Convention, a stability information booklet shall be provided aboard all ships subject to the Convention. The master shall be able to calculate the stability for the anticipated worst conditions during the voyage as well as that on departure and demonstrate that the stability is adequate.
- Shifting divisions and bins, of adequate strength, shall be erected whenever solid bulk cargoes, which are suspected of readily shifting, are carried in 'tween-deck cargo spaces or in only partially filled cargo spaces.

- As far as practicable, high-density cargoes shall be loaded in the lower hold cargo spaces in preference to 'tween-deck cargo spaces. When it is necessary to carry high-density cargoes in 'tween-decks or higher cargo spaces, due consideration shall be given to ensure that the deck area is not overstressed and that the ship's stability is not reduced below the minimum acceptable level specified in the ship's stability data.

3.2.3. Loading and Unloading

- Cargo spaces shall be inspected and prepared for the particular cargo which is to be loaded. (Refer to the Guidance to ships' crews and terminal personnel for bulk carrier inspections, adopted by the Organization by resolution A.866(20).)
- Due consideration shall be paid to bilge wells and strainer plates, for which special preparation is necessary, to facilitate drainage and to prevent entry of the cargoes into the bilge system. Bilge lines, sounding pipes and other service lines within the cargo space shall be in good order.
- Because of the velocity at which some high-density solid bulk cargoes are loaded, special care may be necessary to protect cargo space fittings from damage. To sound bilges after the completion of loading may be effective to detect damage on cargo space fittings.
- As far as practicable, ventilation systems shall be shut down or screened and air conditioning systems placed on recirculation during loading or discharge, to minimize dust ingress into the living quarters or other interior spaces. Due consideration shall be given to minimize the extent to which dust may come into contact with moving parts of deck machinery and external navigational aids.

3.3. Damages During Loading or Unloading

According to Article 12 of the Regulation on Safe Loading and Unloading of Bulk Carriers, if damage occurs to the ship's structure or equipment during loading or unloading, the following provisions shall apply:

1. The terminal representative reports the damage to the master and if necessary, the damage is repaired.
2. If the damage is of such a nature as to undermine the structural integrity or waterproofing of the boat or the basic technical systems of the ship, the terminal representative and/or the master shall inform the administration of the flag state or an organization authorized by it and acting on its behalf. The decision to make repairs immediately or to postpone the repair is made by the Administration in the capacity of port state control authority.
3. In this regard, the Administration takes into account the opinions of the flag state administration or the organization authorized by it and acting on its behalf, and the master of the ship. If it is deemed necessary to make repairs immediately, this repair is done before the ship leaves the port, in a way that can be accepted by the master and the Administration.
4. Before making the decision specified in paragraph 3 of this article, the administration may benefit from the services of an authorized institution for the purpose of examining the damage and expressing an opinion on the repair or postponement of the repair.

3.4. Information Given by the Shipmaster to the Terminal

In accordance with the Regulation on the Safe Loading and Unloading of Bulk Carriers, the information to be given by the ship's master to the terminal is given below:

1. The ship's estimated time of arrival (ETA) off the port as early as possible. (This advice should be updated as appropriate.),
2. With the first given arrival information;
 - Ship's name, call sign, IMO Number of the ship, its flag State and port of registry,
 - A loading plan stating the quantity of cargo required, stowage by hatches, loading order and the quantity to be loaded in each pour, provided the ship has sufficient information to be able to prepare such a plan,
3. Arrival and proposed departure draughts,
4. Time required for de-ballasting,
5. The ship's length overall, beam, and length of the cargo area from the forward coaming of the forward-most hatch to the after coaming of the aft-most hatch into which cargo is to be loaded or from which cargo is to be removed,
6. Distance from the water line to the first hatch to be loaded or unloaded and the distance from the ship's side to the hatch opening,
7. The location of the ship's accommodation ladder,
8. Air draught,
9. Details and capacities of ship's cargo handling gear,
10. Number and type of mooring lines,
11. Special demands of the load, such as continuous measurement or stabilization of the water content,
12. Details of any necessary repairs that may delay berthing, the start of loading or unloading, or the movement of the ship after loading or unloading has been completed,
13. Any other item related to the ship requested by the terminal.

3.5. Duties of the Master Before and During Loading or Unloading Operations

In accordance with the Regulation on the Safe Loading and Unloading of Bulk Carriers, the duties of the master before and during the loading or unloading operations are as follows:

1. The process of receiving or unloading cargo and the process of receiving or pressing ballast water are under the control of the responsible officer on board the ship,
2. Monitoring of the load and ballast water pattern throughout the loading or unloading process so that the structure of the vessel is not subject to excessive stress,
3. If the ship is inclined or requires a tendency (tilt to the side) in terms of operation, it should be kept as small as possible,
4. Taking into account local weather conditions and weather forecasts, we ensure that the ship is safely tied up at the dock,
5. Taking into account the need of the crew to rest for sufficient periods of time in order to avoid fatigue, to take care of the adjustment of the mooring ropes or for any occasion, to have a sufficient number of officers and crew on board,

6. Notification of load balancing needs to the terminal representative (load balancing will be carried out in accordance with IMO's procedures in the Code of Practice Safe for Solid Bulk Loads),
7. Notify the terminal representative of the harmonization needs between the rates of discharge or unloading of bile for the vessel and of receiving or unloading cargo and of any deviation from the plan of pumping or receiving ballast, or of any other matters that may affect the plan of receiving or unloading cargo,
8. That the ballast water is disposed of in proportions in accordance with the agreed loading plan and therefore the dock or nearby boats are not filled with water (if it is not possible for the ship to completely discharge the ballast water before the balancing stage during the loading process, the master agrees with the terminal representative on the times when the loading may be suspended and the duration of these suspensions),
9. If there is a danger due to the nature of the cargo in case of another change in rain or weather conditions, to have agreed with the terminal representative about the operations to be taken in this case,
10. Any hot work on or near the ship while the ship is at the dock shall be carried out only with the permission of the terminal representative and in accordance with the requirements of the competent authority,
11. Closely supervise the loading or unloading process and the ship in the final stages thereof,
12. If the loading or unloading process causes damage, creates a dangerous situation or is likely to do so, the terminal representative is warned immediately,
13. To allow the conveyor belt system to be unloaded, the terminal representative is informed of when the final balancing of the ship must begin,
14. In order to avoid bending the structure of the ship, the unloading process on the pier side and the unloading process on the starboard side in the same hatch are compatible with each other,
15. When ballast is placed in one or more tanks, it shall ensure that the possibility of flammable steam coming out of the hatches is taken into account and that precautions are taken before any hot work is permitted to be carried out adjacent to or above these tanks.

3.6. Information to be given by the Terminal Officer to the Shipmaster

In accordance with the Regulation on Safe Loading and Unloading of Bulk Carriers, the information to be given by the terminal officer to the ship master is as follows:

1. The name of the berth where the loading or unloading will be carried out, the estimated times/durations for docking and completion of loading or unloading,
2. A nominal rate of the terminal to be used in loading or unloading and loading or unloading the hardware of the head (scoop), including the number of loading or unloading equipment during the unloading process as well as the characteristics of the load, or unloading from the ship's store is taken each time and loss estimated time required for completion of each stage of the process,
3. Matters that the master should know about the berthing location or breakwater, including the positions of fixed and mobile obstacles, fenders, pier bollards and ship mooring devices,
4. The minimum water depth along the berthing place and in the approach and departure channels,
5. The water density at the dock measured using the Draft Survey Hydrometer,

6. The maximum distance between the top of the cargo Deckhouse doors or the edges and the water line, whichever is necessary in terms of loading or unloading, and the maximum air draft (free side height),
7. The broadside pier and the entrance device,
8. Which side of the ship will dock,
9. The maximum allowable speed to approach the pier, the presence, type and pulling force of tugs,
10. The order of loading for different parts of the cargo and other restrictions if it is not possible to take the cargo in any order to fit the ship,
11. If the cargo to be put on the ship has features that may cause danger when it comes into contact with other loads or residues on the ship, information on these,
12. To be informed in advance about the proposed loading or unloading operations or about the changes made to the existing plans for loading/unloading,
13. Whether the loading or unloading equipment of the terminal is stationary or the presence of any situation that restricts its movement,
14. The necessary mooring ropes,
15. Unusual mooring device warnings,
16. Restrictions on receiving or pressing ballast,
17. The maximum course draft permitted by the competent authority,
18. It includes other matters requested by the master regarding the terminal.

3.7. Duties of Terminal Representative Before and During Loading or Unloading Operations

In accordance with the Regulation on Safe Loading and Unloading of Bulk Carriers, the duties of the terminal representative during loading and unloading are as follows:

1. Informs the master of the names and contact procedures of the terminal personnel or loader agency who will be responsible for the loading or unloading operations and with whom the master will be in contact.
2. Take all precautions to prevent the loading or unloading equipment from damaging the ship and notify the master if damage occurs.
3. If the ship needs a slope or an operational inclination (tilting), it ensures that this is kept as short as possible.
4. To avoid the vessel from bending, ensures that the unloading process on the pier side is compatible with the unloading process on the starboard side in the same hold.
5. High density loads or large the amount of load that is received in every fight, especially if allowed to free fall from a height, if the inner surface is completely covered with the cargo hold of the ship until the bottom is high impact load on specific points in the structure of weights and warn the master about the installation process that may be at the beginning of every special precautions to be taken in the cargo hold allows it.
6. It ensures that there is agreement between the master and the terminal representative on all aspects and at all stages of loading or unloading operations, and that the master is informed about any changes in the agreed loading rate and when each Decanting of the loaded weight is completed.

7. It keeps a record of the weight and condition of the loaded or unloaded cargo and ensures that the weights in the warehouses do not deviate from the agreed loading or unloading plan.
8. During loading or unloading, it ensures that the load is Jul-ated in accordance with the requirements of the master.
9. The amount of cargo required to reach the ship's departure draft and trim will also cover the amount of cargo remaining in the terminal's conveyor belt systems after loading is completed. For this purpose, he informs the master of the rated tonnage in the terminal's conveyor belt system and the requirements for cleaning the conveyor belt system after the loading is complete.
10. In case of unloading, if it is desired to increase or decrease the number of unloading heads (buckets) used, it informs the master about this and when the unloading operation from each hold is considered completed.
11. It ensures that any hot work on or near the ship while the ship is at the anchorage is carried out only with the permission of the master and in accordance with the requirements of the competent authority.

3.8. Precautions to be Taken by Shore Facility Operators

The precautions to be taken within the scope of Article 11 of the Regulation on the Transportation of Dangerous Cargoes specified by the Administration by Sea and the Safety of Loading in our facility are given below:

3.8.1. Berths, Jetty, Storages and Warehouses Designated for Explosive, Combustible, Flammable and Other Dangerous Cargoes

Berths and Jetty Designated for Loading and Discharging the Ships Which Transport Dangerous Cargoes

In our port facility, we have four dockyards and all kinds of vessels that match the draft. The features are as below:

Table 2 - Dock Features at the Port Facility

| Pier No | Length (meters) | Width (meters) | Max. water depth (meter) | Min. water depth (meter) | Largest ship tonnage and size to berth (DWT or GRT meter) |
|----------------|-----------------|----------------|--------------------------|--------------------------|---|
| Cargo Dock | 215 m | | 7,50 m | 6,50 m | 28.000 DWT |
| Dry Bulk Cargo | 360 m | | 7,30 m | 6,25 m | 20.000 DWT |

In our facility, ship acceptance is carried out day and night. However, the berthing of large tonnage ships with double tugs is not carried out after 24.00 at night.

Storages and Warehouses designated for Dangerous Cargoes

No dangerous goods with UN number are stored in our shore facility. However, the coal subject to the IMSBC Code is stored in the open storage area specified in the site plan. The capacity of the storage area is 5.000 m².

3.8.2. Equipment and Installations of Dangerous Cargoes Handling

The hazardous materials coming to our shore installation are being delivered/picked up by rail cranes. The handling equipment are as follows:

Table 3 – Handling Equipment at the Port Facility

| | | |
|---------------------------------|----------|--------------------------|
| Sennomogen Mobile Cranes | 4 Pieces | 15 - 20 Tone capacity |
| Electricity Cranes | 2 Pieces | 5 - 15 Tone capacity |
| Rubber Wheel Loader Caterpillar | 2 Pieces | 4m ³ Capacity |
| Rubber Wheel Loader Bobcat | 2 Pieces | - |

3.8.3. Operations to be Performed if It is Not Possible to Store Dangerous Cargoes in the Area Where They are Unloaded on the Pier or Dock

Coal and other bulk cargo unloaded from the ships at the Bulk Cargo Docks and Cargo Docks are delivered to the storage areas outside the port area with wagons or trucks as soon as possible without waiting in the field.

3.8.4. Information on the Risk and Safety Precautions of Hazardous Materials Packages/Packings

Packaging is not done in our shore facility.

3.8.5. Protective Clothing of Shore Facility Personnel in Charge of Handling Dangerous Cargoes, Seamen and Other Authorized People for Goods During Loading, Unloading and Storing

- Glove
- Welder Mask
- Business Dress
- Welder Jacket
- Powder Mask (Single use)
- Half Face Powder Mask
- Welding Apparel
- Powder workwear
- Chemical workwear
- Safety belt
- Work shoes
- Boot
- Helmet
- Visor
- Headphone
- Gas Filter
- Powder Eyeglass
- Chemical Eyewear
- Welder's Eyeglass

3.8.6. Teams in Charge of Fighting Against Fire During Handling Dangerous Cargoes, Equipment, Fire Extinguishing System and First Aid Units of the Teams

List of people in charge of fighting against fire in our shore facility and their duties, fire extinguishing systems and first aid teams and duties of the team are the same as Emergency Action Plan. Fire-fighting team in our shore facility is equipped with firefighting equipment, having fire-extinguishing and first aid units ready to use at any moment. Information on fire protection systems in our offshore installation is as in the Hazardous Substances Directive Article 8.10, 8.11, 8.12 and in the Emergency Action Plan.

3.8.7. Preparation of an Emergency Evacuation Plan by Shore facility Operators for the Evacuation of Ships and Marine Vehicles from Shore Facilities in Case of Emergency

The emergency evacuation procedure for removal of ships and marine vessels from shore installations in an emergency is as in Annex-19.

3.8.8. Issues Related to Fire, Safety and Security Precautions to be Taken by Shore Facility Operators

Our facility precautions taken in relation to the fire is the same as Emergency Action Plan. Precautions taken regarding safety in our facilities, prepared under the ISPS Code is the same as Port Facility Security Plan. Issues related to our facility security precautions taken Dangerous Book is the same as in Article 9.

3.8.9. Necessary Training and Certificates According to the Regulation on Training and Authorization within the Scope of the International Code on Dangerous Cargoes Transported by Sea

The trainings planned by DGSA, which serves the personnel involved in the dangerous cargo handling operation in our facility, are carried out and the records of the training are kept.

4. CLASSES, TRANSPORTATION, LOADING/DISCHARGING, HANDLING, SEGREGATION, STOWING AND STORAGE OF DANGEROUS CARGOES

Dangerous cargoes that are subject to the provisions of the IMSBC Code but do not cover the IMDG Code classes are handled at our port. The issues related to the transportation, loading/unloading, handling, separation, stacking and storage of hazardous substance classes described under this heading have been put for informational purposes in accordance with the Implementation Instruction dated 20.04.2022.

