
**DANGEROUS GOODS MANIFEST SUBMISSION
WITH EBXML MESSAGE SERVICE
(XMLDG)**

for

The MARINE DEPARTMENT



XML SCHEMA SPECIFICATION

Version: 1.0

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For full details of legal requirements related to the Service, it should refer to the section 4 of the Dangerous Goods (Shipping) Regulations.

TABLE OF CONTENTS

COPYRIGHT	I
TABLE OF CONTENTS	II
1. INTRODUCTION	1
1.1 DOCUMENT TRANSMISSION.....	1
2. BUSINESS DOCUMENTS AND BUSINESS PROCESS	2
2.1 BUSINESS DOCUMENTS	2
2.2 BUSINESS PROCESS.....	2
3. SCHEMA SPECIFICATION	3
3.1 CORE COMPONENT TYPES	3
3.1.1 Code Type.....	3
3.1.2 Date Time Type	4
3.1.3 Identifier Type	4
3.1.4 Measure Type.....	5
3.1.5 Quantity Type	6
3.1.6 Text Type.....	7
3.2 GENERAL PURPOSE BUSINESS INFORMATION ENTITIES.....	7
3.2.1 Location Type	7
3.2.2 Package Type	8
3.2.3 Party Type	9
3.2.4 Document Header Type	9
3.2.5 Processing Result Type.....	11
3.3 DANGEROUS GOODS RELATED BUSINESS INFORMATION ENTITIES	12
3.3.1 Dangerous Goods Type.....	12
3.3.2 Dangerous Goods Class Code Type	13
3.3.3 Dangerous Goods Marine Pollutant Code Type	14
3.3.4 Dangerous Goods Packing Group Code Type	14
3.3.5 Dangerous Goods UNDG Identifier Type	15
3.3.6 Dangerous Goods Item Type	15
3.3.7 Container Type.....	17
3.3.8 Container SizeType Code Type	18
3.3.9 Container Location Type	18
3.3.10 ContainerCount.Type.....	20
3.4 TRANSPORTATION RELATED BUSINESS INFORMATION ENTITIES.....	21
3.4.1 Transport Type.....	21
3.4.2 Vessel Type.....	22
3.4.3 Vessel CallsignId Type	22
3.4.4 Vessel IMOId Type.....	23
3.4.5 Voyage Type.....	23
3.5 DANGEROUS GOODS MANIFEST DOCUMENT	24
3.5.1 Child Elements.....	24
3.5.2 Application.....	26
3.6 EXAMPLE	28
3.7 ACKNOWLEDGEMENT DOCUMENT	30
3.7.1 Child Elements.....	30
3.7.2 Application.....	30

3.7.3 Example	31
3.8 CREDENTIAL DOCUMENT	31
3.8.1 Child Elements.....	32
3.8.2 Example	32
3.9 OVERALL XML SCHEMA DIAGRAM (3 PAGES).....	33

1. INTRODUCTION

This specification provides the XML schema definitions for the business documents to be exchanged in the process of Dangerous Goods Manifest submission that the Hong Kong SAR Government (HKSARG) requires shipping agents (agents) to comply with the Dangerous Goods (Shipping) Regulations of HKSARG. The three types of the documents involved in the process are namely *Dangerous Goods Manifest*, *Acknowledgement*, and *Credential*.

Under section 4 of the Dangerous Goods (Shipping) Regulations, agents or master of any vessel calling at Hong Kong and having on board any dangerous goods shall, not less than 48 hours before the arrival of the vessel, furnish the Director of Marine a Dangerous Goods Manifest.

1.1 DOCUMENT TRANSMISSION

It is recommended that the documents are exchanged through the ebXML Message Service (ebMS) through the Internet. ebMS provides the mechanism for packaging and transporting business documents in a standardized, secure and reliable manner.

2. BUSINESS DOCUMENTS AND BUSINESS PROCESS

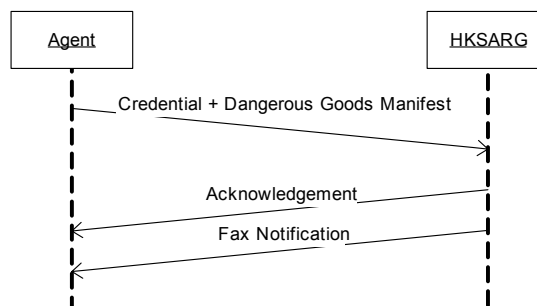
2.1 BUSINESS DOCUMENTS

The three types of business documents involved in the Dangerous Goods Manifest submission process are as follows:

1. **Dangerous Goods Manifest.** The business document for agents to declare dangerous goods to HKSARG.
2. **Acknowledgement.** The business document for HKSARG to acknowledge the Dangerous Goods Manifest submission.
3. **Credential.** The business document that contains user identifier and password for HKSARG to authenticate the sender of the Dangerous Goods Manifest.

2.2 BUSINESS PROCESS

1. The agent packages the Dangerous Goods Manifest document (1) and the Credential document (3) into one single ebXML message, and sends the message to HKSARG.
2. HKSARG authenticates the sender of the message using the Credential document and validates the data in the Dangerous Goods Manifest document.
3. HKSARG sends the Acknowledgement document to the agent with the validation result.
4. If the Dangerous Goods Manifest data is valid, HKSARG processes the Dangerous Goods Manifest.
5. After processing, HKSARG sends an notification on the processing result the agent by fax. HKSARG is considering the possibility of substitute the fax notification by another Acknowledgement document in future.



