Message Implementation Guide

AddressAttachment Message

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Version control

Version	Date	Author	Description
0.1	1-12-2014	Jaco Oskam	Initial version
0.2	3-2-2015	Jaco Oskam	Rework after review Sort functionality added
0.9	19-2-2015	Jaco Oskam	Rework after review meeting
0.91	11-3-2015	Jaco Oskam	Minor rework after writing MIG PackagingInformation
0.92	20-4-2015	Jaco Oskam	KIX code also relevant for sorted Domestic address when country code or country name is not specified
0.93	4-5-2015	Jaco Oskam	Removed IssueID from interface
0.94	22-5-2015	Jaco Oskam	Updated description of master data
0.95	24-6-2015	Jaco Oskam	KIX code removed (is already a parameter on BulkMailOrder). 3 ProcessedInputCharacteristics corrected to be Optional.
1.0	3-7-2015	Jaco Oskam	Status field only mandatory when retrieving a result Error codes provided in chapter 6
1.1	15-9-2015	Jaco Oskam	Encoding of CSV address files described TransportEquipmentTypeCode values corrected Error messages improved Attachement.FileType updated with additional file types CharacteristicName only mandatory when CharacteristicValue is mandatory
1.2	3-11-2015	Manon Havinga	Explanation XSD versus MIG added Decimal separator added Functional error message E1023 and E1024 added
1.3	1-2-2016	Manon Havinga	3 message structure error codes added 4 functional error codes added 1 functional error code adjusted ThicknessMailPiece removed (as it is already present in BulkMailOrder as PhysicalDataThickness)
2.0	21-3-2016	Manon Havinga	• Textual adjustments to align all MIGs • Message structure code E012 combined with E009 • Functional error codes E1025 t/m E1028 moved to MIG Packaging Information and numbered to E3000 t/m E3003 • Packaging information files added to attachment
2.1	24-3-2016	Manon Havinga	• Textual adjustments • Improved applicability: In the event that a value is supplied for an element which is "N/A", than the value will be

			ignored instead of generating an error message.
			• Updated diagrams in paragraph 2.1
			• Textual adjustment in status InProgress
2.2	6-2-2020	Jacco L. Moens	• E1100 added Validation error
			• CSV Encoding added for other encoding than UTF-8
2.3	1-5-2020	Jacco L. Moens	• Deleted SortingCenterOrderPosition6: GL-L Den Haag
2.4		Frank Weusten	5.4.2 Address attachment Characteristics added for Mymail and Track and Check

Distribution

Who	Function
PostNL V&S team	B2B webservice development
Launching customers	First customers to use the extended B2B webservice

This document is based on MIG Template version 1.0, March 1st, 2013

Table of Contents

1   Introduction

This document provides the definition of the PostNL AddressAttachment message to be used in the electronic data conversation with the PostNL MijnPost B2B system. This Message Implementation Guidelines document is based on the AddressAttachment.xsd.

The associated XSD with this MIG contains more elements/fields than described in this MIG. This is not an error but caused by the fact that we use standard elements which (can) contain more sub elements and/or fields than strictly necessary for this specific service. The reason for the use of a generic XSD is that future enhancements and changes can be easily implemented.

The associated XSD with this MIG contains elements/fields that will not be used. However it is required that all elements/fields described in this MIG are implemented in the messages exchanged between the different parties.

The current definition of the message, as described in this guideline, reflects its use in PostNL MijnPost. It does not preclude the use of this message between other organisational units or parties than those indicated in this guideline. The criteria for the use of the message should be its functionality rather than the organisational units or parties involved.

1.1   Functional definition

The B2B module handles several messages including the AddressAttachment message.
An Issue is uniquely identified and has an address file (attachment) containing delivery addresses of a sorted or unsorted bulk mail consignment.

1.2   Principles

The AddressAttachment message is exchanged to:

- validate addresses contained in a file. Validation within this context means that addresses are matched against the full collection of existing addresses in The Netherlands. Each address is organized into 1 of 3 categories:
    - Recognized and valid address in The Netherlands
    - Foreign address
    - Unrecognized address

- retrieve the validation result. Validation is an asynchronous operation and may take a while to complete. Therefore, the synchronous response only provides a unique identifier that can be used to retrieve the validation result at a later moment.

- validate and sort addresses contained in a file. Addresses cannot be sorted without validating these addresses first. During sorting a sorting code is added to each recognized address.

- retrieve the validation and sorting result. Validation and sorting is an asynchronous operation and may take a while to complete. Therefore, the synchronous response only provides a unique identifier that can be used to retrieve the validation and sorting result at a later moment.

1.3 Field of application

The AddressAttachment message is used:
- By the system of a customer to validate a file with addresses.
- By the system of a customer to validate and sort a file with addresses.

The message is communicated from customer systems to the MijnPost B2B module. See paragraph 2.1 for details about the message flow.

1.4 PostNL canonical model

The structure of the AddressAttachment message is based on the definition of terms and conditions as agreed by PostNL. The definition of this messages is based on existing canonical messages.
The AddressAttachment message consists always of two components:
- A verb part, described in chapter 4 'Address Attachment processing'
- A noun part, described in chapter 5 'Information Model for Address Attachment'

1.5 Conventions

The following conventions apply in this document.

Character type:
a	:	string with alphabetic characters
an	:	string with alphabetic and/or numeric characters
n		string with numeric characters
i	:	integer
d	:	decimal with decimal point as separator
boolean	:	"true" or "false"
dt	:	date time
guid	:	global unique identifier

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<u>Size:</u>

Fixed   :   all positions must be used
Variable   :   positions may be used up to a specified maximum

<u>Examples:</u>

a3	:	3 alphabetic characters, fixed length
n3	:	3 numeric characters, fixed length
d4,3	:	decimal, fixed length with 4 numeric characters left of the decimal separator and 3 numeric characters right of the decimal separator.
a..3	:	up to 3 alphabetic characters
n..3	:	up to 3 numeric characters
dt	:	2011-01-20T13:35:32Z
guid	:	55f1ebee-5d37-41be-b260-b07b1929a1f7

The following conventions apply when parts of the message are presented as an XSD model.
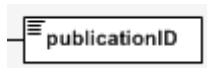
publicationID	Box with a full line is a mandatory message element
WorksheetName	Box with a dotted line is an optional message element
	The component can contain a number of mandatory and optional elements. The elements must appear in the sequence mentioned
	The component contains a number of elements. Only one of the possible elements may be present (choice).
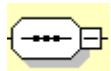
Each message element is elaborated in this document using the format below.

Action	Description
Element	Name of the element
Description	Description of the element
Type and size	Type and size of the element. See the text above for the conventions
Formatting	Format of the element. For example a year has the format "YYYY"
Default value	Standard value of the element
Applicability	A meaning indicates how the message is handled by the MijnPost B2B module. For example the meaning "Show". For each meaning is described whether the element is: • Mandatory: The element must have an allowed value. If a correct value is supplied, then MijnPost B2B module will check and register the supplied value.

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Action	Description
	If no value or an incorrect value is supplied, then MijnPost B2B module will generate an error message.
	• Optional: The element doesn't have to have a value. If a value is supplied, then MijnPost B2B module will check and register the supplied value. If no value is supplied, then MijnPost B2B module doesn't perform any action.
	• Not applicable (N/A): The element shouldn't have a value. If a value is supplied, then MijnPost B2B module will ignore the supplied value and this value is not returned in the response. If no value is supplied, then MijnPost B2B module doesn't perform any action.
Dependence requirements	Explanation of dependencies between this element and other elements

1.6 References

Reference	Details
[ref1]	MIG BulkMailOrder message Jaco Oskam Version 3.0 July 3rd, 2015
[ref2]	MIG PackagingInformation message Jaco Oskam Version 0.92 May 22nd, 2015
[ref3]	MIG OrderConfirmation message <TBD>

2   Interaction specification

This chapter describes the interactions with the MijnPost B2B module using an interaction diagram. In addition, technical aspects like protocol and channel are described.