4.1. Classes of Dangerous Cargoes

4.1.1. Classes Included in the IMDG Code

All substances subject to the provisions of the IMDG Code (dangerous goods) are assigned to one and more of the nine basic classes (secondary hazard) according to the hazard they present. Classes:

- Class 1.1 Substances and articles which have a mass explosion hazard
- Class 1.2 Substances and articles which have a projection hazard but not a mass explosion hazard
- Class 1.3 Substances and articles which have a fire hazard and either a minor blast hazard or a minor projection hazard or both, but not a mass explosion hazard
- Class 1.4 Substances and articles which present no significant hazard
- Class 1.5 Very insensitive substances which have a mass explosion hazard very insensitive substances which have a mass explosion hazard
- Class 1.6 Extremely insensitive articles which do not have a mass explosion hazard

- Class 2.1 Flammable gases
- Class 2.2 Non-flammable, non-toxic gases
- Class 2.3 Toxic gases
- Class 3 Flammable liquids
- Class 4.1 Flammable solids, self-reactive substances, solid desensitized explosives and polymerizing substances
- Class 4.2 Substances liable to spontaneous combustion
- Class 4.3 Substances which, in contact with water, emit flammable gases
- Class 5.1 Oxidizing substances
- Class 5.2 Organic peroxides
- Class 6.1 Toxic substances
- Class 6.2 Infectious substances
- Class 7 Radioactive material
- Class 8 Corrosive substances
- Class 9 Miscellaneous dangerous substances and articles

4.1.2. Hazard Groups Defined in IMSBC Code

Hazard group A – Cargoes which may liquefy

If the load in question is shipped with a moisture content exceeding the transportable moisture limit (TML), the danger of liquefaction can be seen. Such cargoes may appear to be in a relatively dry granular state when loaded, and yet may contain sufficient moisture to become fluid under the stimulus of compaction and the vibration which occurs during a voyage.

A ship's motion may cause a cargo to shift sufficiently to capsize the vessel. Trimming the cargo in accordance with section 5 of IMSBC Code can prevent sliding failure.

Some cargoes which may liquefy may also heat spontaneously.

Concentrates or other cargoes which may liquefy shall only be accepted for loading when the actual moisture content of the cargo is less than its TML. Such cargoes may be transported on vessels specially designed and suitable for transporting finely powdered cargoes.

Cargoes which contain liquids other than packaged canned goods or the like shall not be stowed in the same cargo space above or adjacent to these solid bulk cargoes.

For a group A cargo, the actual moisture content and transportable moisture limit shall be determined in accordance with a procedure determined by the appropriate authority.

Hazard group B – Materials possessing chemical hazards

Solid bulk cargoes which may possess chemical hazards during transport, because of their chemical nature or properties, are in group B. These materials can be classified as follows:

1. Classification is made in accordance with the IMDG Code of SOLAS. The classes that can be mentioned for group B bulk solid cargoes under the IMSBC Code are as follows:

Class 4.1 Flammable solids

The materials in this class are readily combustible solids and solids which may cause fire through friction.

Class 4.2 Substances liable to spontaneous combustion

The materials in this class are materials, other than pyrophoric materials, which, in contact with air without energy supply, are liable to self-heating.

Class 4.3 Substances which, in contact with water, emit flammable gases

The materials in this class are solids which, by interaction with water, are liable to become spontaneously flammable or to give off flammable gases in dangerous quantities.

Class 5.1 Oxidizing substances

The materials in this class are materials that while in themselves not necessarily combustible, may, generally by yielding oxygen, cause, or contribute to, the combustion of other material.

Class 6.1 Toxic substances

The materials in this class are materials liable either to cause death or serious injury or to harm human health if swallowed or inhaled, or by skin contact.

Class 7 Radioactive material

Subject to special rules.

Class 8 Corrosive substances

The materials in this class are materials which, by chemical action, will cause severe damage when in contact with living tissue or will materially damage, or even destroy, other goods or the means of transport.

Class 9: Miscellaneous dangerous substances and articles

The materials in this class are materials and articles which, during transport, present a danger not covered by other classes.

2. These are materials which, when carried in bulk, possess chemical hazards other than the hazards covered by the classification system of the IMDG Code.

These materials present a significant risk when carried in bulk and require special precautions.

A material shall be classified as MHB if the material possesses one or more of the chemical hazards (excluding those hazards which are covered by the classification system of the IMDG Code) as defined below.

MHB (CB) Combustible solids

Easily combustible or easily ignited.

MHB (SH) Self-heating solids

It can heat itself.

MHB (WF) Solids that evolve flammable gas when wet

Evolves flammable gases when in contact with water.

MHB (WT) Solids that evolve toxic gas when wet

Evolves toxic gases when in contact with water.

MHB (TX) Toxic solids

Have toxic hazards to humans if inhaled or with contact with skin.

MHB (CR) Corrosive solids

Corrosive to skin, eye or to metal.

MHB (OH) Other hazards

In case of deviations in the determination of the hazard criteria given above, it is included in the scope of other hazards and recorded in the hazard section of the cargo.

Hazard group C – Other Cargoes

Group C consists of cargoes which are neither liable to liquefy (group A) nor to possess chemical hazards (group B). This does not mean that there is no danger of loads in this group.

For example, sand and fine particle loads can be abrasive to the surface, powdered silica can cause discomfort in the respiratory tract, and cement can slip and dust during loading.

Employees who are exposed to the dust of the cargo during handling should use eye protective equipment, a mask with a dust filter and protective clothing.

4.2. Packages of Dangerous Goods

4.2.1. Packaging Types

The numbers specified for the valid packaging types and the letters given for the material types in the IMDG Code for the code system used in the identification of packaging types are as follows:

Table 4 – Packaging Identification Codes

| Kinds of Packaging | Types of Material |
|-----------------------|--|
| 1 Drum | A Steel (all types and surface treatments) H Plastics material |
| 2 - | B Aluminium L Textile |
| 3 Jerrican | C Natural wood M Paper, multiwall |
| 4 Box | D Plywood N Metal (other than steel or aluminium) |
| 5 Bag | F Reconstituted wood P Glass, porcelain or stoneware |
| 6 Composite packaging | G Fibreboard |

4.2.2. Use of Packagings

1. Dangerous goods shall be packed in good quality packagings, including IBCs and large packagings, which shall be strong enough to withstand the shocks and loadings normally encountered during transport, including trans-shipment between cargo transport units and between cargo transport units and warehouses as well as any removal from a pallet or overpack for subsequent manual or mechanical handling.
2. Packagings, including IBCs and large packagings, shall be constructed and closed so as to prevent any loss of contents when prepared for transport which may be caused under normal conditions of transport, by vibration, or by changes in temperature, humidity or pressure (resulting from altitude, for example).
3. Packagings, including IBCs and large packagings, shall be closed in accordance with the information provided by the manufacturer. No dangerous residue shall adhere to the outside of packages, IBCs and large packagings during transport.
4. Parts of packagings, including IBCs and large packagings, which are in direct contact with dangerous goods shall not be affected or significantly weakened by those dangerous goods; and shall not cause a dangerous effect, such as catalysing a reaction or reacting with the dangerous goods; shall not allow permeation of the dangerous goods that could constitute a danger under normal conditions of transport. Where necessary, they shall be provided with a suitable inner coating or treatment.
5. Unless otherwise provided elsewhere in this Code, each packaging, including IBCs and large packagings, except inner packagings, shall conform to a design type successfully tested in accordance with the provisions of IMDG Code as applicable.
6. When filling packagings, including IBCs and large packagings, with liquids, sufficient ullage (outage) shall be left to ensure that neither leakage nor permanent distortion of the packaging occurs as a result of an expansion of the liquid caused by temperatures likely to occur during transport.
7. Unless specific provisions are prescribed, liquids shall not completely fill a packaging at a temperature of 55°C. However, sufficient ullage shall be left in an IBC to ensure that at the mean bulk temperature of 50°C it is not filled to more than 98% of its water capacity.
8. For air transport, packagings intended to contain liquids shall also be capable of withstanding a pressure differential without leakage as specified in the international regulations for air transport.
9. Inner packagings shall be packed in an outer packaging in such a way that, under normal conditions of transport, they cannot break, be punctured or leak their contents into the outer packaging.
10. Inner packagings containing liquids shall be packaged with their closures upward and placed within outer packagings consistent with the orientation marks. Inner packagings that are liable to break or be punctured easily, such as those made of glass, porcelain or stoneware or of certain plastics materials, etc., shall be secured in outer packagings with suitable cushioning material. Any leakage of the contents shall not substantially impair the protective properties of the cushioning material or of the outer packaging.

11. Where an outer packaging of a combination packaging or a large packaging has been successfully tested with different types of inner packagings, a variety of such different inner packagings may also be assembled in this outer packaging or large packagings.
12. Use of supplementary packagings within an outer packaging (e.g. an intermediate packaging or a receptacle inside a required inner packaging) additional to what is required by the packing instructions is authorized provided all relevant requirements are met and, if appropriate, suitable cushioning is used to prevent movement within the packaging.
13. Cushioning and absorbent material shall be inert and suited to the nature of the contents.
14. The nature and the thickness of the outer packagings shall be such that friction during transport does not generate any heating likely to alter dangerously the chemical stability of the contents.
15. Dangerous goods shall not be packed together in the same outer packaging, or in large packagings, with dangerous or other goods if they react dangerously with each other and cause:
 - Combustion and/or evolution of considerable heat,
 - Evolution of flammable, toxic or asphyxiant gases,
 - The formation of corrosive substances; or,
 - The formation of unstable substances.
16. The closures of packagings containing wetted or diluted substances shall be such that the percentage of liquid (water, solvent or phlegmatizer) does not fall below the prescribed limits during transport.
17. Where two or more closure systems are fitted in series on an IBC, that nearest to the substance being transported shall be closed first.
18. Packages containing substances with the following properties Unless otherwise specified in the Dangerous Goods List should be hermetically sealed:
 - Evolve flammable gases or vapour,
 - May become explosive if allowed to dry,
 - Evolve toxic gases or vapour,
 - Evolve corrosive gases or vapour; or,
 - May react dangerously with the atmosphere.
19. Where pressure may develop in a package by the emission of gas from the contents (as a result of temperature increase or other causes), the packaging or IBC may be fitted with a vent provided that the gas emitted will not cause danger on account of its toxicity, its flammability, the quantity released, etc.
20. A venting device shall be fitted if dangerous overpressure may develop due to normal decomposition of substances. The vent shall be so designed that, when the packaging or IBC is in the attitude in which it is intended to be transported, leakages of liquid and the penetration of foreign substances are prevented under normal conditions of transport.
21. Liquids may only be filled into inner packagings which have an appropriate resistance to internal pressure that may be developed under normal conditions of transport.
22. New, remanufactured or re-used packagings, including IBCs and large packagings, or reconditioned packagings and repaired or routinely maintained IBCs shall be capable of passing

- the tests prescribed in IMDG Code, as applicable. Before being filled and handed over for transport, every packaging, including IBCs and large packagings, shall be inspected to ensure that it is free from corrosion, contamination or other damage and every IBC shall be inspected with regard to the proper functioning of any service equipment. Any packaging which shows signs of reduced strength as compared with the approved design type shall no longer be used or shall be so reconditioned that it is able to withstand the design type tests. Any IBC which shows signs of reduced strength as compared with the tested design type shall no longer be used or shall be so repaired or routinely maintained that it is able to withstand the design type tests.
23. Liquids shall be filled only into packagings, including IBCs, which have an appropriate resistance to the internal pressure that may develop under normal conditions of transport. As the vapour pressure of low-boiling-point liquids is usually high, the strength of receptacles for these liquids shall be sufficient to withstand, with an ample factor of safety, the internal pressure likely to be generated.
 24. Packagings and IBCs marked with the hydraulic test pressure prescribed in IMDG Code, respectively, shall be filled only with a liquid having a vapour pressure:
 - Such that the total gauge pressure in the packaging or IBC (i.e. the vapour pressure of the filling substance plus the partial pressure of air or other inert gases, less 100 kPa) at 55°C, determined on the basis of a maximum degree of filling in accordance with 4.1.1.4 and a filling temperature of 15°C, will not exceed two thirds of the marked test pressure; or,
 - At 50°C, less than four sevenths of the sum of the marked test pressure plus 100 kPa; or,
 - At 55°C, less than two thirds of the sum of the marked test pressure plus 100 kPa.
 25. IBCs intended for the transport of liquids shall not be used to carry liquids having a vapour pressure of more than 110 kPa (1.1 bar) at 50°C or 130 kPa (1.3 bar) at 55°C.
 26. Empty packagings, including IBCs and large packagings, that have contained a dangerous substance shall be treated in the same manner as is required by this Code for a filled packaging, unless adequate measures have been taken to nullify any hazard.
 27. Every packaging intended to contain liquids shall successfully undergo a suitable leakproofness test before it is first used for transport and after remanufacturing or reconditioning of any packaging, before it is re-used for transport.
 28. For this test, the packaging need not have its closures fitted. The inner receptacle of a composite packaging may be tested without the outer packaging, provided the test results are not affected. This test is not necessary for inner packagings of combination packagings or large packagings.
 29. Packagings, including IBCs, used for solids which may become liquid at temperatures likely to be encountered during transport shall also be capable of containing the substance in the liquid state.
 30. Packagings, including IBCs, used for powdery or granular substances shall be sift-proof or shall be provided with a liner.
 31. For plastics drums and jerricans, rigid plastics IBCs and composite IBCs with plastics inner receptacles, unless otherwise approved by the competent authority, the period of use permitted for the transport of dangerous substances shall be five years from the date of

manufacture of the receptacles, except where a shorter period of use is prescribed because of the nature of the substance to be transported.

32. Where ice is used as a coolant it shall not affect the integrity of the packaging.

4.3. Plaques, Plates, Brands and Labels for Dangerous Goods

4.3.1. Placarding Provisions

1. Enlarged labels (placards) and marks and signs shall be affixed to the exterior surfaces of a cargo transport unit or bulk container to provide a warning that the contents of the unit or bulk container are dangerous goods and present hazards, unless the labels and/or marks affixed to the packages are clearly visible from the exterior of the cargo transport unit or bulk container.
2. The methods of placarding and marking on cargo transport units and bulk containers shall be such that this information will still be identifiable on cargo transport units and bulk containers surviving at least three months' immersion in the sea. In considering suitable marking methods, account shall be taken of the ease with which the surface of the cargo transport unit or bulk container can be marked.
3. All placards, orange panels, marks and signs shall be removed from cargo transport units and bulk containers or masked as soon as both the dangerous goods or their residues which led to the application of those placards, orange panels, marks or signs are discharged.
4. Placards shall be affixed to the exterior surface of cargo transport units and bulk containers to provide a warning that the contents of the unit are dangerous goods and present hazards. Placards shall correspond to the primary hazard of the goods contained in the cargo transport unit and bulk container except that:
 - Placards are not required on cargo transport units carrying any quantity of explosives of division 1.4, compatibility group S; and,
 - Placards indicating the highest hazard only need be affixed on cargo transport units carrying substances and articles of more than one division in class 1.
5. Placards shall be displayed on a background of contrasting color, or shall have either a dotted or solid outer boundary line.
6. For dangerous goods of class 9 the placard shall correspond to the label model No. 9; label model No. 9A shall not be used for placarding purposes.
7. Placards shall also be displayed for those subsidiary hazards for which a subsidiary hazard label is required. However, cargo transport units and bulk containers containing goods of more than one class need not bear a subsidiary hazard placard if the hazard represented by that placard is already indicated by a primary hazard placard.
8. A cargo transport unit or bulk container containing dangerous goods or residues of dangerous goods shall clearly display placards as follows:
 - A freight container, semi-trailer, a closed or sheeted bulk container or portable tank: one on each side and one on each end of the unit. Portable tanks having a capacity of not more than 3,000 L may be placarded or, alternatively, may be labelled instead, on only two opposite sides;
 - A railway wagon: at least on each side;

- A multiple-compartment tank containing more than one dangerous substance or their residues: along each side at the positions of the relevant compartments. If all compartments are required to display the same placards, these placards need to be displayed only once along each side of the cargo transport unit;
- A flexible bulk container: in at least two opposing positions; and
- Any other cargo transport unit: at least on both sides and on the back of the unit.

4.3.2. Specifications for Placards

Except the class 7 placard, and the marine pollutant mark, a placard shall be configured as shown in the figure below:

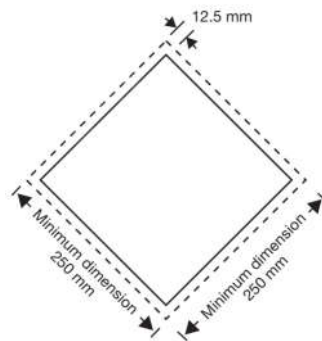


Figure 1 – Placard Sizes (Except Class 7)

The placard shall be in the form of a square set at an angle of 45° (diamond-shaped). The minimum dimensions shall be 250 mm \times 250 mm (to the edge of the placard). The line inside the edge shall be parallel and 12.5 mm from the outside of that line to the edge of the placard. The symbol and line inside the edge shall correspond in color to the label for the class or division of the dangerous goods in question. The class or division symbol/ numeral shall be positioned and sized in proportion for the corresponding class or division of the dangerous goods in question. The placard shall display the number of the class or division (and for goods in class 1, the compatibility group letter) of the dangerous goods in question in the manner for the corresponding label, in digits not less than 25 mm high. Where dimensions are not specified, all features shall be in approximate proportion to those shown.