3. SCHEMA SPECIFICATION

3.1 CORE COMPONENT TYPES

3.1.1 Code Type

Name:	Code.Type
Definition:	A character string (letters, figures or symbols) that for brevity and/or language independence may be used to represent or replace a definitive value or text of an attribute together with relevant supplementary information.
Base:	xs:string
UML:	<pre> classDiagram class Code_Type { +content : xs:string +codeListAgencyId : xs:string +codeListId : xs:string +codeListVersionId : xs:string +languageCode : xs:string } class Datatype_xs_string { <<datatype>> xs:string } Code_Type -- > Datatype_xs_string </pre>

3.1.1.1 Attributes

Name:	codeListIdentifier
Definition:	The type of unit of measure.
Type:	xs:string
Use:	Optional

Name:	codeListAgencyIdentifier
Definition:	An agency that maintains one or more code lists.
Type:	xs:string
Use:	Optional

Name:	codeListVersionIdentifier
Definition:	The version of the code list.
Type:	xs:string
Use:	Optional

Name:	languageCode
Definition:	The identifier of the language used in the corresponding text string.
Type:	xs:string
Use:	Optional

3.1.1.2 Example

```

<LocaleCode
  codeListIdentifier="ISO3166"
  codeListAgencyIdentifier="ISO"
  codeListVersionIdentifier="1.0">
  US
</LocaleCode>
        
```

3.1.2 Date Time Type

Name:	DateTime.Type
Definition:	A particular point in the progression of time together with relevant supplementary information.
Base:	dateTime (It is predefined in XML Schema 1.0, its format is: <i>CCYY-MM-DDThh:mm:ss</i>)
UML:	
See:	http://www.w3.org/TR/2001/REC-xmlschema-2-20010502/#dateTime

3.1.2.1 Attributes

Name:	dateTimeFormatText
Definition:	The format of the date/time content.
Type:	xs:string
Use:	Optional

3.1.2.2 Example

```
<IssueDateTime
  dateTimeFormatText="CCYY-MM-DDThh:mm:ss">
  2002-08-20T09:30:45
</IssueDateTime>
```

3.1.3 Identifier Type

Name:	Id.Type
Definition:	A character string to identify and distinguish uniquely, one instance of an object in an identification scheme from all other objects within the same scheme together with relevant supplementary information.
Base:	xs:string
UML:	

3.1.3.1 Attributes

Name:	identificationSchemeName
Definition:	The name of the identification scheme.
Type:	xs:string
Use:	Optional

Name:	identificationSchemeAgencyName
Definition:	The agency that maintains the identification scheme.
Type:	xs:string
Use:	Optional

Name:	languageCode
Definition:	The identifier of the language used in the corresponding text string.
Type:	xs:string
Use:	Optional

Name:	identificationSchemeDataURI
Definition:	The Uniform Resource Identifier that identifies where the Identification Scheme Data is located.
Type:	xs:anyURI
Use:	Optional

Name:	identificationSchemeURI
Definition:	The Uniform Resource Identifier that identifies where the Identification Scheme is located.
Type:	xs:anyURI
Use:	Optional

3.1.3.2 Example

```
<DUNSI d
  identificationSchemeName="DUNS "
  identificationAgencyName="DandB" >
  251258964
</DUNSI d>
```

3.1.4 Measure Type

Name:	Measure . Type
Definition:	The size, volume, mass, amount or scope derived by performing a physical measure together with relevant supplementary information.
Base:	xs:decimal
UML:	<pre> classDiagram class Measure_Type { +measureUnitCode : xs:string } class Datatype { <<datatype>> xs:decimal } Measure_Type -- > Datatype </pre>

3.1.4.1 Attributes

Name:	meausreUnitCode
Definition:	Code specifying the unit of measure.
Type:	xs:string
Use:	Optional

3.1.4.2 Example

```
<GrossMassMeasure
  measureUnitCode="KGM">
  56.5
</GrossMassMeasure>
```

3.1.5 Quantity Type

Name:	Quantity.Type
Definition:	A number of non-monetary units together with relevant supplementary information.
Base:	xs:decimal
UML:	<pre> classDiagram class Quantity_Type { +content : xs:decimal +quantityUnitCode : xs:string +quantityUnitCodeListId : xs:string +quantityUnitCodeListAgencyId : xs:string } class Datatype_xs_decimal { <<datatype>> xs:decimal } Quantity_Type -- > Datatype_xs_decimal </pre>

3.1.5.1 Attributes

Name:	quantityUnitCode
Definition:	A number of non-monetary units.
Type:	xs:string
Use:	Optional

Name:	quantityUnitCodeListIdentifier
Definition:	The agency which maintains the quantity unit code list.
Type:	xs:string
Use:	Optional

Name:	quantityUnitCodeListAgencyIdentifier
Definition:	The quantity unit code list.
Type:	xs:string
Use:	Optional

3.1.5.2 Example

```
<GoodsQuantity
  quantityUnitCode="BX"
  quantityUnitCodeListIdentifier="UNECE-REC20"
  quantityUnitCodeListAgencyIdentifier="UN">
  360
</GoodsQuantity>
```

3.1.6 Text Type

Name:	Text . Type
Definition:	A character string with or without a specified language.
Base:	xs:string
UML:	<pre> classDiagram class Text_Type { +content : xs:string +languageCode : xs:string } class xs_string_datatype["<<datatype>> xs:string"] Text_Type -- > xs_string_datatype </pre>

3.1.6.1 Attributes

Name:	languageCode
Definition:	The identifier of the language used in the corresponding text string.
Type:	xs:string
Use:	Optional

3.1.6.2 Example

```

<CompanyName
  languageCode="en">
  ABC Co.
</CompanyName>
            
```

3.2 GENERAL PURPOSE BUSINESS INFORMATION ENTITIES

3.2.1 Location Type

Name:	Location . Type
Definition:	Identification of a location by identifier, code, and/or name.
UML:	<pre> classDiagram class Location_Type { *Id : Id.Type *Code : Code.Type *Name : Text.Type } </pre>

3.2.1.1 Child Elements

Name:	Id
Definition:	Identifier of a location.
Type:	Id.Type
Occurrence:	0-1

Name:	Code
Definition:	Code specifying a location.
Type:	Code.Type
Occurrence:	0-1

Name:	Name
Definition:	Name of a location.
Type:	Text.Type
Occurrence:	0-1

3.2.1.2 Examples

```
<StowageLocation>
  <Id>430705</Id>
  <Name>BAY 43, ROW 7, TIER 5</Name>
</StowageLocation>
```

3.2.2 Package Type

Name:	Package.Type
Definition:	Details of goods packaging.
UML:	<pre> classDiagram class Package_Type { } class Sub1 { TypeName : Text.Type } class Sub2 { Quantity : Quantity.Type } Package_Type < -- Sub1 Package_Type < -- Sub2 Sub1 "0..1" Sub2 "0..1" </pre>