2.1   Interaction diagram

The next diagram shows the functional flows between customer systems and the MijnPost B2B module. Only the communications within the green box are in scope of this MIG.
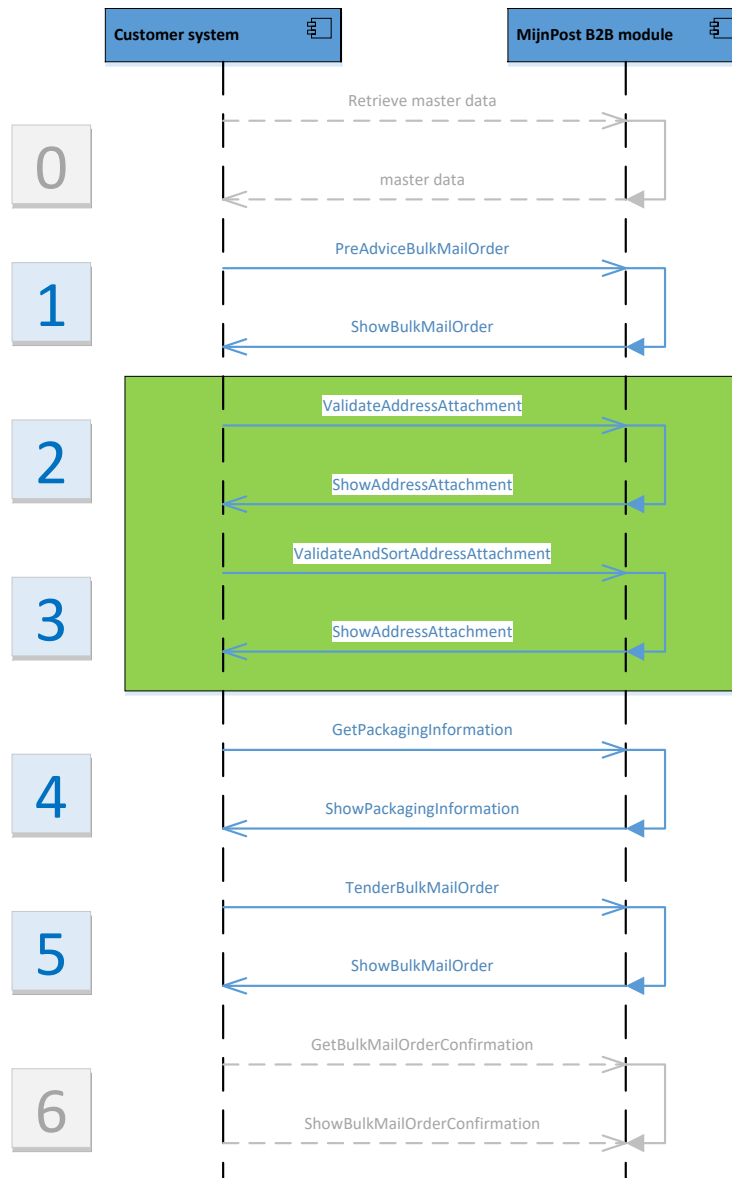
A typical customer flow for creating and tendering a sorted bulk mail order consists of 6 steps. When creating and tendering a bulk mail order for an unsorted product, specific steps are optional. The next figure indicates which steps are mandatory and optional for both sorted and unsorted products.

2 Interaction specification

	Masterdata (0)	Pre-advice (1)	Validate (2)	ValidateAndSort (3)	Packaging Information (4)	Tender (5)	Order Confirmation (6)
sorted	optional	mandatory	optional	mandatory	optional	mandatory	optional
unsorted	optional	mandatory	optional	Not applicable	optional	mandatory	optional

Before a bulk mail order is created the applicable master data like geo data and location data can be downloaded from the MijnPost web portal. The B2B webservice does not offer any master data since the relevant master data is all relatively static and the same for all customers. When, in the future, more dynamic master data becomes relevant, the B2B webservice might be updated to supply these data.

Step 1 is to pre-advice the bulk mail order. Within that step a consignment is created. Multiple consignments can be pre advised within a single invocation. As a result, unique ConsignmentId(s) and unique IssueId(s) are returned of which ConsignmentId(s) must be used for further processing. The PreAdviceBulkMailOrder method can be invoked multiple times. When an existing ConsignmentId is used, an existing consignment gets updated. Otherwise a new consignment is created. See [ref1] for details about the *BulkMailOrder* message.

Bulk mail orders are sent to many addressee. When a customer has an address file containing these addressee, the addresses within this file can be validated in step 2. Validation is mandatory for sorted products and optional for unsorted products. Validation can be executed separately or in combination with sorting (step 3). When ConsignmentId is present, addresses can be validated. Validation includes categorizing addresses in domestic, foreign and unrecognized. Validation and sorting is only supported on a single address file at a time.

After validating addresses, the addresses can be sorted. This applies to bulk mail orders with sorted products only. During sorting in step 3, each individual address is also enriched with a sorting code.

Looking in more detail into the Validate and Sort flow shows that more messages are exchanged:

2 Interaction specification
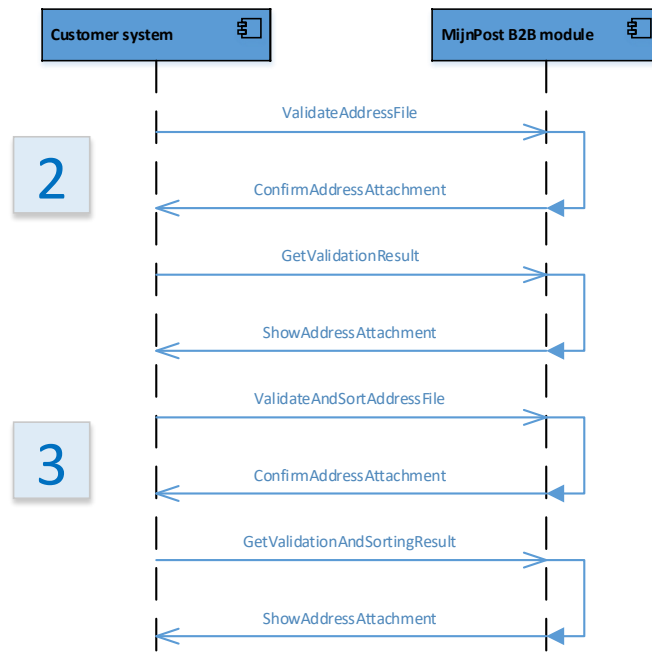
Validation and sorting functionality can take a (long) time especially when large address files are used. To avoid timeouts, this functionality is not offered in a synchronous way. After offering a file for validation or validation and sorting, a unique identifier is received (synchronously) that can be used to poll the MijnPost B2B module to retrieve the actual result of the operation. Progress instead of the result is replied to the calling party when the operation has not yet completed.

It is important to notice that the B2B module is realized as a webservice so all interactions exist of request and responses. The customer system is always the requesting party and the B2B module replies. This is summarized in the next table for the validation and sorting functionality.

Request	Response
Validate	ConfirmAddressAttachment
GetValidationResult	ShowAddressAttachment
ValidateAndSort	ConfirmAddressAttachment
GetValidationAndSortingResult	ShowAddressAttachment

Bulk mail orders are packaged into roller cages or pallets and other packaging materials. Based on the sorting result, a set of packaging forms (that can be printed to label the packaging materials) can be retrieved in step 4. This step requires the unique consignmentID that was returned in step 1 and is mandatory for sorted products and optional for unsorted products. See [ref2] for details about the *PackagingInformation* message.

2 Interaction specification

The bulk mail order is tendered in step 5. ConsignmentId is mandatory. Bulk mail orders can only be tendered after pre advising the bulk mail order first.
Bulk mail orders with a sorted product can only be tendered after validating and sorting the related address file.
The result of a tender is a customer order number and a P1700 form that must be used when physically tendering the bulk mail order at a PostNL location. See [ref1] for details about the *BulkMailOrder* message.

After physically tendering the bulk mail order a confirmation of the order can be retrieved in step 6. This is the final step of the functional flow. Getting the order confirmation is optional. See [ref3] for details about the *OrderConfirmation* message.
This message hasn't been implemented yet. The B2B webservice will be updated in future to supply also these data.

The remainder of this document only describes the highlighted part of the interaction diagram.

2.2   Channel, protocol and security

The MijnPost B2B module offers its functionality as a SOAP webservice. It is consumed over an HTTPS connection. The calling party (customer system) identifies itself using a client certificate.

3   Operational interface management

3.1   Frequency and volume

Bulk mail orders are created throughout the day (24*7 support) and address files can also be validated and sorted throughout the day. Address files up to 100 Mb (compressed or uncompressed) are supported for validating and sorting. Each customer can sort or validate a maximum of 5 address files at the same time.