4.3.3. Labelling Provisions

1. Labels identifying primary and subsidiary hazards shall conform to models Nos. 1 to 9.
2. Where articles or substances are specifically listed in the Dangerous Goods List, a danger class label shall be affixed for the hazard shown in column 3.
3. A subsidiary hazard label shall also be affixed for any hazard indicated by a class or division number in column 4 of the Dangerous Goods List. However, special provisions indicated in column 6 may also require a subsidiary hazard label where no subsidiary hazard is indicated in column 4 or may be exempt from the requirement for a subsidiary hazard label where such a hazard is indicated in the Dangerous Goods List.
4. Packagings containing substances of class 8 need not bear subsidiary hazard label model No. 6.1 if the toxicity arises solely from the destructive effect on tissue. Substances of class 4.2 need not bear subsidiary hazard label model No. 4.1.

5. If a substance which meets the definition of more than one class is not specifically listed by name in the Dangerous Goods List, the provisions in IMDG Code shall be used to determine the primary hazard class of the goods. In addition to the label required for that primary hazard class, subsidiary hazard labels shall also be applied as specified in the Dangerous Goods List.
6. A package containing a dangerous substance which has a low degree of danger may be exempt from these labelling requirements. In this case, a special provision specifying that no hazard label is required appears in column 6 of the Dangerous Goods List for the relevant substance. However, for certain substances the package shall be marked with the appropriate text as it appears in the special provision, for example;

Table 5 - Example of Special Provision in Label Marking

| Substance | UN | Class | Mark required on bales |
|--|------|-------|------------------------|
| Baled hay in cargo transport unit | 1327 | 4.1 | None |
| Baled hay not in cargo transport unit | 1327 | 4.1 | Class 4.1 |
| Baled dry vegetable fibres in cargo transport unit | 3360 | 4.1 | None |

| Substance | UN | Class | Mark required on packages in addition to the proper shipping name and UN number |
|-------------|------|-------|---|
| Fish meal * | 1374 | 4.2 | Class 4.2** |

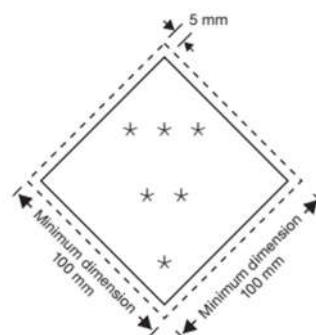
* Only applicable to fish meal in packing group III.

** Exempt from class marking when loaded in a cargo transport unit containing only fish meal under UN 1374.

7. These provisions are related essentially to danger labels. However, additional marks or symbols indicating precautions to be taken in handling or storing a package (such as a symbol representing an umbrella, indicating that a package shall be kept dry) may be displayed on a package if appropriate.

4.3.4. Provisions for Labels

Labels shall be configured as shown in the figure below:



* The class or, for divisions 5.1 and 5.2, the division number shall be shown in the bottom corner.

** Additional text/numbers/symbol/letters shall (if mandatory) or may (if optional) be shown in this bottom half.

*** The class or division symbol or, for divisions 1.4, 1.5 and 1.6, the division number, and for model No. 7E, the word "FISSILE" shall be shown in this top half.


















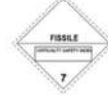






Figure 2 - Label Sizes

The label shall be in the form of a square set at an angle of 45 degrees (diamond-shaped). The minimum dimensions shall be 100 mm × 100 mm. There shall be a line inside the edge forming the diamond which shall be parallel and approximately 5 mm from the outside of that line to the edge of the label. Where dimensions are not specified, all features shall be in approximate proportion to those shown.

4.3.5. Hazard Labels and Marks

Labels shall satisfy the provisions below and conform, in terms of color, symbols and general format, to the models shown in below. Corresponding models required for other modes of transport, with minor variations which do not affect the obvious meaning of the label, are also acceptable.

Table 6 - Classification Marks of Dangerous Goods

| | | | | | | | |
|--|---|---|--|---|--|---|--|
| Class 1 - Explosives | | | | Class 5 - Oxidizing substances and organic peroxides | | | |
|  |  |  |  |  |  |  | |
| Division 1.1, 1.2 ve 1.3 | Division 1.4 | Division 1.5 | Division 1.6 | Class 5.1 Oxidizing substances | Class 5.2 Organic peroxides | | |
| Class 2 - Gases | | | | Class 6 - Toxic and infectious substances | | | |
|  |  |  |  |  |  | | |
| Class 2.1 Flammable gases | | Class 2.2 Non-flammable, non-toxic gases | | Class 6.1 Toxic substances | Class 6.2 Infectious substances | | |
| Class 3 - Flammable liquids | | | | Class 7 - Radioactive material | | | |
|  | | | |  | | | |
| | | | |  | | | |
| | | | |  | | | |
| | | | |  | | | |
| | | | | 7A | | | |
| | | | | 7B | | | |
| | | | | 7C | | | |
| | | | | 7E | | | |
| Class 4 - Flammable solids; substances liable to spontaneous combustion; substances which, in contact with water, emit flammable gases | | | | Class 8 - Corrosive substances | | | |
|  |  |  | |  | | | |
| Class 4.1: Flammable solids, self-reactive substances, solid desensitized explosives and polymerizing substances | Class 4.2 Substances liable to spontaneous combustion | Class 4.3 Substances which, in contact with water, emit flammable gases | | 8 | | | |
| | | | | Class 9 - Miscellaneous dangerous substances and articles | | | |
| | | | |  | | | |
| | | | |  | | | |
| | | | | 9 | | | |
| | | | | 9A | | | |

4.4. Marks and Packaging Groups of Dangerous Goods

4.4.1. Marking Provisions

- The proper shipping name of the contents shall be durably marked on at least both sides of:
 - Tank cargo transport units containing dangerous goods;
 - Bulk containers containing dangerous goods; or
 - Any other cargo transport unit containing packaged dangerous goods of a single commodity for which no placard, UN number or marine pollutant mark is required. Alternatively, the UN number may be displayed.

2. The proper shipping name for the goods shall be displayed in characters not less than 65 mm high. The proper shipping name shall be of contrasting color with the background. This may be reduced to 12 mm for portable tank containers with a capacity of not more than 3,000 L.
3. Except for goods of class 1, the UN number shall be displayed as required by this chapter on consignments of:
 - Solids, liquids or gases transported in tank cargo transport units, including on each compartment of a multi-compartment tank cargo transport unit;
 - Packaged dangerous goods loaded in excess of 4000 kg gross mass, to which only one UN number has been assigned and which are the only dangerous goods in the cargo transport unit;
 - Unpackaged LSA-I material, SCO-I or SCO-III material of class 7 in or on a vehicle, or in a freight container, or in a tank;
 - Packaged radioactive material with a single UN number in or on a vehicle, or in a freight container, when required to be transported under exclusive use;
 - Solid dangerous goods in bulk containers.
4. The UN number for the goods shall be displayed in black digits not less than 65 mm high, either:
 - Against a white background in the area below the pictorial symbol and above the class number and the compatibility group letter in a manner that does not obscure or detract from the other required placard elements; or;
 - On an orange rectangular panel not less than 120 mm high and 300 mm wide, with a 10 mm black border, to be placed immediately adjacent to each placard or marine pollutant mark. For portable tanks with a capacity of not more than 3,000 L, the UN number may be displayed on an orange rectangular panel of appropriately reduced size on the external surface of the tank in characters not less than 25 mm high. When no placard or marine pollutant mark is required, the UN number shall be displayed immediately adjacent to the proper shipping name.



* Location of class or division number

** Location of UN number

Figure 3 - Example of Marking

4.4.2. Marking of Packages Including IBCs

1. Unless provided otherwise in IMDG Code, the proper shipping name for the dangerous goods and the corresponding UN number, preceded by the letters "UN", shall be displayed on each package. The UN number and the letters "UN" shall be at least 12 mm high, except for packages of 30 L capacity or less or of 30 kg maximum net mass or less and for cylinders of 60 L water capacity or less when they shall be at least 6 mm in height and except for packages of 5 L capacity or less or of 5 kg maximum net mass when they shall be of an appropriate size.
2. In the case of unpackaged articles, the mark shall be displayed on the article, on its cradle or on its handling, storage or launching device. For goods of division 1.4, compatibility group S, the division and compatibility group letter shall also be marked unless the label for 1.4S is displayed. A typical package mark is:
CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (caprylyl chloride) UN 3265
3. All package marks:
 - Shall be readily visible and legible;
 - Shall be such that this information will still be identifiable on packages surviving at least three months' immersion in the sea. In considering suitable marking methods, account shall be taken of the durability of the packaging materials used and the surface of the package;
 - Shall be displayed on a background of contrasting color on the external surface of the package; and
 - Shall not be located with other package marks that could substantially reduce their effectiveness.
4. Salvage packagings including large salvage packagings and salvage pressure receptacles shall additionally be marked with the word "SALVAGE". The lettering of the "SALVAGE" mark shall be at least 12 mm high.
5. Intermediate bulk containers of more than 450 L capacity and large packagings shall be marked on two opposing sides.
6. Cylinders of 60 L water capacity or less marked with a UN number in accordance with the provisions of the IMDG Code up to 31 December 2013 and which do not conform to the provisions of IMDG Code regarding the size of the UN number and of the letters "UN" applicable as from 1 January 2014 may continue to be used until the next periodic inspection but no later than 1 July 2018.

4.4.3. Marine Pollutant Mark

1. Packages containing marine pollutants shall be durably marked with the marine pollutant mark.
2. The marine pollutant mark shall be located adjacent to the marks required by 4.4.2 and shall comply with the relevant marking provisions..
3. The labelling provisions of 4.3.3 apply in addition to any requirement for packages to bear the marine pollutant mark.
4. The marine pollutant mark shall be as shown in the figure below:



Figure 4 - Marine Pollutant Mark

5. The mark shall be in the form of a square set at an angle of 45° (diamond-shaped). The symbol (fish and tree) shall be black on white or a suitable contrasting background. The minimum dimensions shall be 100 mm \times 100 mm and the minimum width of line forming the diamond shall be 2 mm. If the size of the package so requires, the dimensions/line thickness may be reduced, provided the mark remains clearly visible. Where dimensions are not specified, all features shall be in approximate proportion to those shown.
6. Cargo transport units or bulk containers containing marine pollutants shall clearly display the marine pollutant mark in locations indicated in 4.3.1. The marine pollutant mark for cargo transport units and bulk containers shall be as described above, except that the minimum dimensions shall be 250 mm \times 250 mm. For portable tanks with a capacity of not more than 3,000 L, the dimensions may be reduced to 100 mm \times 100 mm.

4.4.4. Orientation Arrows

1. Packages shall be legibly marked with package orientation arrows which are similar to the illustration shown below or with those meeting the specifications of ISO 780:1997:
 - Combination packagings having inner packagings containing liquid dangerous goods,
 - Single packagings fitted with vents,
 - Cryogenic receptacles intended for the transport of refrigerated liquefied gases and,
 - Machinery or apparatus containing liquid dangerous goods when it is required to ensure the liquid dangerous goods remain in their intended orientation.
2. The orientation arrows shall appear on two opposite vertical sides of the package with the arrows pointing in the correct upright direction. They shall be rectangular and of a size that is clearly visible commensurate with the size of the package. Depicting a rectangular border around the arrows is optional.
3. Orientation arrows will be Two black or red arrows on white or suitable contrasting background. The rectangular border is optional. All features shall be in approximate proportion to those shown.

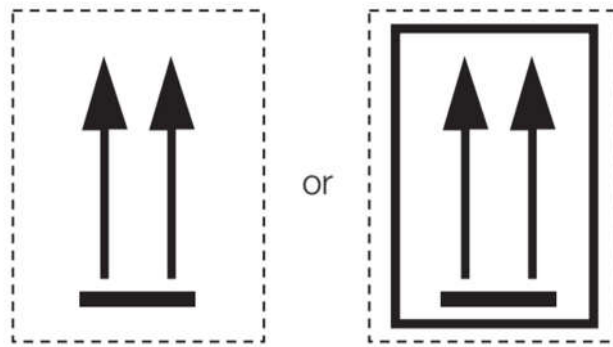


Figure 5 - Orientation Arrows

4. Orientation arrows are not required on:
 - Outer packagings containing pressure receptacles except cryogenic receptacles;
 - Outer packagings containing dangerous goods in inner packagings each containing not more than 120 mL, with sufficient absorbent material between the inner and outer packagings to completely absorb the liquid contents;
 - Outer packagings containing Division 6.2 infectious substances in primary receptacles each containing not more than 50 mL;
 - Type IP-2, type IP-3, type A, type B(U), type B(M) or type C packages containing class 7 radioactive material;
 - Outer packagings containing articles which are leak-tight in all orientations (e.g. alcohol or mercury in thermometers, aerosols, etc.); or
 - Outer packagings containing dangerous goods in hermetically sealed inner packagings each containing not more than 500 ml.
5. Arrows for purposes other than indicating proper package orientation shall not be displayed on a package marked in accordance with this subsection.

4.4.5. Lithium Battery Mark

1. Packages containing lithium cells or batteries prepared in accordance to IMDG Code shall be marked as shown in figure below.
2. The mark shall indicate the UN number, preceded by the letters "UN", i.e. 'UN 3090' for lithium metal cells or batteries or 'UN 3480' for lithium ion cells or batteries.
3. Where the lithium cells or batteries are contained in, or packed with, equipment, the UN number preceded by the letters "UN", i.e. 'UN 3091' or 'UN 3481' as appropriate shall be indicated.
4. Where a package contains lithium cells or batteries assigned to different UN numbers, all applicable UN numbers shall be indicated on one or more marks.
5. The mark shall be in the form of a rectangle or a square with hatched edging. The dimensions shall be a minimum of 100 mm wide × 100 mm high and the minimum width of the hatching shall be 5 mm. The symbol (group of batteries, one damaged and emitting flame, above the UN number for lithium ion or lithium metal batteries or cells) shall be black on white or suitable contrasting background.

6. The hatching shall be red. If the size of the package so requires, the dimensions may be reduced to not less than 100 mm wide × 70 mm high. Where dimensions are not specified, all features shall be in approximate proportion to those shown.

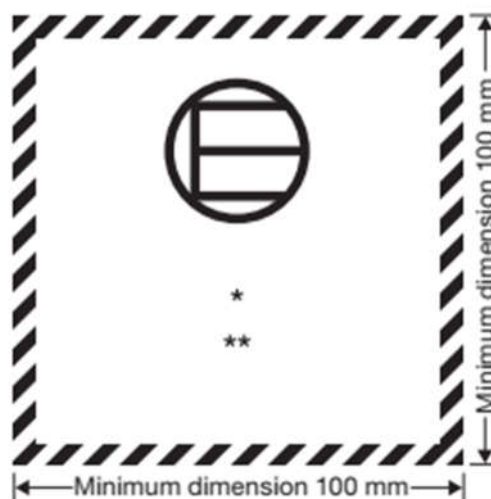


- * Place for UN number(s)
- ** Place for telephone number for additional information

Figure 6 - Lithium Battery Mark

4.4.6. Excepted Quantities Mark

1. Packages containing excepted quantities of dangerous goods shall be durably and legibly marked with the mark shown below. The primary hazard class of each of the dangerous goods contained in the package shall be shown in the mark. Where the name of the consignor or consignee is not shown elsewhere on the package, this information shall be included within the mark.