3.2.2.1 Child Elements

Name:	TypeName
Definition:	Name of the outer package type.
Type:	Text.Type
Occurrence:	0-1

Name:	Quantity
Definition:	Number of packages.
Type:	Quantity.Type
Occurrence:	0-1

3.2.2.2 Example

```
<Package>
  <TypeName>BOX</TypeName>
  <Quantity>200</Quantity>
</Package>
```

3.2.3 Party Type

Name:	Party.Type
Definition:	Identification of a party by identifier and/or name.
UML:	<pre> classDiagram class PartyType["Party.Type"] class IdType["Id : Id.Type"] class NameType["Name : Text.Type"] PartyType "1" *-- "0..1" IdType PartyType "1" *-- "0..1" NameType </pre>

3.2.3.1 Child Elements

Name:	Id
Definition:	Party identifier.
Type:	Id.Type
Occurrence:	0-1

Name:	Name
Definition:	Party name.
Type:	Text.Type
Occurrence:	0-1

3.2.3.2 Example

```

<Party>
  <Id>100298798</Id>
  <Name>ABC Co.</Name>
</Party>
    
```

3.2.4 Document Header Type

Name:	DocumentHeader.Type
Definition:	Header of a document.
UML:	<pre> classDiagram class DocumentHeaderType["DocumentHeader.Type"] class DocumentIdType["DocumentId : Id.Type"] class DocumentTypeCodeType["DocumentTypeCode : Code.Type"] class DocumentFunctionCodeType["DocumentFunctionCode : Code.Type"] class ResponseTypeCodeType["ResponseTypeCode : Code.Type"] class ReferenceDocumentIdType["ReferenceDocumentId : Id.Type"] class ReferenceDocumentTypeCodeType["ReferenceDocumentTypeCode : Code.Type"] class IssueDateTimeType["IssueDateTime : DateTime.Type"] class SenderPartyType["SenderParty : Party.Type"] class RecipientPartyType["RecipientParty : Party.Type"] DocumentHeaderType "1" *-- "1" DocumentIdType DocumentHeaderType "1" *-- "1" DocumentTypeCodeType DocumentHeaderType "1" *-- "1" DocumentFunctionCodeType DocumentHeaderType "1" *-- "0..1" ResponseTypeCodeType DocumentHeaderType "1" *-- "0..1" ReferenceDocumentIdType DocumentHeaderType "1" *-- "0..1" ReferenceDocumentTypeCodeType DocumentHeaderType "1" *-- "0..1" IssueDateTimeType DocumentHeaderType "1" *-- "0..1" SenderPartyType DocumentHeaderType "1" *-- "0..1" RecipientPartyType </pre>

3.2.4.1 Child Elements

Name:	DocumentId
Definition:	Identification of the document.
Type:	Id.Type
Occurrence:	1

Name:	DocumentTypeCode
Definition:	Code specifying the type of the document.
Type:	Code.Type
Occurrence:	1

Name:	DocumentFunctionCode
Definition:	Code specifying the function of the document.
Type:	Code.Type
Occurrence:	0-1

Name:	ResponseTypeCode
Definition:	Code specifying the type of the acknowledgement required or transmitted.
Type:	Code.Type
Occurrence:	0-1

Name:	ReferenceDocumentId
Definition:	Identification of the document referenced by this document.
Type:	Id.Type
Occurrence:	0-1

Name:	ReferenceDocumentTypeCode
Definition:	Code specifying the document referenced by this document.
Type:	Code.Type
Occurrence:	0-1

Name:	IssueDateTime
Definition:	Date/time when this document is issued.
Type:	DateTime.Type
Occurrence:	0-1

Name:	SenderParty
Definition:	Identification of party who sends this document.
Type:	Party.Type
Occurrence:	0-1

Name:	RecipientParty
Definition:	Identification of party who receives this document.
Type:	Party.Type
Occurrence:	0-1

3.2.4.2 Example

```

<DocumentHeader>
  <DocumentId>4567@MARDEP.GOV.HK</DocumentId>
  <DocumentTypeCode>ACK</DocumentTypeCode>
  <ResponseTypeCode>RE
</ResponseTypeCode>
  <ReferenceDocumentId>1234@SHIPPINGAGENT.COM
</ReferenceDocumentId>
  <ReferenceDocumentTypeCode>DGM
</ReferenceDocumentTypeCode>
  <IssueDateTime>2002-08-21T09:32:47</IssueDateTime>
  <SenderParty>
    <Id>abc.com</Id>
    <Name>HONG KONG SAR GOVERNMENT</Name>
  </SenderParty>
  <RecipientRarty>
    <Id>123.com</Id>
    <Name>SHIPPING AGENT COMPANY</Name>
  </RecipientRarty>
</DocumentHeader>

```

3.2.5 Processing Result Type

Name:	ProcessingResult.Type
Definition:	A processing result.
UML:	<pre> classDiagram class ProcessingResult_Type["ProcessingResult.Type"] class Code_Type["Code : Code.Type"] class Text_Type["Text : Text.Type"] ProcessingResult_Type "0..1" --> Code_Type ProcessingResult_Type "0..1" --> Text_Type </pre>

3.2.5.1 Child Elements

Name:	Code
Definition:	Code identifying the result type.
Type:	Code.Type
Occurrence:	0-1

Name:	Text
Definition:	Description of the result.
Type:	Text.Type
Occurrence:	0-1

3.2.5.2 Example

```

<ProcessingResult>
  <Code>410</Code>
  <Text>Duplicate Document Id</Text>
</ProcessingResult>

```

3.3 DANGEROUS GOODS RELATED BUSINESS INFORMATION ENTITIES

3.3.1 Dangerous Goods Type

Name:	DangerousGoods . Type
Definition:	Details of a dangerous goods.
UML:	<pre> classDiagram class DangerousGoods_Type { UNDGId : DangerousGoods.UNDGId.Type ProperShippingName : Text.Type ClassCode : DangerousGoods.ClassCode.Type SubsidiaryRiskClassCode : DangerousGoods.ClassCode.Type PackingGroupCode : DangerousGoods.PackingGroupCode.Type MarinePollutantCode : DangerousGoods.MarinePollutantCode.Type FlashpointMeasure : Measure.Type } </pre>