Since large files can be offered to the MijnPost B2B webservice it may be required to adjust specific time-out settings on both the consumer and provider of this webservice.

3.2   Validation and processing

Before the message is processed it will be validated by the receiving party (MijnPost B2B module) on multiple levels:
1. Structure and field definitions
2. Contents and syntax
3. Meaning and semantics

Result of validation is either OK or not OK.
When an error is detected, the complete message is rejected. The sending party must repair the message based on the supplied error code(s) and resend the message.

3.3   Scheduling

As described in section 2.1, validation and sorting is handled asynchronously and the result must be polled for after offering an address attachment. It is advised to poll using a 5 seconds interval.

3.4   Interface monitoring

Monitoring takes place on a daily basis and involves:
- Tracking the total number of received messages
- Detect abnormalities
- Investigate abnormalities
- Verify that the webservice is up and running

3.5   Restart and recovery procedures

This will be according to the standard system maintenance of MijnPost.NET modules.

4   Address Attachment processing

The AddressAttachment message supports a single meaning:

- Process

A meaning indicates how the AddressAttachment message is handled by the MijnPost B2B module. Since Process is very generic, a process code is defined inside the AddressAttachment message that specifies the specific action to be executed. Supported processes are:

- Validate
- GetValidationResult
- ValidateAndSort
- GetValidationAndSortingResult

4.1   Validating addresses

Validation of the address file is mandatory for sorted mail and optional for unsorted mail. When an address file is submitted for validation it is first interpreted based on the supplied metadata in the message.

Each individual address in the address file is checked against master data containing all addresses in The Netherlands and each address is categorized as either:

- Recognized and domestic
- Recognized and foreign
- Unrecognized

The category of each address is added to the address file in an additional column. When an address is recognized, an additional warning can be added in this column that states that street name and/or city name has been misspelled.

An address is considered foreign only when the specified country code or country name specifies this. When foreign addresses are encountered, an additional consignment is created based on a specific foreign product. When unrecognized addresses are encountered, an additional consignment can be created based on a specific product for this situation. This only happens when the calling party has indicated to create a consignment in relation to unrecognized addresses. The quantity of mail pieces in each consignment reflects the number of addresses in each category.

As an example, consider an issue for which an address file is supplied for validation that contains 1000 addresses. During validation 800 domestic and 150 foreign addresses were recognized leaving a number of 50 unrecognized addresses.

The issue relates to an existing consignment and this consignment is part of the result that is returned with the GetValidationResult action. This 'original' consignment is updated; the quantity of the consignment is set to 850.

In addition, a new consignment is created with a foreign product and quantity 150.

Optionally, only if indicated by the calling party, a third consignment is created with a fixed product code for unrecognized addresses with quantity 50.

The contents of an AddressAttachment message is limited to a single issue for which a single address file can be validated.

4.2 Getting the validation result
The result of the validation consists of:
- a summary of the results in address counts
- the original consignment of which quantity may have been updated
- if applicable, consignmentID and related product code and quantity for the relevant (newly created) consignments
- a single ZIP archive that contains 1 or 2 address files:
  1. The original address enriched with the categorization described in section 4.1 (domestic, foreign, unrecognized).
  2. A file with unrecognized addresses. Each address in this file is supplied with a reason why it was not recognized.

When the validation result is requested before validation has completed, the actual progress is returned.

4.3 Validating and sorting addresses
Sorting the address file is mandatory for sorted mail and cannot be executed for unsorted mail. Sorting can only be executed in combination with validating the address file. When an address file is submitted for validation and sorting it is first validated as described in section 4.1.

After validation, the address file is sorted based on a number of sorting parameters that were provided as metadata. After sorting, each recognized address in the address file has been enriched with a sorting code. During sorting for a sorted product, the addresses will be re-sorted inside the address file. When sorting for an unsorted product, the addresses are also re-sorted when the 'SortOnPostalCodeBuildingNumber' flag is set.

The contents of an AddressAttachment message is limited to a single issue for which a single address file can be validated and sorted.

4.4 Getting the validation and sort result
The result of the validation and sorting action consists of:
- a summary of the results in address counts and packaging material counts
- if applicable, consignmentID and related product code and quantity for newly created consignments
- a single ZIP archive that contains:

4 Address Attachment processing

1. The original address file enriched with a sorting code.
2. Optionally an additional address file that contains addresses (including sorting code) that will be tendered at a VBL (Voorbereidingslocatie).
3. Optionally a file with unrecognized addresses. Each address in this file is supplied with a reason why it was not recognized.

When the validation and sorting result is requested before validation and sorting has completed, only progress is returned.

All packaging related forms can be retrieved using the *GetPackagingInformation* message described in [Ref3].

4.5 Common elements for the different AddressAttachment meanings

The meanings described above share some common elements which are required in the header of the message. Only the relevant items within the header are described in the next table. Items that are not listed are not applicable, will be ignored and do not have to be present in the message.
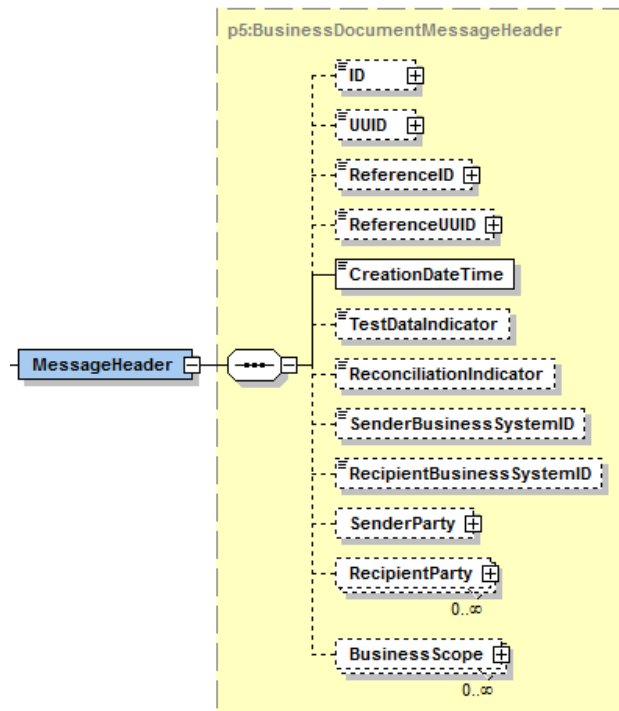
Action	Description
Element	CreationDateTime
Description	Timestamp when the message was created.

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Action	Description
Type and size	dt
Formatting	[0-9]{4}-[0-9]{2}-[0-9]{2}T[0-9]{2}:[0-9]{2}:[0-9]{2}(.[0-9]{1,7})?Z
Default value	N/A
Applicability	
Validate	Mandatory
Confirm	Mandatory
GetValidationResult	Mandatory
Show	Mandatory
ValidateAndSort	Mandatory
Confirm	Mandatory
GetValidationAndSortingResult	Mandatory
Show	Mandatory
Dependence requirements	None

Action	Description
Element	TestDataIndicator
Description	Indicates whether or not this message should be - fully processed (false) - only checked (true)
Type and size	boolean
Formatting	true or false
Default value	false
Applicability	
Validate	Optional
Confirm	Optional
GetValidationResult	Optional
Show	Optional
ValidateAndSort	Optional
Confirm	Optional
GetValidationAndSortingResult	Optional
Show	Optional
Dependence requirements	When the TestDataIndicator is true, the addresses within the address attachment are not validated nor sorted and no changes in consignments are made. Only the structure of the messages is checked including the check on mandatory message elements and message element types and values.

4 Address Attachment processing

This default header contents is extended with an error messages section. Within this section all error messages regarding the structure of the message will be logged. A list of these messages can be found in section 6.1.
Functional error messages regarding the state of the AddressAttachment object itself are part of the message body described in chapter 5.

4.5.1 ErrorMessages

The ErrorMessages structure depicted below is added to the header of the message.
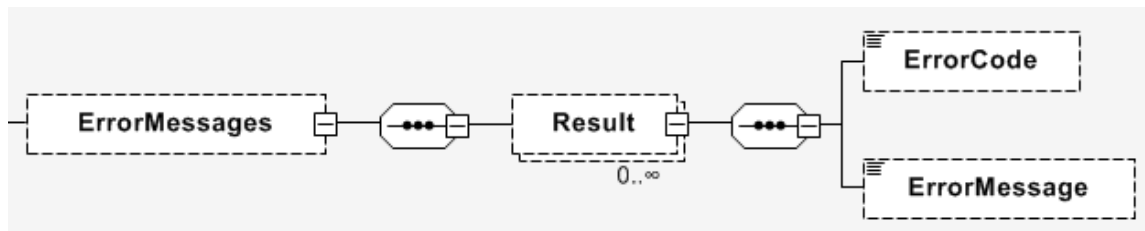
Both ErrorMessages and Result are not data elements themselves but components that hold data elements. The ErrorMessages component can hold zero to many Result components. Each Result component holds one specific ErrorCode element and one ErrorMessage element.