- * The class or, when assigned, the division number(s) shall be shown in this location
- ** The name of the consignor or of the consignee shall be shown in this location if not shown elsewhere on the package

Figure 7 - Excepted Quantities Mark

2. The mark shall be in the form of a square.
3. The hatching and symbol shall be of the same color, black or red, on white or suitable contrasting background.
4. The minimum dimensions shall be 100 mm × 100 mm. Where dimensions are not specified, all features shall be in approximate proportion to those shown.
5. When packages containing dangerous goods packed in excepted quantities are placed in an overpack or in a unit load, the overpack or the unit load shall be marked with the mark required by this chapter unless the marks representative of all dangerous goods in the overpack or the unit load are visible. In addition, an overpack shall be marked with the word "OVERPACK" unless marks representative of all dangerous goods, as required by this chapter, in the overpack are visible. The lettering of the "OVERPACK" mark shall be at least 12 mm high.

4.4.7. Limited Quantity Mark

1. Packages containing dangerous goods in limited quantities shall bear the mark shown below.
2. The mark shall be readily visible, legible and able to withstand open weather exposure without a substantial reduction in effectiveness.
3. The mark shall be in the form of a square set at an angle of 45° (diamond-shaped). The top and bottom portions and the surrounding line shall be black. The center area shall be white or a suitable contrasting background.
4. The minimum dimensions shall be 100 mm × 100 mm and the minimum width of the line forming the diamond shall be 2 mm. Where dimensions are not specified, all features shall be in approximate proportion to those shown. If the size of the package so requires, the minimum outer dimensions shown above may be reduced to be not less than 50 mm × 50 mm provided the mark remains clearly visible.
5. The minimum width of the line forming the diamond may be reduced to a minimum of 1 mm.

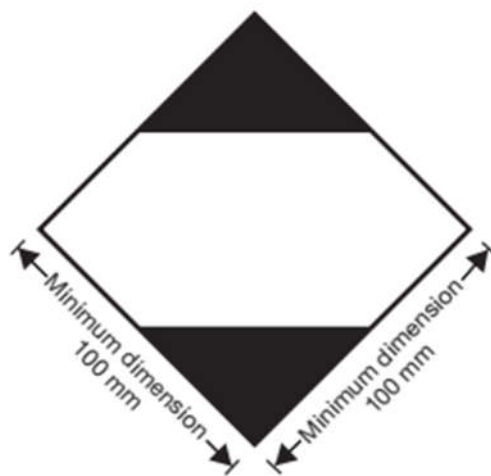


Figure 8 - Mark For Packages Containing Limited Quantities

6. When packages containing dangerous goods packed in limited quantities are placed in an overpack or in a unit load, the overpack or the unit load shall be marked with the mark required by this chapter unless the marks representative of all dangerous goods in the overpack or the unit load are visible.
7. In addition, an overpack shall be marked with the word "OVERPACK" unless marks representative of all dangerous goods, as required by this chapter, in the overpack are visible.
8. The lettering of the "OVERPACK" mark shall be at least 12 mm high.
9. Cargo transport units containing dangerous goods packed in limited quantities with no other dangerous goods and dangerous goods packed in limited quantities shall be placarded and marked of minimum 250 mm × 250 mm dimensions.
10. The mark shall be readily visible, legible and be such that this information will still be identifiable on cargo transport units surviving at least three months' immersion in the sea.

4.4.8. Elevated Temperature Substance Mark

1. Cargo transport units containing a substance that is transported or offered for transport in a liquid state at a temperature equal to or exceeding 100°C or in a solid state at a temperature equal to or exceeding 240°C shall bear on each side and on each end the mark shown in the figure below.

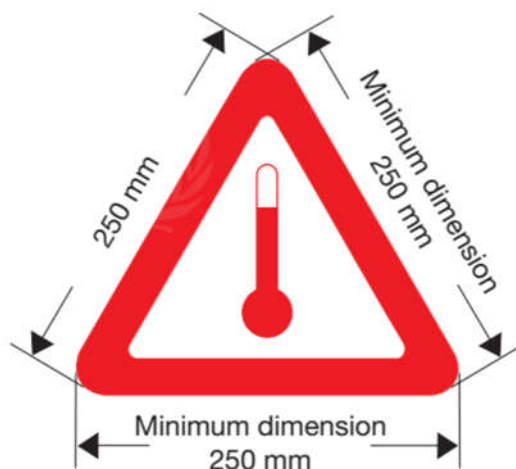


Figure 9 - Mark for Transport at Elevated Temperature

2. The mark shall be an equilateral triangle.
3. The color of the mark shall be red.
4. The minimum dimension of the sides shall be 250 mm except for portable tanks with a capacity of not more than 3,000 L where the sides may be reduced to 100 mm.
5. Where dimensions are not specified, all features shall be in approximate proportion to those shown.
6. In addition to the elevated temperature mark, the maximum temperature of the substance expected to be reached during transport shall be durably marked on both sides of the

portable tank or insulation jacket, immediately adjacent to the elevated temperature mark, in characters at least 100 mm high.

4.4.9. Packing Groups

1. For packing purposes, substances other than those of classes 1, 2, 5.2, 6.2 and 7, and other than self-reactive substances of class 4.1, are assigned to three packing groups in accordance with the degree of danger they present:

Packing group I : Substances presenting high danger

Packing group II : Substances presenting medium danger

Packing group III : Substances presenting low danger

2. The packing group to which a substance is assigned is indicated in the Dangerous Goods List in IMDG Code.
3. Articles are not assigned to packing groups. For packing purposes, any requirement for a specific packaging performance level is set out in the applicable packing instruction.

4.5. Segregation Tables on Ship and Shore Facility by Classes of Dangerous Goods

4.5.1. General Segregation Provisions

1. Segregation is the process of separating two or more substances or articles which are considered mutually incompatible when their packing or stowage together may result in undue hazards in case of leakage or spillage, or any other accident.
2. However, as the extent of the hazard arising may vary, the segregation arrangements required may also vary as appropriate.
3. Segregation is obtained by maintaining certain distances between incompatible dangerous goods or by requiring the presence of one or more steel bulkheads or decks between them, or a combination thereof.
4. Intervening spaces between such dangerous goods may be filled with other cargo compatible with the dangerous substances or articles in question.
5. To determine the segregation requirements between two or more dangerous goods, the segregation provisions, including the segregation table and column 16b of the Dangerous Goods List in IMDG Code shall be consulted. In case of conflicting provisions, the provisions of column 16b of the Dangerous Goods List, always take precedence.
6. Whenever a segregation term applies, the goods are not permitted to be packed in the same outer packaging; and not permitted to be transported in the same cargo transport unit except as provided in related provisions.
7. The general provisions for segregation between the various classes of dangerous goods are shown in the "segregation table" given below.

Table 7 – Segregation Table

| Class | 1.1, 1.2, 1.5 | 1.3, 1.6 | 1.4 | 2.1 | 2.2 | 2.3 | 3 | 4.1 | 4.2 | 4.3 | 5.1 | 5.2 | 6.1 | 6.2 | 7 | 8 | 9 |
|---------------|---------------------|-------------|-----|-----|-----|-----|---|-----|-----|-----|-----|-----|-----|-----|---|---|---|
| 1.1, 1.2, 1.5 | * | * | * | 4 | 2 | 2 | 4 | 4 | 4 | 4 | 4 | 4 | 2 | 4 | 2 | 4 | X |
| 1.3, 1.6 | * | * | * | 4 | 2 | 2 | 4 | 3 | 3 | 4 | 4 | 4 | 2 | 4 | 2 | 2 | X |
| 1.4 | * | * | * | 2 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | X | 4 | 2 | 2 | X |
| 2.1 | 4 | 4 | 2 | X | X | X | 2 | 1 | 2 | 2 | 2 | 2 | X | 4 | 2 | 1 | X |
| 2.2 | 2 | 2 | 1 | X | X | X | 1 | X | 1 | X | X | 1 | X | 2 | 1 | X | X |
| 2.3 | 2 | 2 | 1 | X | X | X | 2 | X | 2 | X | X | 2 | X | 2 | 1 | X | X |
| 3 | 4 | 4 | 2 | 2 | 1 | 2 | X | X | 2 | 2 | 2 | 2 | X | 3 | 2 | X | X |
| 4.1 | 4 | 3 | 2 | 1 | X | X | X | X | 1 | X | 1 | 2 | X | 3 | 2 | 1 | X |
| 4.2 | 4 | 3 | 2 | 2 | 1 | 2 | 2 | 1 | X | 1 | 2 | 2 | 1 | 3 | 2 | 1 | X |
| 4.3 | 4 | 4 | 2 | 2 | X | X | 2 | X | 1 | X | 2 | 2 | X | 2 | 2 | 1 | X |
| 5.1 | 4 | 4 | 2 | 2 | X | X | 2 | 1 | 2 | 2 | X | 2 | 1 | 3 | 1 | 2 | X |
| 5.2 | 4 | 4 | 2 | 2 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | X | 1 | 3 | 2 | 2 | X |
| 6.1 | 2 | 2 | X | X | X | X | X | X | 1 | X | 1 | 1 | X | 1 | X | X | X |
| 6.2 | 4 | 4 | 4 | 4 | 2 | 2 | 3 | 3 | 3 | 2 | 3 | 3 | 1 | X | 3 | 3 | X |
| 7 | 2 | 2 | 2 | 2 | 1 | 1 | 2 | 2 | 2 | 2 | 1 | 2 | X | 3 | X | 2 | X |
| 8 | 4 | 2 | 2 | 1 | X | X | X | 1 | 1 | 1 | 2 | 2 | X | 3 | 2 | X | X |
| 9 | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X |

- 1 - Away from
- 2 - Separated from
- 3 - Separated by a complete compartment or hold from
- 4 - Separated longitudinally by an intervening complete compartment or hold from
- X - The Dangerous Goods List has to be consulted to verify whether there are specific segregation provisions
- * - See related provisions of IMDG Code for the segregation provisions between class 1 substances or articles

4.5.2. Segregation from Foodstuffs

1. Dangerous goods having a primary or subsidiary hazard of classes 2.3, 6.1, 7 (with the exception of UN 2908, 2909, 2910 and 2911), 8 and dangerous goods for which it is referred to in segregation code SG29 or SG50 in column 16b of the Dangerous Goods List stowed in a conventional way shall be “separated from” foodstuffs stowed in a conventional way. If either dangerous goods or foodstuffs are in a closed cargo transport unit, dangerous goods shall be stowed “away from” foodstuffs. If both dangerous goods and foodstuffs are in different closed cargo transport units, no segregation requirements shall apply.

2. Dangerous goods of class 6.2 stowed in a conventional way shall be “separated by a complete compartment or hold from” foodstuffs stowed in a conventional way. If either dangerous goods or foodstuffs are in a closed cargo transport unit, dangerous goods shall be stowed “separated from” foodstuffs.

4.5.3. Segregation of Packages Containing Dangerous Goods and Stowed in the Conventional Way

Definitions of the Segregation Terms

Away from

Effectively segregated so that the incompatible goods cannot interact dangerously in the event of an accident but may be transported in the same compartment or hold or on deck, provided a minimum horizontal separation of 3 m, projected vertically, is obtained.

Separated from (In different compartments or holds when stowed under deck)

Provided the intervening deck is resistant to fire and liquid, a vertical separation, i.e. in different compartments, may be accepted as equivalent to this segregation. For on deck stowage, this segregation means a separation by a distance of at least 6 m horizontally.

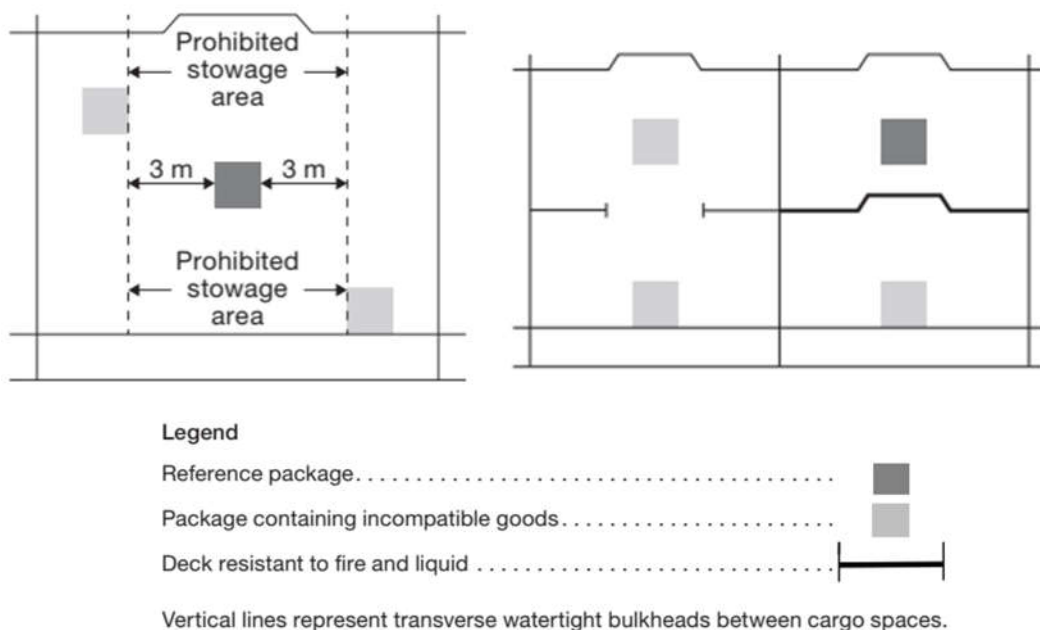


Figure 10 – Away from (left) and Separated from (right)

Separated by a complete compartment or hold from (Either a vertical or a horizontal separation)

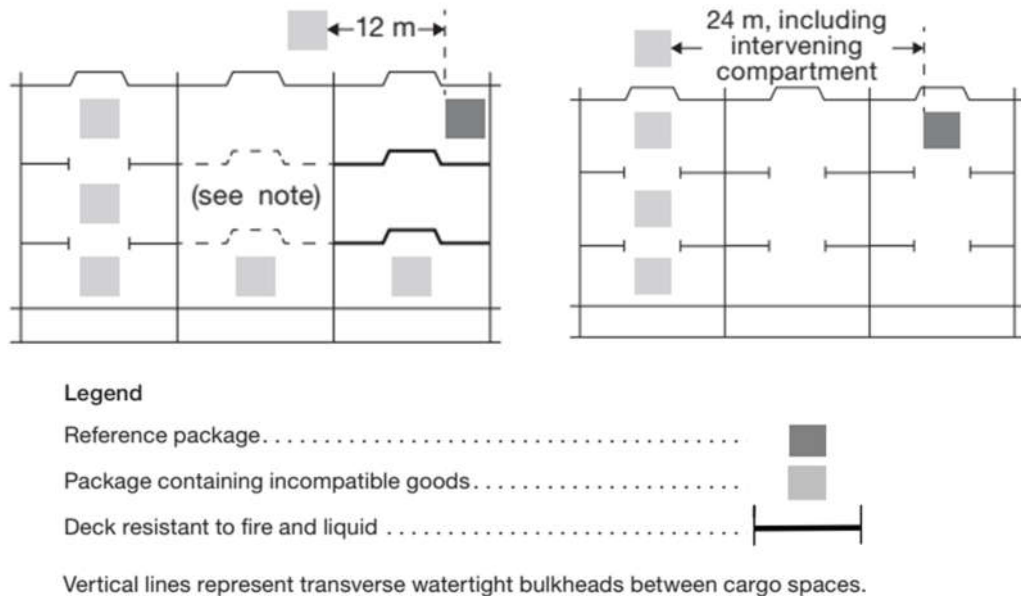
If the intervening decks are not resistant to fire and liquid, then only a longitudinal separation, i.e. by an intervening complete compartment or hold, is acceptable. For on deck stowage, this segregation means a separation by a distance of at least 12 m horizontally.

The same distance has to be applied if one package is stowed on deck, and the other one in an upper compartment.

Note: One of the two decks must be resistant to fire and to liquid.

Separated longitudinally by an intervening complete compartment or hold from

Vertical separation alone does not meet this requirement. Between a package under deck and one on deck, a minimum distance of 24 m, including a complete compartment, must be maintained longitudinally. For on deck stowage, this segregation means a separation by a distance of at least 24 m longitudinally.