3.3.1.1 Child Elements

Name:	UNDGId
Definition:	UNDG number of the dangerous goods
Type:	DangerousGoods . UNDGId . Type
Occurrence:	0-1

Name:	ProperShippingName
Definition:	Proper shipping name of the dangerous goods.
Type:	Text . Type
Occurrence:	0-1

Name:	ClassCode
Definition:	IMDG Hazard Class of the dangerous goods.
Type:	DangerousGoods . ClassCode . Type
Occurrence:	0-1

Name:	SubsidiaryRiskClassCode
Definition:	IMDG Hazard Class of a subsidiary risk.
Type:	DangerousGoods . ClassCode . Type
Occurrence:	0-3

Name:	PackingGroupCode
Definition:	Packing group of the dangerous goods.
Type:	DangerousGoods . PackingGroupCode . Type
Occurrence:	0-1

Name:	MarinePollutantCode
Definition:	Marine pollutant level of the dangerous goods.
Type:	DangerousGoods.MarinePollutantCode.Type
Occurrence:	0-1

Name:	FlashpointMeasure
Definition:	Flashpoint temperature of the dangourous goods.
Type:	Meaure.Type
Occurrence:	0-1

3.3.1.2 Example

```

<DangerousGoods>
  <UNDGId>1549</UNDGId>
  <ProperShippingName>ANTIMONY COMPOUND
</ProperShippingName>
  <ClassCode>1.3G</ClassCode>
  <SubsidiaryRiskCode>6.1</SubsidiaryRiskCode>
  <SubsidiaryRiskCode>8</SubsidiaryRiskCode>
  <PackingGroupCode>2</PackingGroupCode>
  <MarinePollutantCode>S</MarinePollutantCode>
  <FlashpointMeasure measureUnitCode="CEL">50.1
  </FlashpointMeasure>
</DangerousGoods>

```

3.3.2 Dangerous Goods Class Code Type

Name:	DangerousGoods.ClassCode.Type
Definition:	IMDG Class of a dangerous goods.
Base:	Code.Type
UML:	<pre> classDiagram class DangerousGoods_ClassCode_Type[DangerousGoods.ClassCode.Type] class Code_Type[Code.Type] DangerousGoods_ClassCode_Type -- > Code_Type </pre>

3.3.2.1 Attributes

Name:	codeListAgencyIdentifier
Use:	Optional
Default:	IMO

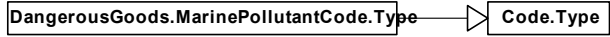
3.3.2.2 Example

```

<IMDGClassCode>1.3G</IMDGClassCode>

```

3.3.3 Dangerous Goods Marine Pollutant Code Type

Name:	DangerousGoods.MarinePollutantCode.Type
Definition:	Marine pollutant indicator of a dangerous goods.
Base:	Code.Type
UML:	 <pre> classDiagram class DangerousGoods_MarinePollutantCode_Type class Code_Type DangerousGoods_MarinePollutantCode_Type -- > Code_Type </pre>

3.3.3.1 Attributes

Name:	codeListAgencyIdentifier
Use:	Optional
Default:	IMO

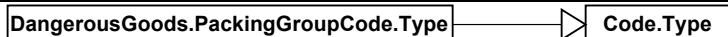
3.3.3.2 Content

Type:	String	
Max length:	1	
Enumeration	N	Non-marine pollutant.
:	Y	Marine pollutant.
	S	Severe marine pollutant.

3.3.3.3 Example

<MarinePollutant>S</MarinePollutant>

3.3.4 Dangerous Goods Packing Group Code Type

Name:	DangerousGoods.PackingGroupCode.Type
Definition:	Code specifying the level of danger for which the packaging must cater.
Base:	Code.Type
UML:	 <pre> classDiagram class DangerousGoods_PackingGroupCode_Type class Code_Type DangerousGoods_PackingGroupCode_Type -- > Code_Type </pre>

3.3.4.1 Attributes

Name:	codeListAgencyIdentifier
Use:	Optional
Default:	IMO

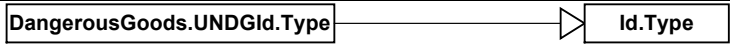
3.3.4.2 Content

Type:	string	
Max length:	1	
Enumeration	N	Not applicable.
:	1	Great danger (I).
	2	Medium danger (II).
	3	Minor danger (III).

3.3.4.3 Example

<PackingGroupCode>1</PackingGroupCode>

3.3.5 Dangerous Goods UNDG Identifier Type

Name:	DangerousGoods.UNDGId.Type
Definition:	A unique identification assigned within the United Nations to substances and articles contained in a list of the dangerous goods most commonly carried.
Base:	Id.Type
UML:	

3.3.5.1 Attributes

Name:	identificationSchemeName
Use:	Optional
Default:	UNDG Number

Name:	identificationSchemeAgencyName
Use:	Optional
Default:	UN

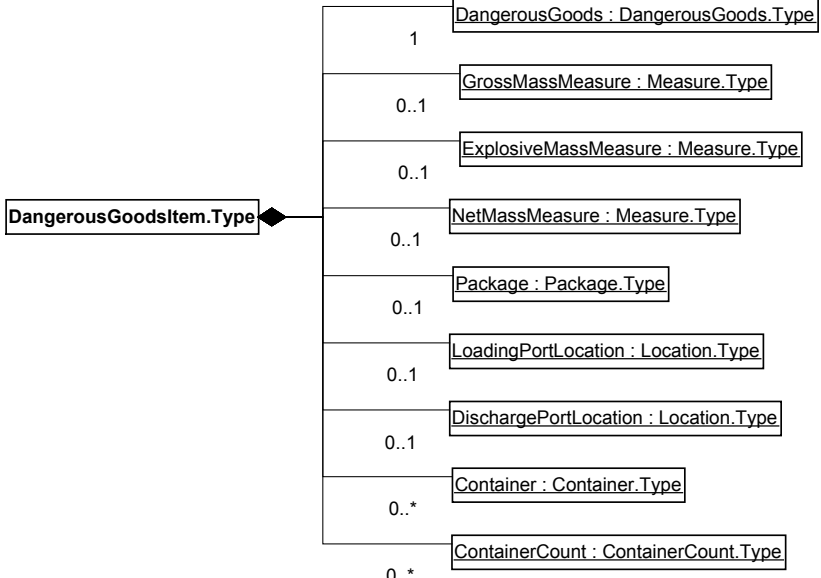
3.3.5.2 Content

Type:	string
Max length:	4
Pattern:	[0-9]{4}

3.3.5.3 Example

<UNDGId>1549</UNDGId>

3.3.6 Dangerous Goods Item Type

Name:	DangerousGoodsItem.Type
Definition:	Details of a dangerous goods item being transported.
UML:	