Action	Description
Element	ErrorCode
Description	A code that uniquely identifies the error that occurred when an address attachment was offered for validation or validation and sorting. A specific error code is returned when no error occurred. See chapter 6 for all supported error codes.
Type and size	a1 or an5
Formatting	Success: S Error: Ennnn, for example "E0008"
Default value	N/A
Applicability	
Validate	N/A
Confirm	Mandatory
GetValidationResult	N/A
Show	Mandatory
ValidateAndSort	N/A
Confirm	Mandatory
GetValidationAndSortingResult	N/A

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Action	Description
Show	Mandatory
Dependence requirements	ErrorCode and ErrorMessage relate to each other.

Action	Description
Element	ErrorMessage
Description	A text message that explains the error that occurred.
Type and size	a
Formatting	Text "Success" when no error occurred.
	See chapter 6 for all supported error messages.
Default value	N/A
Applicability	
Validate	N/A
Confirm	Mandatory
GetValidationResult	N/A
Show	Mandatory
ValidateAndSort	N/A
Confirm	Mandatory
GetValidationAndSortingResult	N/A
Show	Mandatory
Dependence requirements	ErrorCode and ErrorMessage relate to each other.

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5   Information model for Address Attachment

All relevant items within the message body are described in this chapter. Items that are not listed in this chapter but are present in the message structure (XSD) are not applicable for this appliance, will be ignored, and do not have to be present in the message.
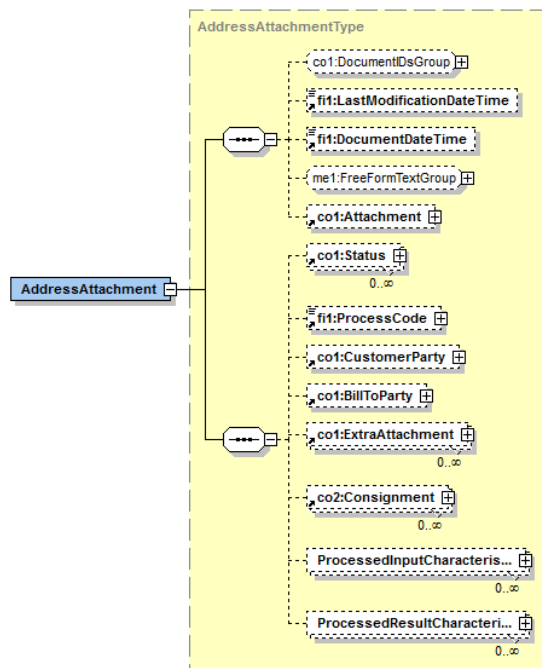
5.1   DocumentID

Action	Description
Element	ID
Description	A unique identification that is created when executing a Validate or ValidateAndSort action. Both actions cannot be executed synchronously and the result has to be retrieved based on this identifier. The ID is returned without modification as part of the result.
Type and size	guid
Formatting	N/A
Default value	N/A
Applicability	
Validate	N/A
Confirm	Mandatory
GetValidationResult	Mandatory
Show	Mandatory
ValidateAndSort	N/A
Confirm	Mandatory
GetValidationAndSortingResult	Mandatory
Show	Mandatory
Dependence requirements	The guid that was returned from executing a Validate action must be used in executing the GetValidationResult action to retrieve the result. The guid that was returned from executing a ValidateAndSort action must be used in executing the GetValidationAndSortingResult action to retrieve the result.

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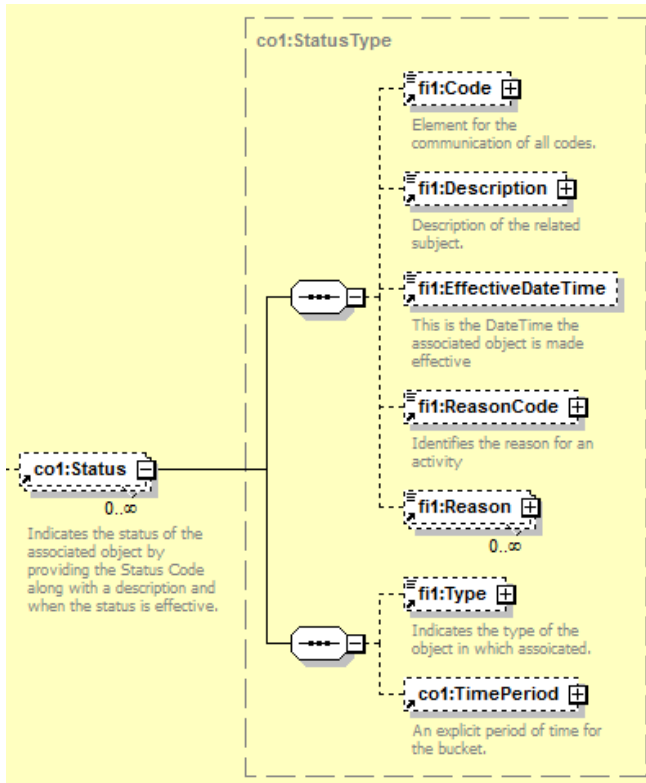
5.2   Status

The Status section is used to supply status information about the Address Attachment object. Three statuses can be distinguished:

- **Success**, action completed without errors.
- **InProgress,** action is currently being executed.
- **Error** when an error occurred ==during message processing==.

Action	Description
Element	Code
Description	A code that uniquely identifies the success, in progress or error relating to the current action that is executed on an address attachment. The status is only relevant when retrieving a result. See chapter 6.3 for all supported functional error codes.
Type and size	Success: a1 InProgress: a1 Error: an5

Action	Description
Formatting	Success: "S"
	Progress: "P"
	Error: <Ennnn>, for example "E0008"
Default value	N/A
Applicability	
Validate	N/A
Confirm	N/A
GetValidationResult	N/A
Show	Mandatory (success, inprogress, error)
ValidateAndSort	N/A
Confirm	N/A
GetValidationAndSortingResult	N/A
Show	Mandatory (success, inprogress, error)
Dependence requirements	Code and Description relate to each other.

Action	Description
Element	Description
Description	A text message that explains the Code.
Type and size	a
Formatting	Success: "Success".
	Progress: <nn>, for example 60 (%).
	Error: a text explaining the error.
	See chapter 6 for all supported error messages.
Default value	N/A
Applicability	
Validate	N/A
Confirm	N/A
GetValidationResult	N/A
Show	Mandatory (success, progress, error)
ValidateAndSort	N/A
Confirm	N/A
GetValidationAndSortingResult	N/A
Show	Mandatory (success, progress, error)
Dependence requirements	Code and Description relate to each other.

5 Information model for Address Attachment

5.3 ProcessCode

Action	Description
Element	ProcessCode
Description	Identifies the action to be executed on the Address Attachment object.
Type and size	n3
Formatting	The following actions are supported: 100 (Validate) 200 (GetValidationResult) 300 (ValidateAndSort) 400 (GetValidationAndSortingResult)
Default value	N/A
Applicability	
Validate	Mandatory
Confirm	N/A
GetValidationResult	Mandatory
Show	N/A
ValidateAndSort	Mandatory
Confirm	N/A
GetValidationAndSortingResult	Mandatory
Show	N/A
Dependence requirements	None

5.4 ExtraAttachment

5 Information model for Address Attachment
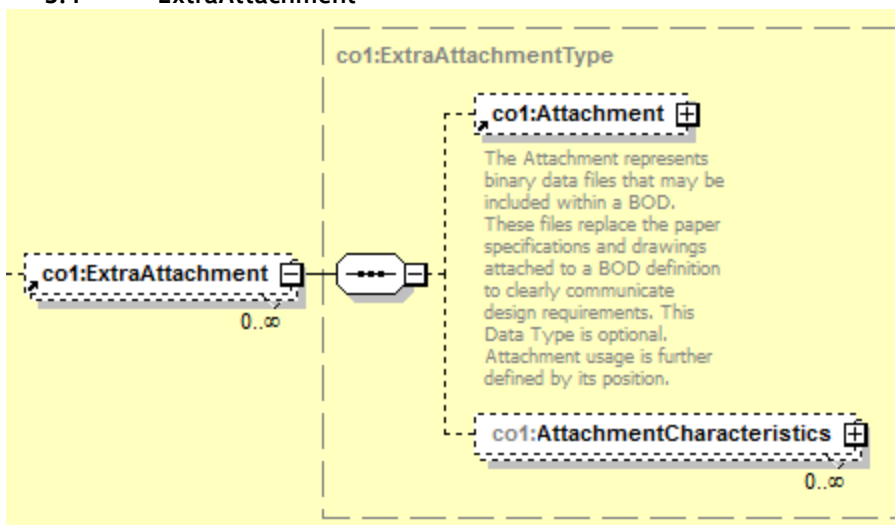
Address files are placed in the Attachment component that is part of the ExtraAttachment component.