*Figure 11 – Separated by a complete compartment or hold from (left)
Separated longitudinally by an intervening complete compartment or hold from (right)*

4.5.4. Segregation of Dangerous Goods Stowed in the Conventional Way From Those Transported in Cargo Transport Unit

1. Dangerous goods stowed in the conventional way shall be segregated from goods transported in open cargo transport units.
2. Dangerous goods stowed in the conventional way shall be segregated from goods transported in closed cargo transport units except that:
 - Where “away from” is required, no segregation between the packages and the closed cargo transport units is required; and
 - Where “separated from” is required, the segregation between the packages and the closed cargo transport units may be as for “away from”.

4.5.5. Segregation of Dangerous Goods in Cargo Transport Units Stowed in Conventional Cargo Spaces

1. Dangerous goods in different closed cargo transport units (closed freight containers) stowed in holds and compartments not properly fitted to give a permanent stowage of the containers during transport shall be segregated from each other except that:

- Where “away from” is required, no segregation between the closed cargo transport units is required; and
- Where “separated from” is required, the segregation between the closed cargo transport units may be as for “away from”.

4.5.6. Segregation Between Bulk Materials Possessing Chemical Hazards and Dangerous Goods in Packaged Form

Unless otherwise required in IMDG Code or in the IMSBC Code, segregation between bulk materials possessing chemical hazards and dangerous goods in packaged form shall be in accordance with the following table.

Table 8 – Segregation Between Bulk Materials Possessing Chemical Hazards and Dangerous Goods in Packaged Form

| Bulk \ Packages | 1.1, 1.2, 1.5 | 1.3, 1.6 | 1.4 | 2.1 | 2.2, 2.3 | 3 | 4.1 | 4.2 | 4.3 | 5.1 | 5.2 | 6.1 | 6.2 | 7 | 8 | 9 |
|---|---------------|----------|-----|-----|----------|---|-----|-----|-----|-----|-----|-----|-----|---|---|---|
| Flammable solids 4.1 | 4 | 3 | 2 | 2 | 2 | 2 | X | 1 | X | 1 | 2 | X | 3 | 2 | 1 | X |
| Substances liable to spontaneous combustion 4.2 | 4 | 3 | 2 | 2 | 2 | 2 | 1 | X | 1 | 2 | 2 | 1 | 3 | 2 | 1 | X |
| Substances which, in contact with water, emit flammable gases 4.3 | 4 | 4 | 2 | 2 | X | 2 | X | 1 | X | 2 | 2 | X | 2 | 2 | 1 | X |
| Oxidizing substances (agents) 5.1 | 4 | 4 | 2 | 2 | X | 2 | 1 | 2 | 2 | X | 2 | 1 | 3 | 1 | 2 | X |
| Toxic substances 6.1 | 2 | 2 | X | X | X | X | X | 1 | X | 1 | 1 | X | 1 | X | X | X |
| Radioactive material 7 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 1 | 2 | X | 3 | X | 2 | X |
| Corrosive substance 8 | 4 | 2 | 2 | 1 | X | 1 | 1 | 1 | 1 | 2 | 2 | X | 3 | 2 | X | X |
| Miscellaneous dangerous substances and articles 9 | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X |
| Materials hazardous only in bulk (MHB) MHB | X | X | X | X | X | X | X | X | X | X | X | X | 3 | X | X | X |

- 1 - Away from
- 2 - Separated from
- 3 - Separated by a complete compartment or hold from
- 4 - Separated longitudinally by an intervening complete compartment or hold from
- X - The segregation, if any, is shown in the Dangerous Goods List in this Code or the individual entries in the IMSBC Code

Definitions of the segregation terms

Away from

Effectively segregated so that incompatible materials cannot interact dangerously in the event of an accident but may be transported in the same compartment or hold or on deck provided a minimum horizontal separation of 3 m, projected vertically, is provided.

Separated from (In different holds when stowed under deck)

Provided an intervening deck is resistant to fire and liquid, a vertical separation, i.e. in different compartments, may be accepted as equivalent to this segregation.

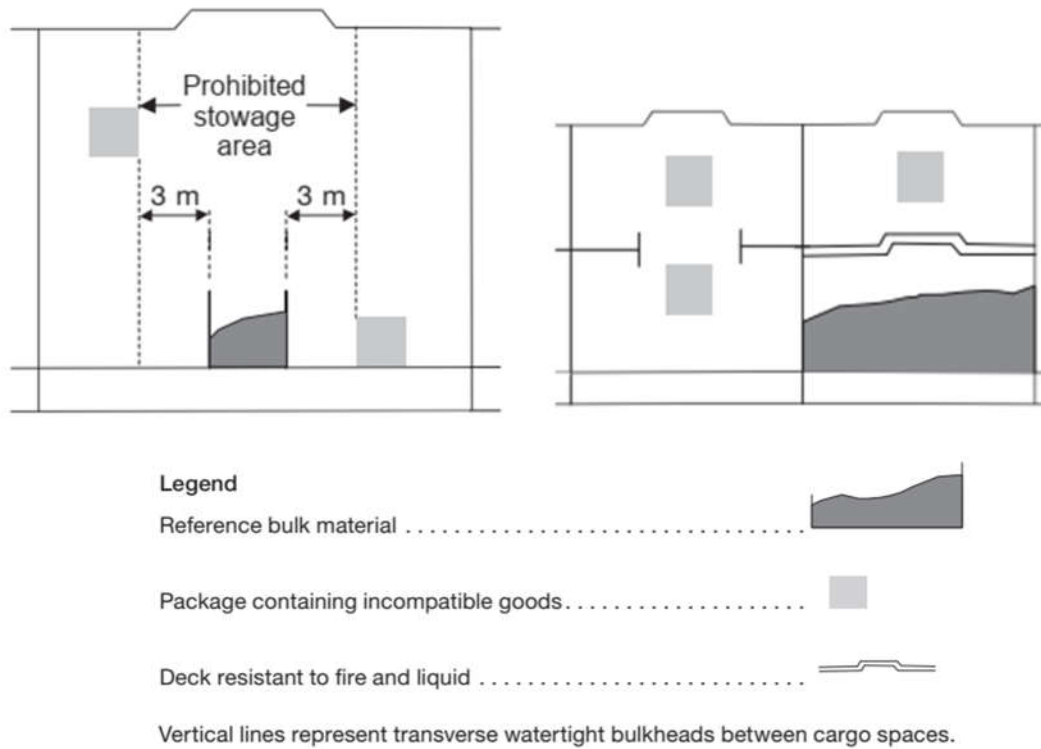


Figure 12 – Away form (left) and Separated form (right)

Separated by a complete compartment or hold from (Either a vertical or a horizontal separation)

If the decks are not resistant to fire and liquid, then only a longitudinal separation, i.e. by an intervening complete compartment, is acceptable.

Separated longitudinally by an intervening complete compartment or hold from

Vertical separation alone does not meet this requirement.

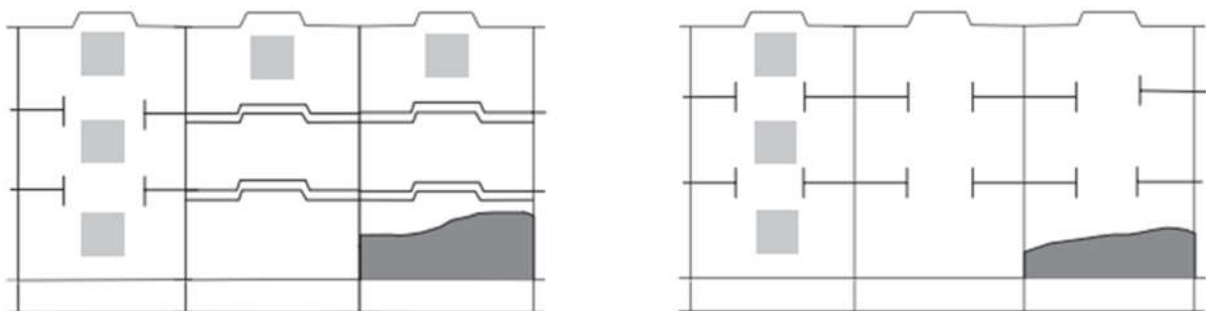
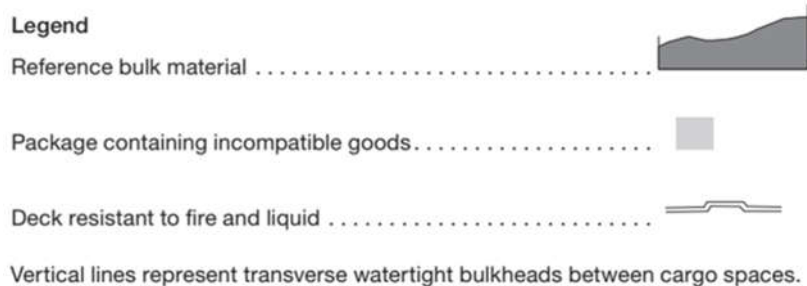


Figure 13 – Separated by a complete compartment or hold from (left)
Separated longitudinally by an intervening complete compartment or hold from (right)



4.6. Segregation Distances and Terms of Dangerous Cargoes in Warehouse Warehouses

For the segregation activities applied in warehouse warehouses, the provisions given in Article 4.5 "Segregation Tables on Ship and Shore Facility by Classes of Dangerous Goods" are applied.

5. HANDBOOK ON DANGEROUS CARGOES HANDLED AT A SHORE FACILITY

Dangerous Goods Handbook is given in Annex-7.

6. OPERATIONAL ISSUES

6.1. Procedures for Berthing, Mooring, Loading/Discharging, Harboring or Anchoring of Ships Transporting Dangerous Cargoes at Night and Day in a Safe Condition

- Ships transporting dangerous goods will be gone alongside to port berths by pilotage and tugboats preferably during day, during night if allowed by Port authority, in accordance with Port Regulations.
- Harbor Pilot will be informed about the dangerous goods aboard ship before maneuver.
- Positions of ship transporting dangerous goods must be considered, berthing must be planned after removal of ship in case of risk.
- In the event that practice of Master for mooring is deemed unsafe for port, it should be requested from Master to connect the ship by extra ropes.
- In case of unfavorable weather conditions, flows and winds create unsafe condition for loading/discharging, the activity must be stopped and the ships must be removed and taken to the anchorage.
- Anchorage sites are different for the ships transporting dangerous goods; ship can wait in the anchorage sites designated for them.

6.2. Procedures for Additional Measures Taken for Loading, Discharging and Transshipment of Dangerous Cargoes According to Seasonal Conditions

- Seasonal conditions must be considered for loading and discharging of the dangerous goods. Handling flammable, combustible, explosive goods should be postponed or stopped at extreme heat, extreme cold, extreme rainy and weather with unfavorable sight conditions, lighting and weather with electric power load.

- If loading/discharging in unfavorable conditions have to be continued or in mandatory conditions; fire, fire department, emergency response teams must be kept in order to response to unwanted conditions as soon as possible.
- In the event of inconvenience, the fire, fire brigade, fire extinguishers, and emergency responders should be kept in a condition that can interfere with a possible undesirable situation.
- In case of continuity of similar conditions, measures, such as the workers must be elected from the experienced ones, resting periods must be planned frequently in extremely hard working situation, increase the lighting, etc. must be provided.

6.3. Procedures for Keeping Away Flammable, Combustible and Explosive Materials From Spark Producing Operations and Procedures for not Operating Vehicles, Equipment and Tools Capable of Spark-Production in Area of Dangerous Cargoes Handling, Stowing and Storing are Made

- Berthed in the state, with load deck and the point of smoking in dangerous cargo vessels carrying hazardous cargo coast of storage space, lighting a fire, it is forbidden to work as welding sparks.
- Flammable materials are kept away from spark-forming process and can not be operated cargo handling dangerous tools or instruments that make up the field of spark.
- In dangerous cargo fields, while handling dangerous goods, working with especially flammable, combustible and explosive;
 - Not doing hot work (welding, cutting, etc.), technical safety measures must be taken in case of mandatory cases,
 - Ex proof hand tools must be used,
 - Working with experienced personnel,
 - Relevant units must be informed before work,
 - Briefing will be given to the personnel working in the field,
 - Especially in closed area of working, measurement of toxic, choking gases and sufficient oxygen must be done, the measurement device must be ready to use,
 - Protective measures and equipment such as water curtain, protective separation, mechanical ventilation must be ready to use.
- The personnel working in Hot Work must wear necessary protective clothing and equipment, closed circuit breathing apparatus when required.
- Emergency team must be assigned to response as soon as possible in potentially undesirable situation in this kind of working.
- Hot processing procedure of our facility is the same as in Annex-18.

6.4. Procedures for Fumigation, Gas Measuring and Degassing

- Fumigation, gas measurement, degassing work and operations of Closed Carriers should be done as follows:
 - Closed carrying containers should be vented thoroughly by opening the covers. Personnel who will open the doors should be briefed on this subject and the information that the container may contain flammable, explosive, poisonous gases should be explained clearly.
 - Gas monitoring should be done if working in closed vessel.
 - Measuring devices must be pre-tested and calibrated.
 - In closed transport containers suspected of containing toxic gases, the measurement must be made in protective clothing and using a closed circuit inhaler.
 - The measurement results must be recorded and can be displayed when requested.
 - Gas, dust, granules, residual liquid, etc. in closed transport containers should be taken into account that these products may cause undesirable reactions if a different hazardous substance is placed in the containers without cleaning these residues, which may have remained even to a very small extent.
- There is no fumigation by the Port Operation for the freight transport units (CTU) and the load within it.
- For the fumigation operation to be carried out on the harbor in the responsibility of the shipper, the written permission shall be obtained from the Port Authority.
- Fumigation party;
 - Circulars MSC-MEPC.2 / Circ.1 on the prevention and disposal of fumigants used in fumigation operations to the marine environment and human health;
 - In advance, the Ministry of Maritime Affairs and Communications shall proceed in accordance with the IMDG Code Implementation Directive No. 2013/180 dated 23.09.2013 in fumigation, gas measurement and degassing work and operations. Fumigation processes make this legislation appropriate.
- Companies that are found not to comply with these rules are not allowed to operate. All the costs incurred will be repaid.
- The site to be fumigated is determined by the port authority. The responsibility of occupational safety and environmental safety during the fumigation operation belongs to the fumigator.

7. DOCUMENTATION, CONTROL AND RECORD

7.1. Procedures Related to All Required Documents, Information and Papers, Their Provision and Control by the Authorities

The following documents related to dangerous cargoes are kept by shore facility livingly:

- IMSBC Code
- BLU Code and BLU Code Manual

- EMS Guide (Emergency Response Procedures for Ships Carrying Dangerous Goods)
- MFAG (Medical First Aid Guide for Use in Accidents Involving Dangerous Goods)

In order to handle the dangerous goods transported to facility in a safe condition and to take the required measures, shore facility needs documents sent prior.

The documents are as follows:

- Dangerous Freight Notification Certificate
- Material Safety Data Sheet
- Container/Vehicle Packaging Certificate
- Multimodal Dangerous Goods Form
- Documents Required on Board
- Other Required Documents and Information

7.1.1. Dangerous Freight Notification Certificate

The shipping documents prepared by the shipper shall include a "Signed Certificate or Hazardous Load Notification Document" stating that the shipment to be transported is properly packed, marked, labeled, and in good condition for shipment.

Ships and vessels carrying dangerous goods at least twenty-four hours before entering the port administrative area; ships and sea vessels with a cruising time of less than twenty-four hours until entering the port area shall submit the notification document containing detailed information about their cargo to the Port Authority in writing immediately after departure from the coastal facility.

The cargo concerned must notify the coastal installation at least 3 hours before entering the coastal facility with regard to dangerous cargo arriving by road and rail.

Failure to comply with the notification obligation, or if the notifications do not contain accurate information, administrative action may be taken against the notifier and, if any, may lose the order of docking, departure, or transit.

When the Dangerous Freight Notification Document is provided with the EDP (Electronic Data Processing) or EDI (Electronic Data Exchange) techniques, the sender information will be available in a timely manner as a printed document in the required order in this section.

The Dangerous Goods Notification Certificate may be in any form, provided that it contains all the information specified in Section 5.4 of the IMDG Code.