3.3.6.1 Child Elements

Name:	DangerousGoods
Definition:	Details of the dangerous goods.
Type:	DangerousGoods.Type
Occurrence:	1

Name:	GrossMassMeasure
Definition:	Gross mass of the dangerous goods item.
Type:	Measure.Type
Occurrence:	0-1

Name:	ExplosiveMassMeasure
Definition:	Mass of the Net Explosive Content in the dangerous goods item.
Type:	Measure.Type
Occurrence:	0-1

Name:	NetMassMeasure
Definition:	Net mass of the dangerous goods item in kilogram.
Type:	Measure.Type
Occurrence:	0-1

Name:	Package
Definition:	Number of packages in the dangerous goods item.
Type:	Package.Type
Occurrence:	0-1

Name:	LoadingPortLocation
Definition:	Port of loading for the dangerous goods item.
Type:	Location.Type
Occurrence:	0-1

Name:	DischargePortLocation
Definition:	Port of discharge for the dangerous goods item.
Type:	Location.Type
Occurrence:	0-1

Name:	Container
Definition:	Details of the containers carrying the dangerous goods item.
Type:	Container.Type
Occurrence:	0-*

Name:	ContainerCount
Definition:	Number of containers of a particular size type carrying the dangerous goods item.
Type:	ContainerCount.Type
Occurrence:	0-*

3.3.6.2 Example

```

<DangerousGoodsItem>
  <DangerousGoods>...</DangerousGoods>
  <GrossMassMeasure measureUnitCode="KGM">253.31
</GrossMassMeasure>
  <ExplosiveMassMeasure measureUnitCode="KGM">92.48
</ExplosiveMassMeasure>
  <NetMassMeasure measureUnitCode="KGM">100.10
</NetMassMeasure>
  <Package>
    <TypeName>DRUM</TypeName>
    <Quantity>200</Quantity>
  </Package>
  <LoadingPortLocation>
    <Code>PRC</Code>
  </LoadingPortLocation>
  <DischargePortLocation>
    <Code>HK</Code>
    <Name>HONG KONG</Name>
  </DischargePortLocation>
  <Container>
    <Id>SEKU9482838</Id>
    <SizeTypeCode>2</SizeTypeCode>
    <Location><Id>4307068</Id></Location>
  </Container>
  <Container>
    <Id>TEAU8384829</Id>
    <SizeTypeCode>4</SizeTypeCode>
    <Location><Id>2406029</Id></Location>
  </Container>
  <ContainerCount>
    <SizeTypeCode>2</SizeTypeCode>
    <Quantity>1</Quantity>
  </ContainerCount>
  <ContainerCount>
    <SizeTypeCode>4</SizeTypeCode>
    <Quantity>1</Quantity>
  </ContainerCount>
</DangerousGoodsItem>

```

3.3.7 Container Type

Name:	Container.Type
Definition:	Identification, size type, and location of a container.
UML:	<pre> classDiagram class ContainerType["Container.Type"] { Id : Id.Type Location : Container.Location.Type SizeTypeCode : Container.SizeTypeCode.Type } </pre>

3.3.7.1 Child Elements

Name:	Id
Definition:	Identifier of a container.
Type:	Id.Type
Occurrence:	0-1

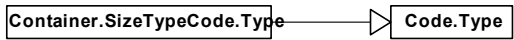
Name:	Location
Definition:	Stowage location of a container.
Type:	Container.Location.Type
Occurrence:	0-1

Name:	SizeTypeCode
Definition:	Size/type code of a container.
Type:	Container.SizeTypeCode.Type
Occurrence:	0-1

3.3.7.2 Example

```
<Container>
  <Id>ABCU29838823</Id>
  <SizeTypeCode>2</SizeTypeCode>
  <Location>
    <Id>4307058</Id>
  </Location>
</Container>
```

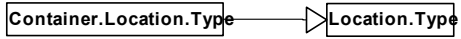
3.3.8 Container SizeType Code Type

Name:	Container.SizeTypeCode.Type
Definition:	Size type code of a container.
Base:	Code.Type
UML:	 <pre>classDiagram class Container.SizeTypeCode.Type class Code.Type Container.SizeTypeCode.Type -- > Code.Type</pre>

3.3.8.1 Example

```
<SizeTypeCode>2</SizeTypeCode>
```

3.3.9 Container Location Type

Name:	Container.Location.Type
Definition:	Stowage location of a container.
Base:	Location.Type
UML:	 <pre>classDiagram class Container.Location.Type class Location.Type Container.Location.Type -- > Location.Type</pre>

3.3.9.1 Child Elements

Name:	Id
Definition:	Identification of a stowage location.
Type:	Id.Type
Occurrence:	0-1
Content Definition	
Type:	String
Max length:	7
Pattern:	[0-9]{7}
Description:	The identifier should be in the format of BBBRRTT, where BBB is the bay number, RR is the row number and TT is the tier number.