5.4.1 Attachment
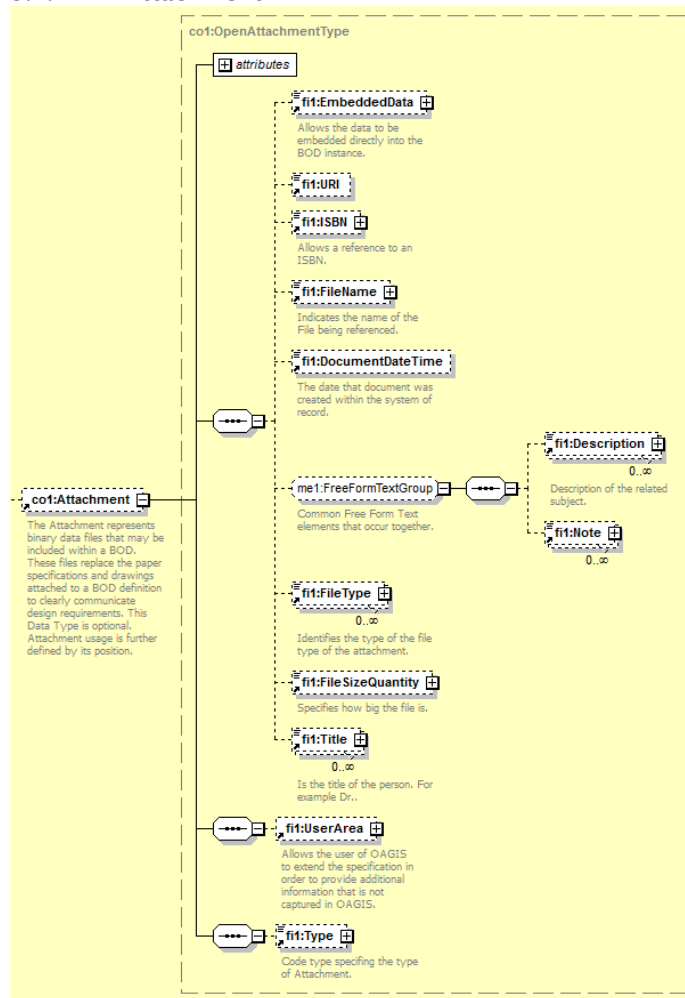
Action	Description
Element	EmbeddedData
Description	A file that contains - the addresses to be validated or validated and sorted **OR** - the result of a validation or validation and sorting action (multiple files in a ZIP archive)
Type and size	an
Formatting	base64 encoded file

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Action	Description
Default value	N/A
Applicability	
Validate	Mandatory
Confirm	N/A
GetValidationResult	N/A
Show	Optional
ValidateAndSort	Mandatory
Confirm	N/A
GetValidationAndSortingResult	N/A
Show	Depends on Status (section 5.2). Mandatory when Status equals *Success*. Not present when Status equals *Progress* or *Error*.

Dependence requirements	When the validation or validation and sorting action has completed successfully, a ZIP archive is returned. When validation or validation and sorting is still in progress or an error is encountered, no file is returned. This action state is described in section 5.2.
	
	The resulting ZIP archive contains the address files(s) with the same type as provided as input.
	
	As part of the validation result, the ZIP archive contains:
	1. The original input file with additional column(s) for:
	   a. the status of the validated address
	   b. KIX code (only if KIX was specified when the consignment was pre-advised).
	  The addresses inside the output file may have been re-sorted on postal code, building number and building number extension if the related input parameter was set.
	  Filename: *"<input filename> - <DD-MM-YYYY HH.MM> - Gecontroleerd.<input extension>"*.
	
	2. An additional file when unrecognized addresses were encountered including an additional column that holds explains why an address was not recognized.
	  Filename: *"<input filename> - <DD-MM-YYYY HH.MM> - Niet-herkend.<input extension>"*.
	  This file is optional.

5 Information model for Address Attachment

Action	Description
	As part of the validation and sorting result, the ZIP archive contains:
	1. The original input file with 2 additional columns for:
	a. Separation character that marks the separation between bundles and the packaging type
	b. Sorting code.
	Filename: "*<input filename> - <DD-MM-YYYY HH.MM> - Gesorteerd.<input extension>*".
	2. An additional file when unrecognized addresses were encountered including an additional column that holds explains why an address was not recognized. Filename: "*<input filename> - <DD-MM-YYYY HH.MM> - Niet-herkend.<input extension>*". This file is optional.
	3. When the sorting parameter 'SplitBetweenSCAndVBL' was set, an additional file contains the sorted addresses for which the bundles must be delivered at the VBL. This file contains rows from the original input file with 2 additional columns as described in item 2. Filename: "*<input filename> - <DD-MM-YYYY HH.MM> - Gesorteerd VBL.<input extension>*". This file is optional.
	In case of an issue based on a sorted product, the ZIP archive that is returned contains:
	4. A text file that contains a list of all bundles. Filename: "<input filename> - <DD-MM-YYYY HH.MM> - Bundellijst.txt".
	5. A ZIP file that contains all packaging labels. Filename: "<input filename> - <DD-MM-YYYY HH.MM> - EmballageKaarten.zip". The ZIP file contains one or several PDF files.

Action	Description
	To accelerate performance an additional PDF file is generated each time the number of roller cages or pallets exceeds a specific maximum number. E.g. the maximum number of packaging labels is set to 200 per PDF file. So in case of a consignment with 300 pallets there will be two separate PDF files. Filename: "<input filename> - <DD-MM-YYYY HH.MM> - EmballageKaarten (<Transportequipment number from> - <Transportequipment number to>).pdf".
	6. A text file that contains a report of the sorting action. Filename: "<input filename> - <DD-MM-YYYY HH.MM> - Rapportage.txt".
	7. A text file that contains a list of all roller cages or pallets. Filename when roller cages are used: "<input filename> - <DD-MM-YYYY HH.MM> - Rolcontainerlijst.txt". Filename when pallets are used: "<input filename> - <DD-MM-YYYY HH.MM> - Palletlijst.txt".
	In case of an issue based on an unsorted product, the ZIP archive that is returned contains:
	4. A PDF file that contains a single page that represents a fixed packaging label that can be used on all equipment. Filename: "<consignmentID>.pdf".

Action	Description
Element	FileName
Description	Name of the address file.
Type and size	a

Action	Description
Formatting	Filename including extension. The extension must match the type specified for the FileType element and the actual file in the EmbeddedData element. Input file names that are valid in Windows can be used. Output file: "<input filename> - <DD-MM-YYYY HH.MM>.zip".
Default value	N/A
Applicability	
Validate	Mandatory
Confirm	N/A
GetValidationResult	N/A
Show	Optional. Mandatory when a file is returned.
ValidateAndSort	Mandatory
Confirm	N/A
GetValidationAndSortingResult	N/A
Show	Optional. Mandatory when a file is returned.
Dependence requirements	When the address file is a CSV file, the encoding type is relevant. The encoding type used in the file should be specified in the file header. When the encoding type is not specified, UTF-8 is assumed. When an incorrect encoding type is specified or omitted, specific characters can be misinterpreted. This will be done by adding the Format element to the Embedded data element. E.G.: <hum:EmbeddedData> <hum:Value>Base64File</Value> **<hum:format>ANSI</hum:format>** </hum:EmbeddedData>

Action	Description
Element	FileType

5 Information model for Address Attachment

Action	Description
Description	Type of the address file to be exchanged.
	Allowed input types are:
	- Excel 97 t/m 2013 (xls and xlsx)
	- Comma separated value (CSV)
	- ZIP archive containing 1 Excel or 1 CSV file
	- RAR archive containing 1 Excel or 1 CSV file (not RAR5)
	Output file type is always a ZIP archive.
Type and size	a3..9
Formatting	Allowed values are listed below. The FileType specified here must match the extension in the FileName element and the actual file in the EmbeddedData element.