7.1.2. Container/Vehicle Packaging Certificate

If the dangerous goods are loaded or packaged into any container or vehicle, those responsible for packing/loading the container or vehicle will provide a "container/vehicle packing certificate" which will indicate that the container/vehicle identification number and the procedures performed are in accordance with the following:

- The container/vehicle must be clean, dry and suitable for the appearance of dangerous goods,
- Whether the packages that need to be segregated according to the applicable separation requirements are packed together and/or not loaded/unloaded,
- All packages are inspected for external damage, only robust packages are installed,
- Unless otherwise specified, the barrels are stacked vertically, all materials are properly loaded and, if necessary, wrapped with the binding material necessary to comply with the intended transport patterns,
- Bulk loaded materials are loaded uniformly in the container/vehicle,
- Containers/vehicles and packages are properly and appropriately marked, labelled and plated,
- If solid carbon dioxide (CO₂-dry ice) is used for cooling purposes, the container/vehicle must be properly branded,
- For each hazardous item loaded into the container/vehicle, the Dangerous Freight Notification Document.

Note: There is no need for container/vehicle packing certificate for portable tanks.

The information required in the Dangerous Load Notification Document and the container / vehicle packing certificate can be collected in a single document. If this is not the case, the documents will be added together. If there is only one document, there will be a signed declaration under the document:

“The packing of the materials loaded in the container/vehicle is made according to the appropriate provisions.”

This notification will be dated and the identity of the signer will be documented.

Signatures may be electronic signatures if the container/vehicle packing certificate is provided with EDP or EDI sending techniques, or may be replaced by the name (capital letters) of the person or persons authorized to sign.

When a container/vehicle packing certificate is provided to a carrier via EDP or EDI techniques and then the dangerous goods are transferred to a carrier with a printed hazardous materials transport document, the carrier will be sure that the printed document specifies the information "received electronically" and written in capital letters of the signer's name. Documents to be found on board

7.1.3. Documents to be Found on Board

Each ship carrying hazardous materials and marine pollutants will have specific list, manifesto or stack plan for the names and locations of dangerous substances and marine pollutants. This specific list and manifest will be based on the documents and certificates required in the IMSBC Code.

A detailed stacking plan of the class, which shows the locations of all the dangerous substances and sea pollutants, will be used instead of this specific list or manifesto.

For sending dangerous goods; appropriate information will be available at any time to be used for any accidents related to dangerous goods during the transportation and emergency intervention to be carried out.

This information will be away from packages containing dangerous substances and will be immediately available in case of an incident. Information to be used in emergency intervention will be found in the following documents:

- Within a special list, manifest or hazardous substance declaration,
- Within a separate document such as the safety data sheet,
- Separate documents such as the Medical First Aid Guide (MFAG) for use in Accidents involving Hazardous Materials and Emergency Response Procedures for Emergency Procedures for Vessels carrying Hazardous Substances (EMS Guide) to be used in conjunction with the transport document.

7.1.4. Other Required Information and Documents

In certain cases, the following special certificates or documents will be required:

- An air wear certificate, as requested on certain entries in the Dangerous Goods List;
- Material, material or object; a certificate that excludes IMDG provisions (such as charcoal, fish meal, see separate entrances for seed tub);
- A notification made by the competent authority of the country of origin about approved classification and transport conditions for new formulations of new self-reactive substances and organic peroxides or currently allocated self-reactive substances and organic peroxides.

7.1.5. Multimodal Dangerous Goods Form

Multimodal Dangerous Goods Form is a form which is used as a combined dangerous goods declaration regarding transportation of dangerous goods in multiple modes and container packing certificate.

Example of Multimodal Dangerous Goods is in Annex-15.

7.2. Procedures for Proper and Full Keeping Updated List of Dangerous Goods in Shore Facility Area and Other Information

Port facility is obliged to submit the information about class, quantity, emergency response methods and locations of all dangerous goods in port facility, to the authorities upon request at any time.

Operation department will keep the records involving the following information of the dangerous goods handled in our port:

- UN number,
- PSN name (Proper shipping name),

- Class (Class 3, 4.1, 4.2, 4.3, 5.1, 6.1, 8, 9 with sub-dangers),
- Packing group,
- Marine pollutant feature,
- Consignee,
- Shipper,
- Container/packing number,
- Seal number,
- Additional information (Ignition temperature, viscosity, etc.),
- Storage location in port field,
- Duration of stay in port.

This information is kept under computer or file as only reached by authorized personnel, shown upon request.

Port facility keeps the updated records of dangerous goods about class, quantity, which have been handled throughout the year by the port and notifies them to Port authority in 3 months period.

7.3. Procedures for Control of Proper Identification of Dangerous Goods in the Facility, Using Proper Shipping Names, Certificating, Packaging/Packed, Labeling and Declaring of Dangerous Goods, Loading to Approved Package, Container or Good Cargo Transport Unit in Accordance With Rules and Transporting in a Safe Condition and Reporting the Results of Control

Planning department checks the accuracy of the following information on dangerous goods documents issued by the shipper in coordination with operation about the dangerous goods to be received to port:

- UN Number,
- PSN name (Proper shipping name),
- Class (Class 3, 4.1, 4.2, 4.3, 5.1, 6.1, 8, 9 with sub-dangers),
- Packing group,
- Marine pollutant feature,
- Container/packing number,
- Seal number,
- Additional information (Ignition temperature, viscosity, etc.),
- Storage location in port field.

This information is delivered to the tally clerk, field supervisors, storage officers, HSE and to the staff who requires knowing the information, by sending upon terminals/documents, so the control of dangerous goods is provided.

In the event that information from operation conflicts with information of goods, operation shall be informed immediately, shipper is directed to confirm the information dangerous goods cargo/vehicle/container, correct the deficient and wrong label marks if any.

7.4. Procedures for Obtaining and Keeping Material Safety Data Sheet (MSDS)

Material Safety Data Sheet (MSDS) involving the following information is required for dangerous goods transported by all modes of transportation (road, rail, air and marine) according to our national law since 1 January 2014:

- UN number,
- PSN (Proper shipping name),
- Class (Class 3, 4.1, 4.2, 4.3, 5.1, 6.1, 8, 9 with sub-dangers),
- Packing group,
- Marine pollutant feature,
- Tunnel restriction code (Required for road transport),

In port, there is a check to control this document together with the dangerous goods to be received.

7.5. Procedures for Keeping Records and Statistics of Dangerous Goods

A report containing information on hazardous cargo handled by the Administration in our port facility was requested to be reported to the port authority in 3-month periods.

Statistical evaluation from records of dangerous goods handled in our port annually is prepared by trade, operation departments.

Monthly inventory and control reports of dangerous goods stored in the port are issued by operation department and submitted to the management.

Records and reports are archived by the departments in 5 year periods.

7.6. Information About the Quality Management System

T.T.K. The Quality Policy and Port Management Process of our enterprise are shown in Annex-20.

8. EMERGENCIES, PREPAREDNESS FOR EMERGENCIES AND RESPONSE

8.1. Response Procedure for Dangerous Goods that Endangers/Able to Endanger Life, Property and/or Environment and Dangerous Incidents Involving Dangerous Goods

In order to prevent fire and pollution caused by hazardous substance operations, Emergency Measures For Fire (Ems For Fire) are intervened in accordance with the procedures specified in the IMDG Code Emergency Guide (EmS Guide); Emergency Measures For Fire against FIRE that may be caused by hazardous substances listed in the IMDG Code.

The incident is reported to the Harbor Master.

8.2. Information for Possibility, Capacity and Capability of Shore Facility to Response Emergencies

8.2.1. Possibility, Capability and Capacity of Fire Response

Table 9 - Port Facility Fire Response Equipment

| No | Type of Material | Pieces |
|----|------------------|--------|
| 1 | 2 kg. KKT YSC | 3 |
| 2 | 6 kg. KKT YSC | 28 |
| 3 | 50 kg. KKT YSC | 3 |
| 4 | Fire cabinet | 24 |

8.2.2. Possibility, Capability and Capacity Against Leakage and Spillage

Possibility, capability and capacity against leakage and spillage are the same as in Annex-14.

8.3. Regulations of First Response for Accidents Involving Dangerous Cargoes

Accidents that can be caused by dangerous cargoes in our port facility are fire, flow, leakage and spillage. In such cases, it uses the EmS Guide with Emergency Rulers, and Emergency Response Methods For Ships Carrying Hazardous Materials and the Medical First Aid Guide (MFAG) is used to ensure that the necessary medical first aid is properly provided to persons affected by the damages of dangerous cargoes and to health problems caused by accidents involving these cargoes.

8.3.1. The Measures Against Fire Which is Occurred by Dangerous Goods

In case of fire which is occurred as a result of accident involving dangerous goods that are handled in port facility, Emergency Plan (EmS) annexed to IMDG Code shall be considered. In addition, the codes defined under the Emergency Plan (EmS Guide) in the IMDG Code annex for packaged dangerous goods are as follows (see these codes in the EmS Guide in case of danger):

- F-A (General Fire Plan)
- F-B (Explosive Substances and Articles)
- F-C (Non-Flammable Gases)
- F-D (Flammable Gases)
- F-E (Non-Water-Reactive Flammable Liquids)
- F-F (Temperature-Controlled Self-Reactives and Organic Peroxides)
- F-G (Water-Reactive Substances)
- F-H (Oxidizing Substances with Explosive Potential)
- F-I (Radioactive Material)
- F-J (Non-Temperature-Controlled Self-Reactives and Organic Peroxides)

8.3.2. The Measures Taken Against Flow/Leakage/Spillage Which are Occurred by Dangerous Goods

In the event of an accidental spill/leak/spill involving dangerous goods handled at port facilities, the Emergency Plan (EMS Guide) annexed to the IMDG Code shall be taken into

account for the packaged dangerous goods. In addition to the measures to be applied in the emergency plan for spills/leaks/spills, the codes defined under the Emergency Plan (EmS Guide) annexed to the IMDG Code for packaged dangerous goods are as follows (see these codes in the EmS Guide at the time of danger):

- S-A (Toxic Substances)
- S-B (Corrosive Substances)
- S-C (Flammable, Corrosive Liquids)
- S-D (Flammable Liquids)
- S-E (Flammable Liquids, Floating On Water)
- S-F (Water-Soluble Marine Pollutants)
- S-G (Flammable Solids and Self-Reactive Substances)
- S-H (Flammable Solids "Molten Material")
- S-I (Flammable Solids "Repacking Possible")
- S-J (Wetted Explosives and Certain Self-Heating Substances)
- S-K (Temperature-Controlled Self-Reactive Substances)
- S-L (Spontaneously Combustible, Water-Reactive Substances)
- S-M (Hazard of Spontaneous Ignition)
- S-N (Substances Reacting Vigorously with Water)
- S-O (Substances Dangerous When Wet "NonCollectable Articles")
- S-P (Substances Dangerous When Wet "Collectable Articles")
- S-Q (Oxidizing substances)
- S-R (Organic Peroxides)
- S-S (Radioactive Material)
- S-T (Dangerous Goods with Biohazard)
- S-U (Flammable, Toxic or Corrosive Gases)
- S-V (Non-Flammable, Non-Toxic Gases)
- S-W (Oxidizing Gases)
- S-Y (Explosive Chemicals)
- S-Z (Toxic Explosives)

8.3.3. Medical First Aid to be Applied in Accidents Involving Dangerous Goods

The Medical First Aid Guide (MFAG) in the IMDG Code annex is used in order to provide the necessary medical first aid for the persons affected by the damages of dangerous loads and the health problems caused by accidents involving these cargoes. Although the MFAG Guide is an appendix to the IMDG Code, it is also used for loads in the IMSBC Code.

In case of any kind of exposure, it is started with the emergency action shown in the guide and continued as recommended. The manual is simple to use. In turn, the tables and attachments shown using the Emergency Action and Diagnosis algorithms are used.

Table 10 - Emergency Action Algorithm in MFAG Guidance

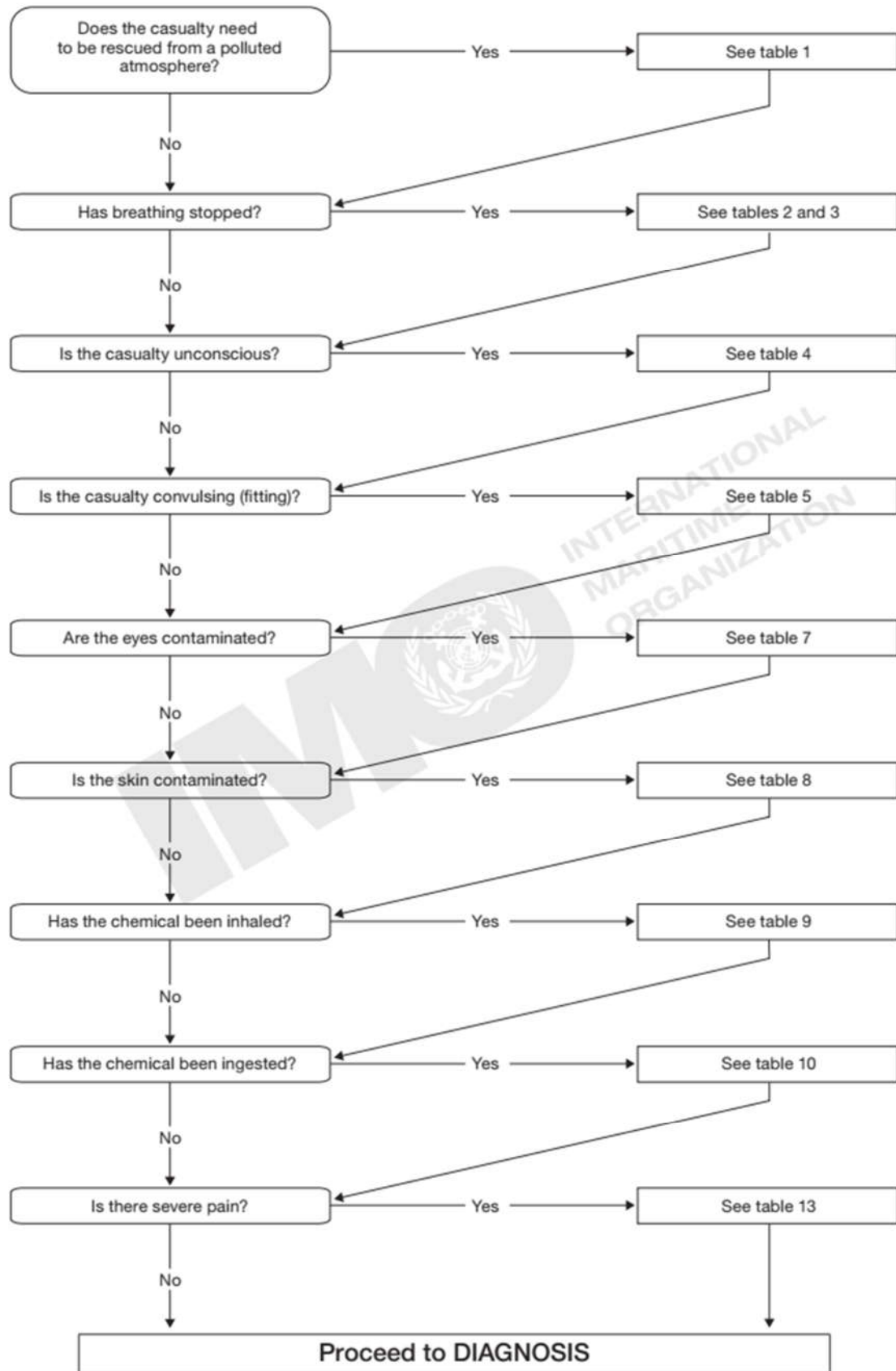
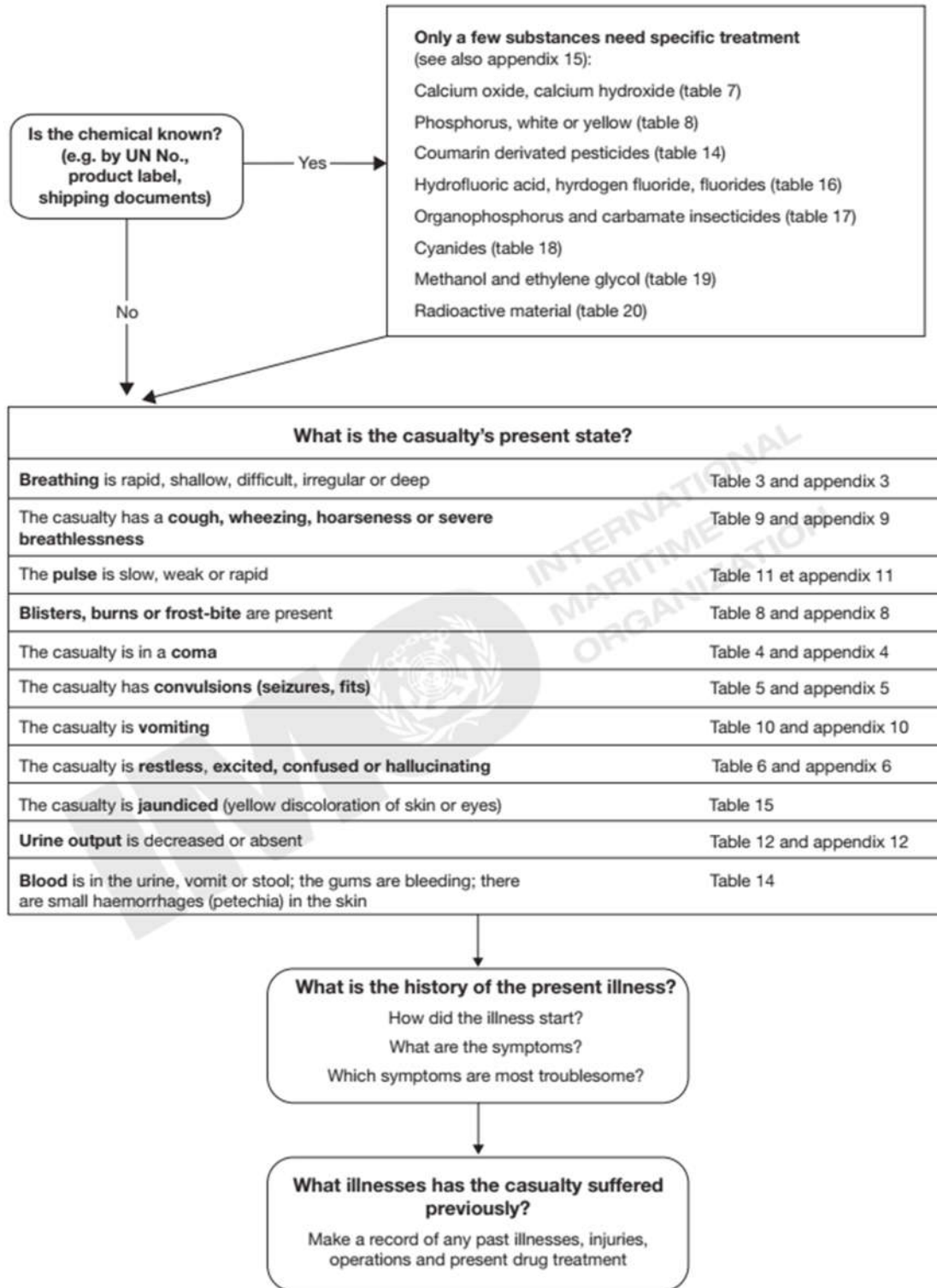