Name:	Name
Definition:	Textual description of a stowage location.
Type:	Text.Type
Occurrence:	0-1

3.3.9.2 Example

```
<StowageLocation>  
  <Id>0420302</Id>  
  <Name>Bay 040, Row 03, Tier 02</Name>  
</StowageLocation>
```

3.3.10 ContainerCount.Type

Name:	ContainerCount.Type
Definition:	Number of containers of a particular size/type.
UML:	<pre> classDiagram class ContainerCount_Type["ContainerCount.Type"] class SizeTypeCode_Type["SizeTypeCode : Container.SizeTypeCode.Type"] class Quantity_Type["Quantity : Quantity.Type"] ContainerCount_Type "0..1" -- SizeTypeCode_Type ContainerCount_Type "1" -- Quantity_Type </pre>

3.3.10.1 Child Elements

Name:	SizeTypeCode
Definition:	Size/type code of a container.
Type:	Container.SizeTypeCode.Type
Occurrence:	0-1

Name:	Quantity
Definition:	Number of containers of the specified size/type.
Type:	Quantity.Type
Occurrence:	1

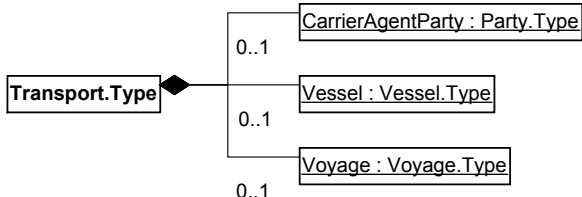
3.3.10.2 Example

```

<ContainerCount>
  <SizeTypeCode>4</SizeTypeCode>
  <Quantity>5</Quantity>
</ContainerCount>
        
```


3.4 TRANSPORTATION RELATED BUSINESS INFORMATION ENTITIES

3.4.1 Transport Type

Name:	Transport.Type
Definition:	Details of transport.
UML:	 <pre> classDiagram class TransportType["Transport.Type"] class CarrierAgentParty["CarrierAgentParty : Party.Type"] class Vessel["Vessel : Vessel.Type"] class Voyage["Voyage : Voyage.Type"] TransportType "0..1" *-- "0..1" CarrierAgentParty TransportType "0..1" -- "0..1" Vessel TransportType "0..1" -- "0..1" Voyage </pre>

3.4.1.1 Child Elements

Name:	CarrierAgentParty
Definition:	Identification of the carrier's agent.
Type:	Party.type
Occurrence:	0-1

Name:	Vessel
Definition:	Details of the vessel.
Type:	Vessel.Type
Occurrence:	0-1

Name:	Voyage
Definition:	Details of the voyage.
Type:	Voyage.Type
Occurrence:	0-1

3.4.1.2 Example

```

<Transport>
  <CarrierAgentParty>
    <Id>1001</Id>
    <Name>Shipping Agent Company</Name>
  </CarrierAgentParty>

  <Vessel>
    <Name>UNICORN</Name>
    <CallSignId>3FTY7</CallSignId>
  </Vessel>
  <Voyage>
    <Id>462CS-041</Id>
    <Location><Name>Singapore</Name></Location>
    <CallPortLocation>
      <Name>HONG KONG</Name>
    </CallPortLocation>
    <PortCallDate>2002-08-21T11:30:00</PortCallDate>
  </Voyage>

```

</Transport>

3.4.2 Vessel Type

Name:	Vessel.Type
Definition:	Details of a vessel.
UML:	<pre> classDiagram class VesselType { CallsignId : Vessel.CallsignId.Type IMOId : Vessel.IMOId.Type PortAuthorityId : Id.Type Name : Text.Type } </pre>

3.4.2.1 Child Elements

Name:	CallsignId
Definition:	Radio Callsign of a vessel.
Type:	Vessel.CallsignId.Type
Occurrence:	0-1

Name:	IMOId
Definition:	IMO number of a vessel.
Type:	Vessel.IMOId.Type
Occurrence:	0-1

Name:	PortAuthorityId
Definition:	An vessel identifier assigned by the port authority.
Type:	Id.Type
Occurrence:	0-1

Name:	Name
Definition:	Vessel name.
Type:	Text.Type
Occurrence:	0-1

3.4.2.2 Example

```

<Vessel>
  <CallsignId>LZGS</CallsignId>
  <IMOId>IMO8683837</IMOId>
  <PortAuthorityId>1048257463</PortAuthorityId>
  <Name>Unicorn</Name>
</Vessel>

```

3.4.3 Vessel CallsignId Type

Name:	Vessel.CallsignId.Type
--------------	-------------------------------

Definition:	Radio Callsign identification.
Base:	Id.Type
UML:	<pre> classDiagram class VesselCallsignIdType["Vessel.CallsignId.Type"] class IdType["Id.Type"] VesselCallsignIdType -- > IdType </pre>

3.4.3.1 Attributes

Name:	identificationSchemeName
Use:	Optional
Default:	Radio Callsign

3.4.3.2 Example

<CallsignId>3FTY7</CallsignId>

3.4.4 Vessel IMOId Type

Name:	Vessel.IMOId.Type
Definition:	IMO number of a vessel.
Base:	Id.Type
UML:	<pre> classDiagram class VesselIMOIdType["Vessel.IMOId.Type"] class IdType["Id.Type"] VesselIMOIdType -- > IdType </pre>

3.4.4.1 Attributes

Name:	identificationSchemeName
Use:	Optional
Default:	IMO Number

3.4.4.2 Example

<IMOId>IMO4847371</IMOId>

3.4.5 Voyage Type

Name:	Voyage.Type
Definition:	Details of a voyage of a vessel.
UML:	<pre> classDiagram class VoyageType["Voyage.Type"] class IdType["Id : Id.Type"] class LocationType["Location : Location.Type"] class CallPortLocationType["CallPortLocation : Location.Type"] class PortCallDateType["PortCallDate : DateTime.Type"] VoyageType -- IdType : 0..1 VoyageType -- LocationType : 0..* VoyageType -- CallPortLocationType : 0..1 VoyageType -- PortCallDateType : 0..1 </pre>

3.4.5.1 Child Elements

Name:	Id
Definition:	Voyage number assigned by the carrier.
Type:	Id.Type
Occurrence:	0-1

Name:	Location
--------------	----------

Definition:	A sequence of locations that a vessel travels.
Type:	Location.Type
Occurrence:	0-*

Name:	CallPortLocation
Definition:	Port of call.
Type:	Location.Type
Occurrence:	0-1

Name:	PortCallDate
Definition:	Port call date.
Type:	DateTime.Type
Occurrence:	0-1

3.4.5.2 Example

```

<Voyage>
  <Id>462CS-041</Id>
  <Location>
    <Name>Singapore</Name>
  </Location>
  <CallPortLocation>
    <Name>HONG KONG</Name>
  </CallPortLocation>
  <PortCallDate>2002-08-21T11:30:00</PortCallDate>
</Voyage>