	Excel	Excel file (xls or xlsx)
	CSV	Character separated. Character specified in the SeparationCharacter element
	ZIP-Excel	Excel file inside a ZIP archive
	ZIP-CSV	CSV file inside a ZIP archive
	RAR-Excel	Excel file inside a RAR archive
	RAR-CSV	CSV file inside a RAR archive
	ZIP	ZIP archive that contains multiple files (only used for "Show" operations).

Action	Description
Default value	N/A
Applicability	
Validate	Mandatory
Confirm	N/A
GetValidationResult	N/A
Show	Optional. Mandatory when a file is returned.
ValidateAndSort	Mandatory
Confirm	N/A
GetValidationAndSortingResult	N/A
Show	Optional. Mandatory when a file is returned.
Dependence requirements	None

5 Information model for Address Attachment

5.4.2 AttachmentCharacteristics

Characteristics defined in this section of the AddressAttachment message acts as metadata for the address attachment. Each characteristic is described by its name and a value. The next table lists all supported characteristics for Validation and Sort.

Characteristic name	Action	Description
SeparationCharacter	Validate ValidateAndSort	Character that is used to separate columns inside a CSV file.
WorksheetName	Validate ValidateAndSort	Name of the worksheet in the Excel file that holds the addresses to be validated (and sorted).
NumberOfHeaderRows	Validate ValidateAndSort	Number of rows in the Excel or CSV file that are used for the header and do not contain actual addresses.
StreetNamePosition	Validate ValidateAndSort	Identifies the column inside an Excel or CSV file that holds the street name part of the address.
BuildingNumberPosition	Validate ValidateAndSort	Identifies which column inside an Excel or CSV file holds the building number part of the address.
BuildingNumberExtensionPosition	Validate ValidateAndSort	Identifies which column inside an Excel or CSV file holds the building number extension part of the address.
PostalCodePosition	Validate ValidateAndSort	Identifies which column inside an Excel or CSV file holds the city name part of the address.
CityNamePosition	Validate ValidateAndSort	Identifies which column inside an Excel or CSV file holds the postal code part of the address.
CountryCodePosition	Validate ValidateAndSort	Identifies which column inside an Excel or CSV file holds the country code part of the address.

5 Information model for Address Attachment

Characteristic name	Action	Description
CountryNamePosition	Validate ValidateAndSort	Identifies which column inside an Excel or CSV file holds the country name part of the address.
LetterCodePosition	Validate ValidateAndSort	Position of the 3S barcode for Track and Check.
CustomerReferencePosition	Validate	Additional customer reference.
CTAButtonTextPosition	Validate ValidateAndSort	For Mymail consignments.
CTAURLPosition	Validate ValidateAndSort	For Mymail consignments.

For each characteristic, the characteristic name and value must be supplied. All characteristic names must be supplied as described in the next table.

Action	Description
Element	CharacteristicName
Description	Name of the characteristic that relates to the attachment.
Type and size	a
Formatting	One of the values listed in the table above must be used.
Default value	N/A
Applicability	
Validate	Mandatory, Optional or N/A depending on the related CharacteristicValue.
Confirm	N/A
GetValidationResult	N/A
Show	N/A
ValidateAndSort	Mandatory, Optional or N/A depending on the related CharacteristicValue.
Confirm	N/A
GetValidationAndSortingResult	N/A
Show	N/A
Dependence requirements	None

Characteristic names are always strings without further restrictions where characteristic values can have different restrictions. All characteristic values are described in the next set of tables.

Action	Description (CharacteristicValue)
Element	SeparationCharacter

5 Information model for Address Attachment

Action	Description (CharacteristicValue)
Description	The UTF-8 code of the character that is used to separate columns inside a CSV file.
Type and size	an5
Formatting	Allowed values are: - , (comma) - ; (semicolon) - 	 (tab)
Default value	; (semicolon)
Applicability	
Validate	Mandatory when a CSV file is submitted. N/A when an Excel file is submitted.
Confirm	N/A
GetValidationResult	N/A
Show	N/A
ValidateAndSort	Mandatory when a CSV file is submitted. N/A when an Excel file is submitted.
Confirm	N/A
GetValidationAndSortingResult	N/A
Show	N/A
Dependence requirements	None.

Action	Description (CharacteristicValue)
Element	WorkSheetName
Description	Name of the worksheet in the Excel file that holds the addresses to be validated (and sorted).
Type and size	a1..31
Formatting	N/A
Default value	N/A
Applicability	
Validate	Mandatory when an Excel file is submitted. N/A when a CSV file is submitted.
Confirm	N/A
GetValidationResult	N/A
Show	N/A
ValidateAndSort	Mandatory when an Excel file is submitted. N/A when a CSV file is submitted.
Confirm	N/A
GetValidationAndSortingResult	N/A

5 Information model for Address Attachment

Action	Description (CharacteristicValue)
Show	N/A
Dependence requirements	None.

Action	Description (CharacteristicValue)
Element	NumberOfHeaderRows
Description	Number of rows in the Excel or CSV file that are used for the header and do not contain actual addresses.
Type and size	i
Formatting	N/A
Default value	0
Applicability	
Validate	Optional
Confirm	N/A
GetValidationResult	N/A
Show	N/A
ValidateAndSort	Optional
Confirm	N/A
GetValidationAndSortingResult	N/A
Show	N/A
Dependence requirements	None

Action	Description (CharacteristicValue)
Element	StreetNamePosition
Description	Identifies which column inside an Excel or CSV file holds the street name part of the address.
Type and size	i
Formatting	0 < StreetNamePosition <= maximum number of columns in file
Default value	N/A
Applicability	
Validate	Mandatory
Confirm	N/A
GetValidationResult	N/A
Show	N/A
ValidateAndSort	Mandatory
Confirm	N/A
GetValidationAndSortingResult	N/A
Show	N/A

5 Information model for Address Attachment

Action	Description (CharacteristicValue)
Dependence requirements	Elements regarding the file layout relate to each other. Each element must have a unique value except: - BuildingNumberPosition and BuildingNumberExtensionPosition. - StreetNamePosition and BuildingNumberPosition and BuildingNumberExtensionPosition. - PostalCodePostion and CityNamePosition. Elements listed within a single bullet can have the same value.

Action	Description (CharacteristicValue)
Element	BuildingNumberPosition
Description	Identifies which column inside an Excel or CSV file holds the house number part of the address.
Type and size	i
Formatting	0 < BuildingNumberPosition <= maximum number of columns in file
Default value	N/A
Applicability	
Validate	Mandatory
Confirm	N/A
GetValidationResult	N/A
Show	N/A
ValidateAndSort	Mandatory
Confirm	N/A
GetValidationAndSortingResult	N/A
Show	N/A
Dependence requirements	Elements regarding the file layout relate to each other. Each element must have a unique value except: - BuildingNumberPosition and BuildingNumberExtensionPosition. - StreetNamePosition and BuildingNumberPosition and BuildingNumberExtensionPosition. - PostalCodePostion and CityNamePosition. Elements listed within a single bullet can have the same value.

Action	Description (CharacteristicValue)
Element	BuildingNumberExtensionPosition
Description	Identifies which column inside an Excel or CSV file holds the house number extension part of the address.

5 Information model for Address Attachment

Action	Description (CharacteristicValue)
Type and size	i
Formatting	0 < BuildingNumberExtensionPosition <= maximum number of columns in file
Default value	N/A
Applicability	
Validate	Mandatory
Confirm	N/A
GetValidationResult	N/A
Show	N/A
ValidateAndSort	Mandatory
Confirm	N/A
GetValidationAndSortingResult	N/A
Show	N/A
Dependence requirements	Elements regarding the file layout relate to each other. Each element must have a unique value except: - BuildingNumberPosition and BuildingNumberExtensionPosition. - StreetNamePosition and BuildingNumberPosition and BuildingNumberExtensionPosition. - PostalCodePostion and CityNamePosition. Elements listed within a single bullet can have the same value.