Table 11 - Diagnostic Algorithm in the MFAAG Guide



MFAG tables contain additional information for special cases, and the information for the tables is as follows:

Table 1 Rescue

Table 2 Cardio-Pulmonary Resuscitation (CPR)

Table 3 Oxygen Administration and Controlled Ventilation

Table 4 Chemical-Induced Disturbances of Consciousness

Table 5 Chemical-Induced Convulsions

Table 6 Toxic Mental Confusion

Table 7 Eye Exposure to Chemicals

Table 8 Skin Exposure to Chemicals

Table 9 Inhalation of Chemicals

Table 10 Ingestion of Chemicals

Table 11 Shock

Table 12 Acute Kidney Failure

Table 13 Pain Relief

Table 14 Chemical-Induced Bleeding

Table 15 Chemical-Induced Jaundice

Table 16 Hydrofluoric Acid and Hydrogen Fluoride

Table 17 Organophosphate and Carbamate Insecticides

Table 18 Cyanides

Table 19 Methanol and Ethylene Glycol

Table 20 Radioactive Material

Appendices; It provides detailed information about drugs and chemicals that may be exposed. The information on the annexes is as follows:

Appendix 1 Rescue

Appendix 2 Cardio-Pulmonary Resuscitation (CPR)

Appendix 3 Oxygen Administration and Controlled Ventilation

Appendix 4 Chemical-Induced Disturbances of Consciousness

Appendix 5 Chemical-Induced Convulsions

Appendix 6 Toxic Mental Confusion

Appendix 7 Eye Exposure to Chemicals

Appendix 8 Skin Exposure to Chemicals

Appendix 9 Inhalation of Chemicals

Appendix 10 Ingestion of Chemicals

Appendix 11 Shock

Appendix 12 Acute Kidney Failure

Appendix 13 Pain Relief

Appendix 14 List of Medicine and Equipment

Appendix 15 List of Materials

8.4. Notification to be Made Inside and Outside of Facility in Emergencies

8.4.1. Flowchart for Notification to be Made in Emergencies

It is as in the Emergency Action Plan.

8.4.2. Notification Required to be Made in Our Shore facility

It is as in the Emergency Action Plan.

8.5. Procedures for Reporting Accidents

Accidents/incidents involving dangerous cargo in our premises will first be reported to the Harbor Master within 3 hours from the moment of use, using the VHF radio system or other means of communication.

Following this declaration, a written report containing the opinion of the accident/event shall be sent to the port authority within 24 hours at the latest.

8.6. Coordination, Support and Cooperation Method with Public Authorities

Coordination, support and cooperation method with public authorities is the same as in Emergency Action Plan.

8.7. Ships and Emergency Evacuation Plan for the Removal of the Emergency Vehicles in the Coastal Resort of Sea

An emergency evacuation procedure has been prepared for removal of ships and marine vessels from coastal facilities in an emergency and is similar to that in Annex-19.

8.8. Damaged Dangerous Loads With Procedures for Handling and Disposal of Wastes Contaminated with Dangerous Cargo

Our plant for each dangerous cargo to be handled "Material Safety Data Sheet (MSDS)" is based towards the damaged dangerous cargoes with the handling of wastes contaminated with dangerous cargo and disposal shall comply with the instructions given in this form.

Damaged dangerous cargo can be maintained and can be re-allocated or contaminated packaging can be disposed of as special waste and held until the area has been allocated port of dangerous goods storage area.

Port emergency procedures and the environment are treated for disposal under the emergency regulations.

Damaged containers, unit load or cargo transport units should be provided immediately transported safely to the private sphere has been allocated. Damaged packages without repackaging, transport and handling appropriate requirement will be ensured leave specific areas before they become safe. Damaged where each cargo transport unit detected the leak will be loaded onto the ship until the necessary repairs made until removed or damaged packaging.

All damaged or leaking packages containing dangerous goods, the unit load or cargo transport units shall be reported to the Port Authority port management.

8.9. Emergency Drills and Their Records

8.9.1. Training Required to be Taken by People in Charge of Dangerous Goods Operations

Coastal personnel involved in the carriage of dangerous cargoes intended to be transported by sea shall receive training on the content of dangerous cargo provisions to an extent commensurate with their responsibilities.

Employees shall be trained in accordance with the provisions of Section 1.3.1 of the IMDG Code prior to taking responsibility and shall act under the direct supervision of a trained person unless they have received the necessary training. Care shall also be taken to the training requirements related to the safety of dangerous goods specified under the heading of Section 1.4 Safety Provisions of the IMDG Code.

Enterprises that use coastal personnel in this type of work decide which of their personnel will be trained, what level of training these personnel need and the training methods that should be used to comply with the provisions of the IMDG Code. Immediately after the recruitment of the person in a position involving the transport of dangerous cargoes, such training is provided or verified. For those who have not yet received the necessary training, businesses will ensure that these personnel only work under the direct supervision of a trained person. Taking into account the changes in regulations and practices, the training should be reinforced with periodic refresher trainings. The competent authority or the unit authorized by it may supervise the enterprise in order to confirm the effectiveness of the system being implemented, the roles and responsibilities of the personnel in the transport chain and the status of receiving appropriate training.

Shore-based personnel such as those who:

- Classify dangerous goods and identify proper shipping names of dangerous goods;
- Pack dangerous goods;
- Mark, label or placard dangerous goods;
- Load/unload cargo transport units;
- Prepare transport documents for dangerous goods;
- Offer dangerous goods for transport;
- Accept dangerous goods for transport;
- Handle dangerous goods in transport;
- Prepare dangerous goods loading/stowage plans;
- Load/unload dangerous goods into/from ships;
- Carry dangerous goods in transport;
- Enforce or survey or inspect for compliance with applicable rules and regulations; or
- Are otherwise involved in the transport of dangerous goods as determined by the competent authority shall be trained in the subjects given in Section 8.10.2.

8.9.2. The Content of Training Required for People Engaged in Dangerous Goods

General awareness/familiarization training

1. Each person shall be trained in order to be familiar with the general provisions of dangerous goods transport provisions;
2. Such training shall include a description of the classes of dangerous goods; labelling, marking, placarding, packing, stowage, segregation and compatibility provisions; a description of the purpose and content of the dangerous goods transport documents (such as the Multimodal Dangerous Goods Form and the Container/Vehicle Packing Certificate); and a description of available emergency response documents.

Function-specific training

1. Each person shall be trained in specific dangerous goods transport provisions which are applicable to the function that person performs. An indicative list, for guidance purposes only, of some of the functions typically found in dangerous goods transport operations by sea and training requirements is given in paragraph 1.3.1.6 of IMDG Code.
2. Records of training received according to this chapter shall be kept by the employer and made available to the employee or competent authority, upon request. Records shall be kept by the employer for a period of time established by the competent authority.

Safety training

Commensurate with the risk of exposure in the event of a release and the functions performed, each person should be trained in:

- Methods and procedures for accident avoidance, such as proper use of package-handling equipment and appropriate methods of stowage of dangerous goods;
- Available emergency response information and how to use it;
- General dangers presented by the various classes of dangerous goods and how to prevent exposure to those hazards, including, if appropriate, the use of personal protective clothing and equipment; and
- Immediate procedures to be followed in the event of an unintentional release of dangerous goods, including any emergency response procedures for which the person is responsible and personal protection procedures to be followed.

8.9.3. Records Regarding the Training of People in Charge of Dangerous Goods

Records of all security trainings are held by the Port Facility Management.

8.9.4. Drills and Record Regarding to Dangerous Goods

Drill implementation

In order to be ready for emergencies in facility, personnel in emergency organization are prepared for their duties by various training. Trainings must be done by support of

specialized organization when necessary. In this context, relevant personnel get IMDG code training regarding to dangerous goods and certificated in the port.

It should be planned to carry out and implement the drills according to the worst-case scenario in order to test the adequacy of emergency plans and be ready for real incidents.

Drill Scenarios

The worst scenario must be foreseen as one incident or a combination of incidents faced by port in exercise planning.

Exercises are provided to implement in line with prepared scenarios in fastest and most efficient way.

Emergency Drills to be Held Within Port Facility

1. It should be stated in port annual training plans,
2. It can be planned as local or general response,
3. It can be combined with safety, spilling, etc. exercise scenarios,
4. Drills can be made by/without informing,
5. Drills are based on various emergency scenarios,
6. Drills can be made actually, or desk bound, seminar type,
7. Scenarios with different time, day, season and incident are prepared for each drill.

8.10. Information on Fire Protection System

There are water storage tanks, hydrants, fire foam machine, portable fire extinguishers under fire protection systems in our facility. Information on fire protection systems is the same as in Article 8.2.1.

8.11. Procedures for Approval, Inspection, Testing, Maintenance and Use of Fire Protection Systems

Zonguldak Municipality approved the approval and supervision of fire protection systems in our facility.

Testing, maintenance and use of fire protection systems are made weekly and monthly by our facility and processed into control forms.

8.12. Measures to be Taken When Fire Protection System not Working

In case the fire protection system does not work in our facility, firstly it will be tried to utilize from neighborhood and adjacent facilities, then local fire department will be informed. Response to incident will be carried out by using all capacity of region.

8.13. Other Risk Controlling Equipment

There is no other risk controlling equipment.

9. OCCUPATIONAL HEALTH AND SAFETY

9.1. The Occupational Health and Safety Measures

9.1.1. Purposes of the Occupational Health and Safety

The purposes of the occupational health and safety are as follows;

To protect employees

It is the main purpose of the occupational health and safety. It aims to protect the employees against working accidents and occupational diseases, provide the mental and physical integrity.

To provide production safety

It is important for economy as providing production safety in workplace will lead an increase in efficiency.

To provide facility safety

As the measures taken in workplace remove the dangers in facility due to machinery malfunctions and disabled operations, explosions, fire which may arise from working accidents or unsafe and unhealthy working conditions, the facility safety can be ensured.

Port Management, EN OHSAS 18001: 2007 and Occupational Health and Safety Management System Certification, is intended to be addressed and resolved in the framework of continuous improvement targets in an orderly manner the occupational health and safety activities.

Occupational health and safety practices in the port of destination of the company "O" is an accident. In line with this objective, the ISG work is carried out, given ongoing training to employees in the port area and to raise awareness of safe operation taking instructions are provided. Ports are included in the company's area of responsibility, in all personal protective equipment, adequate number and quality of port facilities handling dangerous goods to be used herein are available at any moment ready to use.

In this context;

- No. 6331 Occupational Health and Safety Act and related regulations should Occupational Health and Safety within the framework of port in our lives, in terms of plant property and environmental safety Occupational Health and Safety Management System (OHSMS) is applied.
- Limor our input-output port users who TSE according to Personal Protective Equipment (helmets, fluorescent vests, steel toe work health and safety shoes) to wear is required.
- Hazardous material handling of assistants coastal resort staff, other authorized persons for cargo loading, the physical and chemical characteristics of the cargo during unloading and storage are available suitable protective clothing, education and

training/ports that work on dangerous cargo on the use of personal protective equipment in the exercise field staff information is given.

9.1.2. Occupational Health Safety Trainings

Personnel are primarily engaged in basic work safety training for work at port facilities prior to business start-ups.

Apart from this training, Ergonomics training (by the Workplace Physician) for the work done in our facility, In order to intervene in emergency situations, first aid training, fire training, emergency response trainings, Training of personnel working in the field of internal filling and unloading in the field, Awareness training is carried out in the areas of work such as working high on electricity, working for our maintenance team.

Besides these, instant health education (TOOLBOX) is carried out by occupational health and safety specialists.

Training records are kept jointly with the Human Resources Department and the OHS department.

9.1.3. Health Considerations

Personnel who will work and will do new work; eye examination, lung X-ray and blood analysis. Without audiometry testing and without the results we can not get a job done.

Apart from this, all personnel are vaccinated tetanus every year.

In cases where it is deemed necessary by our employees, the workplace physician may do so by requesting further examination (astigmatism examination, view point, etc.) with the approval of the Human Resources Department.

9.1.4. Field Security

In all cases where there may be a situation in the field, he has a job security specialist in his staff and at the same time he also receives job security specialist services from outside. Occupational safety experts create field reports about the deficiencies they have identified in the field and send them to the related departments via e-mail. The fault conditions detected during the field trip are reported to the maintenance team via the fault module and the process up to removal is followed.

9.1.5. Risk Analysis

Occupational health and safety experts identify all hazards that are found in the test and waiting for the employees in the field, and try to develop appropriate measures to reduce these risks. The training you are doing is missing in the end of this study. They identify the situations and start to work on them. The shortcomings that are found within the scope of the risk analysis and the shortcomings that they have identified in the field reports are

discussed and communicated to the other board members in the Occupational Health Committees held every month.