```

3.5 DANGEROUS GOODS MANIFEST DOCUMENT

Root:	DangerousGoodsManifest
Type:	DangerousGoodsManifest.Type
Definition:	A Dangerous Goods Manifest document that a shipping agent submits to a port authority.
UML:	<pre> classDiagram class DangerousGoodsManifest_Type["DangerousGoodsManifest.Type"] class DocumentHeader_Type["DocumentHeader.Type"] class Transport_Type["Transport.Type"] class DangerousGoodsItem_Type["DangerousGoodsItem.Type"] DangerousGoodsManifest_Type < -- DocumentHeader_Type DangerousGoodsManifest_Type < -- Transport_Type DangerousGoodsManifest_Type < -- DangerousGoodsItem_Type </pre>

3.5.1 Child Elements

Name:	DocumentHeader
Definition:	The document header.
Type:	DocumentHeader.Type
Occurrence:	1

Name:	Tranport
--------------	-----------------

Definition:	Details of transport.
Type:	Transport.Type
Occurrence:	0-1

Name:	DangerousGoodsItem
Definition:	Details of each dangerous goods item.
Type:	DangerousGoodsItem.Type
Occurrence:	0-*

3.5.2 Application

1. The agent can declare multiple dangerous goods items in one conveyance of vessel in one Dangerous Goods Manifest document. One Dangerous Goods Manifest document contains the transport details of the conveyance and the details of multiple dangerous goods items.
2. The agent may declare the dangerous goods information of one conveyance in separate Dangerous Goods Manifest documents at different submissions because the agent may only be able to obtain the information at different times.
3. Each dangerous goods item must contain one uniquely identified dangerous goods substance within one Dangerous Goods Manifest document. A dangerous goods substance is uniquely identified by its United Nations Dangerous Goods (UNDG) number, its IMDG Class, and its packing group (i.e. UNDGId, ClassCode, and PackingGroupCode under /DangerousGoodsManifest/DangerousGoodsItem/DangerousGoods). No two dangerous goods items of the identical dangerous goods substance can exist in the same Dangerous Goods Manifest document.
4. The document must indicate it is a Dangerous Goods Manifest using the following element.

/DangerousGoodsManifest/DocumentHeader/DocumentFunctionCode	
DGM	Indication that the document is a Dangerous Goods Manifest.

5. The schema definition supports original submissions of a Dangerous Goods Manifest, replacement of a submitted Manifest, and cancellation of a Manifest using the following element:

/DangerousGoodsManifest/DocumentHeader/DocumentFunctionCode	
ORIGINAL	Indication that the document is the original submission of a Dangerous Goods Manifest. In this case: <ol style="list-style-type: none"> 1. the /DangerousGoodsManifest/Transport element must occur once and only once; and 2. the /DangerousGoodsManifest/DangerousGoodsItem must occur at least once.
REPLACE	Indication that the document is a replacement of a submitted Dangerous Goods Manifest. In this case: <ol style="list-style-type: none"> 1. the /DangerousGoodsManifest/Transport element must occur once and only once; and 2. the /DangerousGoodsManifest/DangerousGoodsItem must occur at least once; and 3. the ReferenceDocumentCode and ReferenceDocumentId under /DangerousGoodsManifest/DocumentHeader/ must contain 'DGM' and the document identifier of a previously submitted Manifest that this replacement refers to.
CANCEL	Indication that the document is to a cancellation of a submitted Dangerous

	<p>Goods Manifest. In this case:</p> <ol style="list-style-type: none"><li data-bbox="408 230 1412 376">1. the ReferenceDocumentCode and ReferenceDocumentId under /DangerousGoodsManifest/DocumentHeader/ must contain 'DGM' and the document identifier of a previously submitted Manifest that this cancellation refers to; and<li data-bbox="408 383 1412 488">2. the /DangerousGoodsManifest/Transport and /DangerousGoodsManifest/DangerousGoodsItem elements should not occur.
--	--

3.6 EXAMPLE

```
<?xml version="1.0" encoding="UTF-8"?>

<DangerousGoodsManifest
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xsi:noNamespaceSchemaLocation
    ="http://www.gov.hk/mardep/xmlldg1.0">
  <DocumentHeader>
    <DocumentId>1234@SHIPPINGAGENT.COM</DocumentId>
    <DocumentTypeCode>DGM</DocumentTypeCode>
    <DocumentFunctionCode>ORIGINAL
  </DocumentFunctionCode>
    <IssueDateTime>2002-08-20T09:30:45</IssueDateTime>
    <SenderParty>
      <Id>shippingagent.com</Id>
      <Name>SHIPPING AGENT COMPANY</Name>
    </SenderParty>
    <RecipientParty>
      <Id>gov.hk</Id>
      <Name>HONG KONG SAR GOVERNMENT</Name>
    </RecipientParty>
  </DocumentHeader>

  <Transport>
    <CarrierAgentParty>
      <Id>shippingagent.com</Id>
      <Name>Shipping Agent Company</Name>
    </CarrierAgentParty>

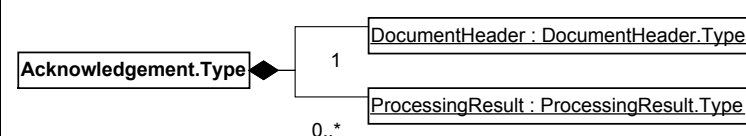
    <Vessel>
      <Name>UNI-ACCORD</Name>
      <CallsignId>3FTY7</CallsignId>
    </Vessel>
    <Voyage>
      <Id>462CS-041</Id>
      <Location>
        <Name>
          KWAI CHUNG CONTAINER TERMINAL (HIT)
        </Name>
      </Location>
      <CallPortLocation>
        <Name>Hong Kong</Name>
      </CallPortLocation>
      <PortCallDate>
        2002-08-21T11:30:00
      </PortCallDate>
    </Voyage>
  </Transport>

  <DangerousGoodsItem>
    <DangerousGoods>
      <UNDGId>1549</UNDGId>
      <ProperShippingName>ANTIMONY COMPOUND
    </ProperShippingName>
      <ClassCode>1.3G</ClassCode>
      <SubsidiaryRiskClassCode>6.1
    </DangerousGoods>
  </DangerousGoodsItem>
</DangerousGoodsManifest>
```



```
        </SubsidiaryRiskClassCode>
        <SubsidiaryRiskClassCode>8
        </SubsidiaryRiskClassCode>
        <PackingGroupCode>2</PackingGroupCode>
        <MarinePollutantCode>S</MarinePollutantCode>
        <FlashpointMeasure quantityUnitCode="CEL">50.1
        </FlashpointMeasure>
    </DangerousGoods>
    <GrossMassMeasure quantityUnitCode="KGM">460.78
    </GrossMassMeasure>
    <ExplosiveMassMeasure quantityUnitCode="KGM">365.47
    </ExplosiveMassMeasure>
    <NetMassMeasure quantityUnitCode="KGM">380.23
    </NetMassMeasure>
    <Package>
        <TypeName>DRUM</TypeName>
        <Quantity>50</Quantity>
    </Package>
    <LoadingPortLocation>
        <Name>SINGAPORE</Name>
        <Code>OTH</Code>
    </LoadingPortLocation>
    <DischargePortLocation>
        <Name>HONG KONG</Name>
        <Code>HK</Code>
    </DischargePortLocation>
    <Container>
        <Id>CBHU1726854</Id>
        <SizeTypeCode>2</SizeTypeCode>
        <Location>
            <Id>4307058</Id>
        </Location>
    </Container>
    <Container>
        <Id>ICSU1845678</Id>
        <SizeTypeCode>4</SizeTypeCode>
        <Location>
            <Id>7105029</Id>
        </Location>
    </Container>
    <ContainerCount>
        <SizeTypeCode>2</SizeTypeCode>
        <Quantity>1</Quantity>
    </ContainerCount>
    <ContainerCount>
        <SizeTypeCode>4</SizeTypeCode>
        <Quantity>1</Quantity>
    </ContainerCount>
</DangerousGoodsItem>
</DangerousGoodsManifest>
```