Action	Description (CharacteristicValue)
Element	PostalCodePostion
Description	Identifies which column inside an Excel or CSV file holds the postal code part of the address.
Type and size	i
Formatting	0 < PostalCodePostion <= maximum number of columns in file
Default value	N/A
Applicability	
Validate	Mandatory
Confirm	N/A
GetValidationResult	N/A
Show	N/A
ValidateAndSort	Mandatory
Confirm	N/A
GetValidationAndSortingResult	N/A
Show	N/A

5 Information model for Address Attachment

Action	Description (CharacteristicValue)
Dependence requirements	Elements regarding the file layout relate to each other. Each element must have a unique value except: - BuildingNumberPosition and BuildingNumberExtensionPosition. - StreetNamePosition and BuildingNumberPosition and BuildingNumberExtensionPosition. - PostalCodePostion and CityNamePosition. Elements listed within a single bullet can have the same value.

Action	Description (CharacteristicValue)
Element	CityNamePosition
Description	Identifies which column inside an Excel or CSV file holds the city name part of the address.
Type and size	i
Formatting	0 < CityNamePosition <= maximum number of columns in file
Default value	N/A
Applicability	
Validate	Mandatory
Confirm	N/A
GetValidationResult	N/A
Show	N/A
ValidateAndSort	Mandatory
Confirm	N/A
GetValidationAndSortingResult	N/A
Show	N/A
Dependence requirements	Elements regarding the file layout relate to each other. Each element must have a unique value except: - BuildingNumberPosition and BuildingNumberExtensionPosition. - StreetNamePosition and BuildingNumberPosition and BuildingNumberExtensionPosition. - PostalCodePostion and CityNamePosition. Elements listed within a single bullet can have the same value.

Action	Description (CharacteristicValue)
Element	CountryCodePosition
Description	Identifies which column inside an Excel or CSV file holds the country code part of the address.
Type and size	i

5 Information model for Address Attachment

Action	Description (CharacteristicValue)
Formatting	0 < CountryCodePosition <= maximum number of columns in file
Default value	N/A
Applicability	
Validate	Optional
Confirm	N/A
GetValidationResult	N/A
Show	N/A
ValidateAndSort	Optional
Confirm	N/A
GetValidationAndSortingResult	N/A
Show	N/A
Dependence requirements	Elements regarding the file layout relate to each other. This value must be unique within all elements.

Action	Description (CharacteristicValue)
Element	CountryNamePosition
Description	Identifies which column inside an Excel or CSV file holds the country name part of the address.
Type and size	i
Formatting	0 < CountryNamePosition <= maximum number of columns in file
Default value	N/A
Applicability	
Validate	Optional
Confirm	N/A
GetValidationResult	N/A
Show	N/A
ValidateAndSort	Optional
Confirm	N/A
GetValidationAndSortingResult	N/A
Show	N/A
Dependence requirements	Elements regarding the file layout relate to each other. This value must be unique within all elements.

Action	Description (CharacteristicValue)
Element	LetterCodePosition

5 Information model for Address Attachment

Action	Description (CharacteristicValue)
Description	Identifies which column inside an Excel or CSV file holds the LetterCode part of the address.
Type and size	i
Formatting	0 < LetterCodePosition <= maximum number of columns in file
Default value	N/A
Applicability	
Validate	Optional
Confirm	N/A
GetValidationResult	N/A
Show	N/A
ValidateAndSort	Optional
Confirm	N/A
GetValidationAndSortingResult	N/A
Show	N/A
Dependence requirements	Elements regarding the file layout relate to each other. This value must be unique within all elements.

Action	Description (CharacteristicValue)
Element	CustomerReferencePosition
Description	Identifies which column inside an Excel or CSV file holds the CustomerReference part of the address.
Type and size	i
Formatting	0 < CustomerReferencePosition <= maximum number of columns in file
Default value	N/A
Applicability	
Validate	Optional
Confirm	N/A
GetValidationResult	N/A
Show	N/A
ValidateAndSort	Optional
Confirm	N/A
GetValidationAndSortingResult	N/A
Show	N/A

5 Information model for Address Attachment

Action	Description (CharacteristicValue)
Dependence requirements	Elements regarding the file layout relate to each other. This value must be unique within all elements. LetterCodePosition is mandatory when using this element. The column may with LetterCode is allowed to leave empty. In that case we will create letter code for you.

Action	Description (CharacteristicValue)
Element	CTAButtonTextPosition
Description	Identifies which column inside an Excel or CSV file holds the CTAButtonText part of the address.
Type and size	i
Formatting	0 < CTAButtonTextPosition <= maximum number of columns in file
Default value	N/A
Applicability	
Validate	Optional
Confirm	N/A
GetValidationResult	N/A
Show	N/A
ValidateAndSort	Optional
Confirm	N/A
GetValidationAndSortingResult	N/A
Show	N/A
Dependence requirements	Elements regarding the file layout relate to each other. This value must be unique within all elements.

Action	Description (CharacteristicValue)
Element	CTAURLPosition
Description	Identifies which column inside an Excel or CSV file holds the CTAURL part of the address.
Type and size	i
Formatting	0 < CTAURLPosition <= maximum number of columns in file
Default value	N/A
Applicability	
Validate	Optional
Confirm	N/A
GetValidationResult	N/A
Show	N/A

5 Information model for Address Attachment

Action	Description (CharacteristicValue)
ValidateAndSort	Optional
Confirm	N/A
GetValidationAndSortingResult	N/A
Show	N/A
Dependence requirements	Elements regarding the file layout relate to each other. This value must be unique within all elements.

5.5 Consignment

When an address file is offered for validation or validation and sorting the consignments created in step 1 is provided. After validation or validation and sorting, this original consignment is returned and, in addition, 2 other consignments may be returned depending on the addresses that have been validated:

- One consignment has a product for domestic addresses. This consignment is mandatory. In most cases this will be the 'original' consignment that was pre advised before.
- Another consignment has a fixed product for foreign addresses. This consignment is optional and only present when foreign addresses were encountered during address validation.
- Another consignment has a fixed product for unknown addresses. This consignment is optional and only present when:
  - o unrecognized addresses were found during address validation AND
  - o a validation setting that defines to create a consignment for unrecognized addresses was set.

All of these consignments relate to the same issue that is a characteristic of each of the consignments.

5 Information model for Address Attachment
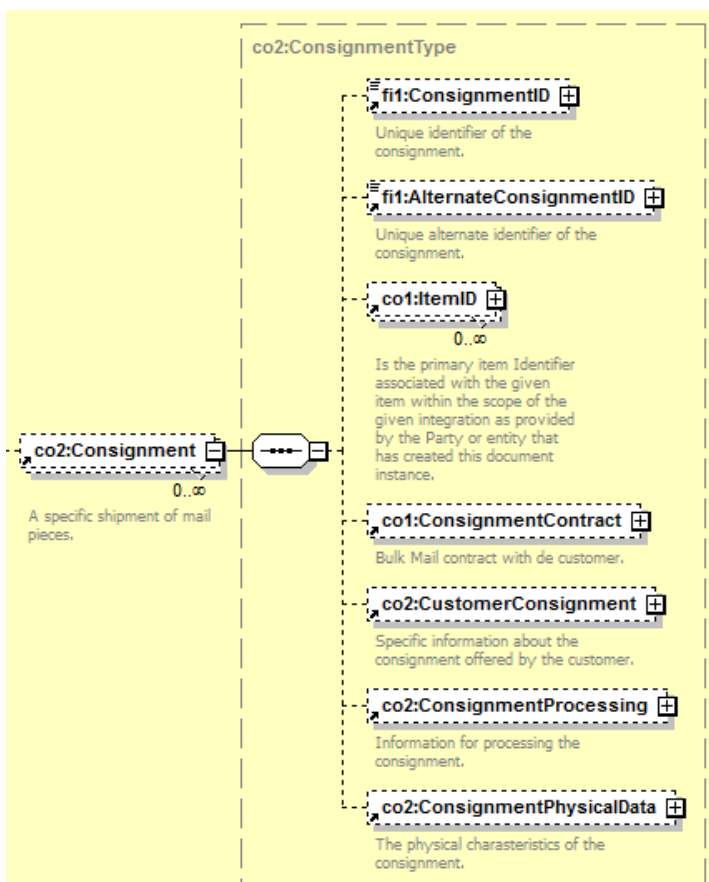
For the input consignment and all output consignments, the following fields are relevant.