9.1.6. Periodic Controls

All lifting devices, earthing systems, pressure vessels, fire tubes and lines in the field are checked and kept in their legal frames.

It informs the maintenance team about the shortcomings that are detected during the periodic inspections and ensures that they are removed as soon as possible.

9.1.7. Dangerous Work Permits

High work, excavation work, closed work, etc., to be performed within the facility. All work to be done in the works is subject to work permits and work is not started without the necessary checks and approval.

9.1.8. Legal Terms

All legal regulations concerning occupational health and safety issues that concern our establishment are followed by the Occupational Health Safety Department through the official newspaper.

9.1.9. Accident Situations

All possible stumbling conditions are reported by the staff and they are moved to the Occupational Health and Safety Committee required by the Occupational Health and Safety Department and taken as necessary to correct them.

9.1.10. Subcontracting

Occupational health and safety requirements are controlled by the Occupational Health and Safety department within the context of subcontracted activities (security, food, lashing, etc.).

With in this scope;

- Negotiations with business security experts of relevant companies,
- Establishment visit of the physicians of the workplace is provided,
- Registrations of the companies are requested (risk analyzes, contingency plans, etc.) are recorded,
- Informing the necessary deficiencies (education, PPE etc.),
- Participation in the Occupational Health and Safety Committees is ensured.

9.2. Information on Personal Protective Clothing and Procedures for Their Use

Personal protective clothing is in the specified standards and these clothes are like the ones in Appendix-12 which indicate who wears these clothes.

9.2.1. PPE Variables Used in Port Operation

- Gloves (normal)
- Business dress
- Powder mask (single use)
- Half face powder mask
- Full face powder mask
- Powder tulum
- Chemical tulum
- Safety belt
- Work shoes
- Boot
- Helmet
- Headphone
- Powder eyeglass
- Chemical eyewear

9.2.2. PPE Variables Used by Port Mechanics

- Gloves (normal)
- Gloves (welder)
- Gloves (chemical)
- Welder mask
- Business dress
- Welder jacket
- Powder mask (single use)
- Half face powder mask
- Welding apparel
- Powder tulum
- Chemical tulum
- Safety belt
- Work shoes
- Boot
- Helmet
- Visor
- Headphone
- Gas filter
- Powder eyeglass
- Chemical eyewear
- Welder's eyeglass

9.2.3. PPE Variables Used in Port Electric/Automation

- Gloves (normal)
- Glove insulator
- Business dress
- Powder mask (single use)
- Half face powder mask
- Powder tulum
- Chemical tulum
- Safety belt
- Work shoes
- Boot
- Helmet
- Visor
- Headphone
- Powder eyeglass
- Chemical eyewear

HEAD PROTECTORS

EN 397 HELMET
EN 443 FIRE MAN'S HELMET
EN 812 PROTECTIVE HELMET

EAR PROTECTORS

EN 352-1 NOISE CANCELLING HEADPHONES
EN 352-2 NOISE CANCELLING EAR PLUGS
EN 352-3 NOISE CANCELLING HEADPHONES (ATTACHED TO HELMET)

EYE PROTECTORS

EN 166 EYE PROTECTIVE GENERAL STANDARD
EN 167 OPTICAL TEST METHODS
EN 168 OTHER NONOPTICAL TEST METHODS
EN 169 WELDING FILTERS
EN 170 ULTRAVIOLET FILTERS
EN 171 INFRARED FILTERS
EN 172 SUNLIGHT FILTERS (INDUSTRY)
EN 174 SKIER FILTERS
EN 175 WELDING TRENCHES - HEADINGS
EN 1731 WIRE MESH EYE AND FACE PROTECTORS (ATTACHED TO HELMET)
EN 207/208 LASER FILTERS
EN 379 AUTODIMMING WELDER TITLES

RESPIRATORY SYSTEM

EN 136 FULL FACE MASKS
EN 137 BREATHING APPARATUS (TUBE AND BACKRESTS)
EN 138 CLEAN AIR SUPPLY MASKS
EN 139 COMPRESSOR AIR SUPPLY CONTINUOUS AIRFLOW REGULATOR MASKS
EN 140 HALF FACE MASKS
EN 14387 (EN 141) GAS VAPOR FILTERS
EN 143 PARTICLE MASKS
EN 149 MAINTENANCE FREE (DISPOSABLE) MASKS
EN 269 CLEAN AIR SUPPLY (MOTORIZED) HEADERS
EN 14593-1 MASKS WITH BOTH POSITIVE DEMAND VALVE AND CONTINUOUS AIR FLOW SWITCH WITH COMPRESSOR AIR SUPPLY
EN 14593-2 MASKS WITH POSITIVE DEMAND VALVES WITH COMPRESSOR AIR SUPPLY
EN 402 ESCAPE MASKS (20 MINUTE TUBE WITH BACKLESS NECK TO WAIST)
EN 1146 ESCAPE MASKS (10-15 MINUTES TUBE WITH BACKLESS NECK TO EXCEED 0.47 cm)
EN 403 ESCAPE MASKS (WITH HEAD FILTER)
EN 405 MAINTENANCE FREE (WITHOUT REPLACEABLE FILTERS) GAS STEAM MASKS

HAND PROTECTORS

EN 420 GENERAL PURPOSE GLOVES
EN 374-1 GLOVES RESISTANT TO CHEMICALS, MICROORGANISMS
EN 374-2 GLOVES RESISTANT TO CHEMICALS, MICROORGANISMS (TIER 2 PENETRATION RESISTANT)
EN 374-3 GLOVES RESISTANT TO CHEMICALS, MICROORGANISMS (TIER 3 PENETRATION RESISTANT)
EN 381 STEEL (MESH) GLOVES
EN 388 MECHANICAL RESISTANCE, ANTISTATIC GLOVES
Pictogram
a) Friction (rated 0-4)
b) Truncation (rated 0-4)
c) Tearing (rated 0-4)
d) Puncture (rated 0-4)
EN 407 HEAT AND FLAME RESISTANT GLOVES
EN 421 RADIATION RESISTANT GLOVES TO IONIZING RAYS
EN 511 COLD WEATHER GLOVES
EN 659 FIRE FIGHTING GLOVES
EN 50237 GLOVES FOR ELECTRICAL PURPOSES WITH MECHANICAL PROTECTION
EN 60903 GLOVES AGAINST LIVE ELECTRICITY RISKS

BODY PROTECTORS

EN 340 GENERAL WORK CLOTHES
EN 342 PROTECTIVE CLOTHING AGAINST EXTREME COLD (BELOW -5°C)
EN 343 RAIN PROTECTIVE CLOTHING, RAINCOATS
EN 14058 COLD (COOL) CLIMATE CLOTHING
EN 348 PROTECTIVE CLOTHING AGAINST ADULT METAL SPLASHES
EN 367 HIGH TEMPERATURE AND OPEN FLAME PROTECTIVE CLOTHING
EN 463 PROTECTIVE CLOTHING AGAINST CHEMICALS (LIQUID SPLASHES)
EN 464 PROTECTIVE CLOTHING AGAINST CHEMICALS (LIQUID AND GAS)
EN 467 PROTECTIVE CLOTHING FOR A PART OF THE BODY AGAINST LIQUID CHEMICALS (APRONS, CAPS, ETC.)
EN 468 PROTECTIVE CLOTHING AGAINST CHEMICALS (SPRAYING AND TRANSMISSION OF PARTICLES TO THE BODY)
EN 469/AC PROTECTIVE CLOTHING USED IN THE FIGHT AGAINST FIRE
EN 471:2003 REFLECTIVE (PHOSPHORESCENT) AND HIGH VISIBILITY CLOTHING
EN 531 CLOTHING FOR INDUSTRIAL WORKERS EXPOSED TO HIGH TEMPERATURES (EXCEPT FIREFIGHTER AND WELDER CLOTHING)
EN 533 PROTECTIVE CLOTHING AGAINST HEAT AND (LIMITED) FLAME
EN 943-1 PROTECTIVE CLOTHING FROM LIQUID AND GAS CHEMICALS, GAS SUITS (SEALED: TYPE 1, GAS LEAKER: TYPE 2)
EN 1149-5:2008 ANTISTATIC CLOTHING
EN 1073 CLOTHING AGAINST RADIOACTIVE POLLUTION
EN 14605 CLOTHING THAT PROTECTS ONLY PART OF THE BODY AGAINST LIQUID CHEMICALS
EN 13998 GOWNS, PANTS AND VESTS AGAINST CUTTING AND KNIFE SINKING
EN 863 MECHANICAL (DUE TO PUNCTURES, CUTS, ETC.) CLOTHING THAT PROVIDES PROTECTION

FALL PREVENTION

EN 341 SYSTEMS/APPARATUS THAT LOWER SAFELY FROM A HEIGHT
EN 353-1 BRAKING SYSTEM THAT PREVENTS FALLING (ON THE VERTICAL LINE)
EN 351-2 ANTIFALL BRAKING SYSTEM (ON FLEXIBLE ELASTIC LINE)
EN 354 SAFETY ROPES (LANYARDS)
EN 355 SHOCK (ENERGY) ABSORBERS AND SAFETY ROPES PREVENTING SUDDEN FALLS FROM HIGH
EN 358 WAIST TYPE SEAT BELT AND SAFETY ROPE (POSITION RETENTION)
EN 360 ANTISUDDEN FALL FROM HEIGHT, REWINDING (INERTIAL) TYPE ROLLERS APPARATUS AND KNITTING COLUMNS
EN 361 PARACHUTE TYPE SAFETY BELT
EN 362 SAFETY HOOKS, BLACK BUILDINGS
EN 363 SYSTEMS THAT STOP FALLING
EN 795 PROTECTION AGAINST FALLING FROM A HEIGHT - ANCHORING DEVICES - TRIPODS - FIXED HOOKING DEVICES, DEVICES
EN 1496 RESCUE EQUIPMENT - LIFTING EQUIPMENT FOR RESCUE PURPOSES (PROTECTION AGAINST FALLING AND SLIPPING - INCLUDING SAFETY ROPES, BELTS AND FALL PREVENTERS)

FOOT PROTECTORS

EN 20345 (EN 345) SAFETY SHOES 200 JOULES
CLASS 1 - ONLY THOSE MADE OF GENUINE LEATHER
S1 HEEL WITH PROTECTIVE TOE, ANTISTATIC
SHOCK ABSORBER
S2 WATERPROOF +S1 FEATURES
S3 PROTECTIVE BASE +S2 +S1 FEATURES
CLASS 2 - ONLY THOSE MADE OF NATURAL AND SYNTHETIC POLYMERS
S4 ANTISTATIC, SHOCK - ABSORBING HEEL
S5 PROTECTIVE BASE +S4
EN 20346 (EN 346) PROFESSIONAL USE SHOES 100 JOULES
WATERPROOF METATARSAL PROTECTION, RESISTANCE TO CUTS
EN 20347 (EN 347) PROTECTIVE NOSELESS SAFETY SHOES
01 HYDROCARBON - RESISTANT SOLE, ANTISTATIC, SHOCK - ABSORBING HEEL
02 WATERPROOF +01 FEATURES
03 PROTECTIVE BASE +02 +01 FEATURES
EN 15090 FOOT CLOTHING FOR FIREFIGHTERS

Figure 14 - EN Standards for Personal Protective Equipment

9.3. Closed Space Entry Permit Measures and Procedures

There are no closed spaces in the coastal facility. Closed space activities within the ship are the responsibility of the ship and are acted in accordance with ship procedures.

10. OTHER ISSUES

10.1. Validity of Dangerous Goods Compliance Certificate

The validity date of TYUB numbered DGM.1045992.KTTMUB.484, which belongs to our enterprise, is 30/11/2022.

10.2. Defined Duties for the Dangerous Goods Safety Advisor

- In addition to the IMDG Code, DGSA shall have information about the IBC Code, IGC Code, IMSBC Code and MARPOL 73/78 applications according to its interest within the scope of dangerous cargoes handled at the coastal facility and the hazardous cargo activities of the coastal facility in general.
- The operator of the coastal facility shall notify in writing its assessment of whether the dangerous cargoes handled at the coastal facility are handled in accordance with the rules, provided that they do not exceed 6 (six) months at the intervals to be agreed between them and the coastal facility operator.
- DGSAs prepare quarterly reports on the responsibilities of the coastal facilities they serve or serve in the format determined by the Administration in the format determined by the Administration and this report is approved by the coastal facility operator and notified to the Administration.
- DGSAs are present at the coastal facility during the TYUB audits to be carried out by the Administration and actively participate in the audits.
- In cases where the coastal facility receives DGSA service from DGSA Organization, if the DGSA providing services cannot participate in the audit due to a reasonable reason, another DGSA employed by DGSA Organization is assigned by DGSA Organization to participate in the audit to the relevant coastal facility.
- Prepares and checks the accuracy of the coastal facility's Dangerous Cargo Handling Guidelines together with the coastal facility for dangerous goods handling and/or temporary storage.
- The parts of the guide dealing with the handling and/or temporary storage of dangerous goods shall also bear the signature of the DGSA.

10.3. Issues for Carrier of Dangerous Goods to the Shore Facility/from the Shore Facility by Land

10.3.1. Documents Required to be Carried

- Transport documents,
- Dangerous goods transportation driver training certificate (SRC-5),
- Identification card with photo in charge in vehicle (identity card, driving license or passport),

- Written instruction prepared by carrier to give to driver,
- Multimodal Dangerous Goods Transportation Form for dangerous goods transported in multimodal,
- ADR conformity certificate for vehicles,
- Copy of transport permission document taken from related competent authority,
- Dangerous Goods and Dangerous Waste Compulsory Financial Liability Insurance for vehicles carried out dangerous goods transportation.

10.3.2. Equipment and Apparatus Required to have in Vehicles

- Portable fire extinguishers,
- At least one chock of appropriate size to the wheel diameter and maximum mass for each vehicle,
- Two self-standing warning signs,
- Eye rinsing liquid,
- Warning vest,
- Portable lightening apparatus,
- A pair of protective gloves,
- Eye protection goggles,
- Emergency escape mask,
- Shovel,
- Drain seal,
- Collecting container.

10.3.3. Speed Limits in Port Area

Speed limits determined by Port Facility will be applied.

10.4. Issues Regarding to the Carriers of Dangerous Goods to Coming the Shore Facility/Leaving from Shore Facility by Sea

10.4.1. Exhibition of Signals by Ships and Sea Vehicles to the Port or Shore Facility by Day/at Night

Ships carrying explosive, flammable, flammable and similar dangerous cargoes shall pull a B (Bravo) beacon during the day according to the International Regulation for Preventing Collisions at Sea (COLREG) and display a red lantern visible from all directions (360 degrees) at night. Cold and Hot Work procedures aboard ships in the shore facility and carrying dangerous goods:

10.4.2. Cold and Hot Work Procedures Aboard Ships in the Shore facility and Carrying Dangerous Goods

- The ships carrying dangerous goods and staying in shore facility shall take the required permission for hot and cold work from Port authority and inform the shore facility responsible.

- The principles of hot working in vessels carrying dangerous cargo at coastal facilities are as in Annex-18.

10.5. The Responsibilities of Third Parties Operating

The Responsibilities of Third Parties Operating in the Coastal Facility, such as the Cargo/Ship Agency, are as follows:

1. To ensure that the personnel who will do business in the coastal facility receive the trainings specified in the relevant legislation,
2. To act in accordance with the rules specified in the IMSBC Code in the coastal facility,
3. To act in accordance with the Dangerous Goods Guidelines established by the coastal facility and the procedures related to dangerous goods,
4. When it detects any non-compliance in the handling, transportation and storage of dangerous goods in the coastal facility, to report the situation to the facility concerned,
5. To send the Material Safety Data Sheet (MSDS), which constitutes an important part of the work to eliminate the Occupational Health and Safety risks that may occur during the use and storage of dangerous goods and which is prepared to inform the user correctly and adequately, and which includes the hazards and risks of the relevant dangerous goods and other information, to the coastal facility operation and the Administration.

11. ATTACHMENT

The annexes to the Dangerous Cargo Handling Guide prepared by the coastal facility have not been included in the English translation of this guide. For references to the appendices made in the guide, please refer to the original (Turkish) version of this guide.