3.7 ACKNOWLEDGEMENT DOCUMENT

Root:	Acknowledgement
Type:	Acknowledgement.Type
Definition:	Acknowledgement to a processing request.
UML:	<div style="border: 1px solid black; padding: 5px;"> <p>Acknowledgement : Acknowledgement.Type</p>  <pre> classDiagram class AcknowledgementType["Acknowledgement.Type"] class DocumentHeaderType["DocumentHeader.Type"] class ProcessingResultType["ProcessingResult.Type"] AcknowledgementType "1" *-- DocumentHeaderType AcknowledgementType "0..*" *-- ProcessingResultType </pre> </div>

3.7.1 Child Elements

Name:	DocumentHeader
Definition:	The document header.
Type:	DocumentHeader.Type
Occurrence:	1

Name:	ProcessingResult
Definition:	Details of a processing result.
Type:	ProcessingResult.Type
Occurrence:	0-*

3.7.2 Application

1. HKSARG responds to the submission of the Dangerous Goods Manifest document by the agent with an Acknowledgement document.
2. The document must indicate it is an Acknowledgement to a previously submitted Dangerous Goods Manifest document using the following elements:

/DangerousGoodsManifest/DocumentHeader/DocumentTypeCode	
ACK	Indication that the document is a Dangerous Goods Manifest.
/DangerousGoodsManifest/DocumentHeader/ReferenceDocumentId	
The reference document identifier is the document identifier of the Dangerous Goods Manifest document that this Acknowledgement document responds to.	
/DangerousGoodsManifest/DocumentHeader/ResponseTypeCode	
AP	Approved. Indication that the submitted Dangerous Goods Manifest has been approved.
AQ	Accepted for processing. Indication that the submitted Dangerous Goods Manifest has been accepted for processing by the receiving application (e.g. when processing is pending).
RE	Rejected. Indication that the submitted Dangerous Goods Manifest has been rejected after completely or partially being processed by the receiving application.

RP	Rejected for processing. Indication that the submitted Dangerous Goods Manifest has been rejected before it could actually being processed by the receiving application.
----	--

3.7.3 Example

```
<?xml version="1.0" encoding="UTF-8"?>

<Acknowledgement
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xsi:noNamespaceSchemaLocation
    ="http://www.gov.hk/mardep/xmldg1.0">
  <DocumentHeader>
    <DocumentId>4567@MARDEP.GOV.HK</DocumentId>
    <DocumentTypeCode>ACK</DocumentTypeCode>
    <DocumentResponseTypeCode>RE
  </DocumentResponseTypeCode>
    <ReferenceDocumentId> 1234@SHIPPINGAGENT.COM
  </ReferenceDocumentId>
    <ReferenceDocumentTypeCode>DGM
  </ReferenceDocumentTypeCode>
    <IssueDateTime>2002-08-21T09:32:47</IssueDateTime>
    <SenderParty>
      <Id>gov.hk</Id>
      <Name> HONG KONG SAR GOVERNMENT</Name>
    </SenderParty>
    <RecipientRarty>
      <Id>shippingagent.com</Id>
      <Name>SHIPPING AGENT COMPANY</Name>
    </RecipientRarty>
  </DocumentHeader>

  <ProcessingResult>
    <Code>410</Code>
    <Text>Duplicate Document Id</Text>
  </ProcessingResult>
</Acknowledgement>
```

3.8 CREDENTIAL DOCUMENT

Root:	Credential
Type:	Credential.Type
Definition:	Credential for user authentication.
UML:	<pre>classDiagram class CredentialType { DomainId : Id.Type UserId : Id.Type PasswordText : Text.Type }</pre>

3.8.1 Child Elements

Name:	DomainId
Definition:	Application domain identifier.
Type:	Id.Type
Occurrence:	0-1

Name:	UserId
Definition:	Identifier of a user who accesses to a service.
Type:	Id.Type
Occurrence:	1

Name:	PasswordText
Definition:	Password for accessing to a service..
Type:	Text.Type
Occurrence:	1

3.8.2 Example

```
<?xml version="1.0" encoding="UTF-8"?>
<Credential
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xsi:noNamespaceSchemaLocation
  ="http://www.gov.hk/mardep/xmldg1.0">
  <DomainId>DGIS1</DomainId>
  <UserId>2sa4w56fgh</UserId>
  <PasswordText>letmepass</PasswordText>
</Credential>
```

3.9 OVERALL XML SCHEMA DIAGRAM (3 PAGES)