Action	Description
Element	ConsignmentID
Description	A unique identification of a consignment.
Type and size	n12
Formatting	N/A
Default value	N/A
Applicability	
Validate	Mandatory
Confirm	Mandatory
GetValidationResult	Mandatory
Show	Mandatory
ValidateAndSort	Mandatory
Confirm	Mandatory
GetValidationAndSortingResult	Mandatory

5 Information model for Address Attachment

Action	Description
Show	Mandatory
Dependence requirements	All consignments contained in the response belong to a single issue and share the same IssueID.

5.5.1   ItemID
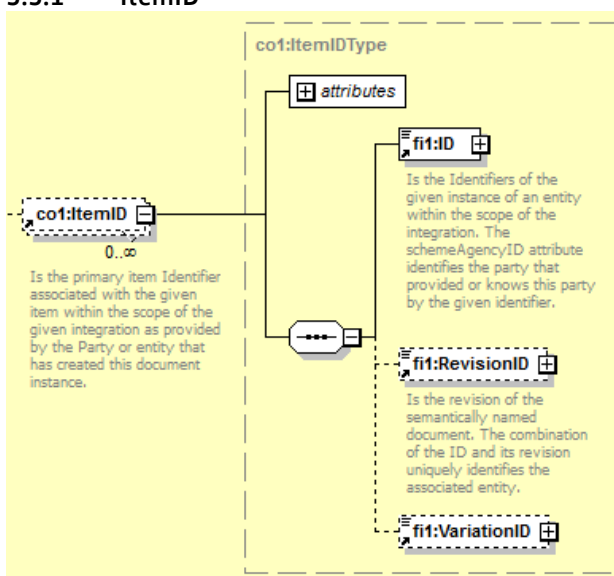
Action	Description
Element	ID
Description	Product code of the consignment.
Type and size	n4
Formatting	N/A
Default value	N/A
Applicability	
Validate	N/A
Confirm	N/A
GetValidationResult	N/A
Show	Mandatory
ValidateAndSort	N/A
Confirm	N/A
GetValidationAndSortingResult	N/A
Show	Mandatory
Dependence requirements	None

5 Information model for Address Attachment

5.5.2   PhysicalDataQuantity

Action	Description
Element	PhysicalDataQuantity
Description	The actual number of mail pieces within the consignment.
Type and size	i
Formatting	N/A
Default value	N/A
Applicability	
Validate	N/A
Confirm	N/A
GetValidationResult	N/A
Show	Mandatory

5 Information model for Address Attachment

Action	Description
ValidateAndSort	N/A
Confirm	N/A
GetValidationAndSortingResult	N/A
Show	Mandatory
Dependence requirements	Number of mail pieces may be updated based on the number of address found in the address attachment.

5.5.3   IssueID
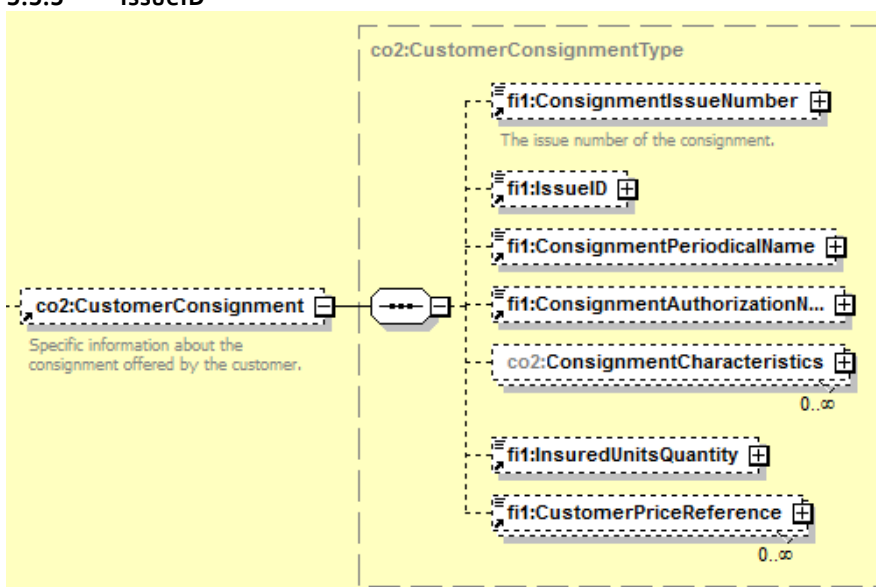
Action	Description
Element	IssueID
Description	Unique identification of the issue to which this consignment relates.
Type and size	n12
Formatting	N/A
Default value	N/A
Applicability	
Validate	N/A
Confirm	N/A
GetValidationResult	N/A
Show	Mandatory
ValidateAndSort	N/A

Action	Description
Confirm	N/A
GetValidationAndSortingResult	N/A
Show	Mandatory
Dependence requirements	All consignments within the response relate to the same issue.

5.6 ProcessedInputCharacteristics
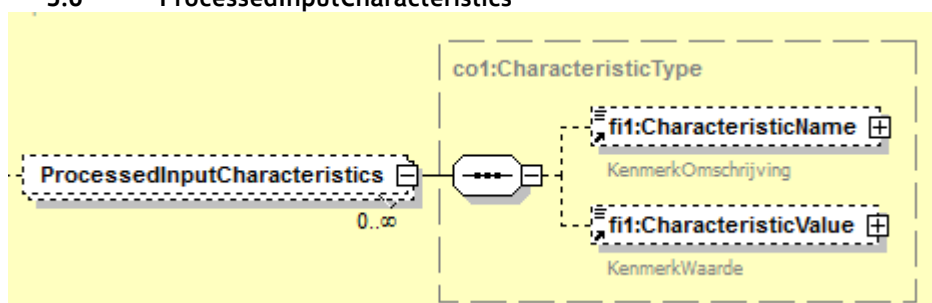
Characteristics defined in this section of the AddressAttachment message acts as input parameters to the Validation or Validation and Sort action. Each characteristic is described by its name and a value. The next table lists all supported characteristics for Validation and Sort.

Characteristic name	Action	Description
SortOnPostalCodeBuildingNumber	Validate	Indicator for sorting the resulting file alphabetically based on postal code and building number or not. This only applies to domestic addresses for unsorted products.
TenderUnrecognizedAddresses	Validate ValidateAndSort	Indicator for creating a consignment for all unrecognized addresses or not.
TransportEquipmentTypeCode	ValidateAndSort	Describes the way the mail pieces are packaged.

Characteristic name	Action	Description
MinimumNumberInABundle	ValidateAndSort	Minimum number of mail piece in a single bundle as requested by the customer.
MaximumNumberInABundle	ValidateAndSort	Maximum number of mail piece in a single bundle as requested by the customer.
MinimumWeightTransportEquipment	ValidateAndSort	Minimum weight of a single packaging unit as requested by the customer.
MaximumWeightTransportEquipment	ValidateAndSort	Maximum weight of a single packaging unit as requested by the customer.
SplitBetweenSCAndVBL	ValidateAndSort	Indicator to split bundles for sorting center and VBL or not.
SeparationCharacterBundlesAndTransportEquipment	ValidateAndSort	Character within the address file that marks the separation between bundles and the packaging type.
SeparationCharacterLocationInFile	ValidateAndSort	Location of this separation character in the address file.
SortingOrderSCActive	ValidateAndSort	Indicator for setting a custom sorting order for the sorting centers or not.
SortingCenterOrderPosition1 SortingCenterOrderPosition2 SortingCenterOrderPosition3 SortingCenterOrderPosition4 SortingCenterOrderPosition5	ValidateAndSort	Custom order of PostNL Sorting Centers to be used when sorting the addresses.
BundleStrapType	ValidateAndSort	Type of strap used for bundles.

5 Information model for Address Attachment

Characteristic name	Action	Description
CustomerReferenceInformation	ValidateAndSort	A free text that can be specified by the customer that is printed on each roller cage label or pallet label.

For each characteristic, the characteristic name and value must be supplied. All characteristic names must be supplied as described in the next table.

Action	Description
Element	CharacteristicName
Description	Name of the characteristic that relates to the attachment.
Type and size	a
Formatting	One of the values listed in the table above must be used.
Default value	N/A
Applicability	
Validate	Mandatory, Optional or N/A depending on the related CharacteristicValue.
Confirm	N/A
GetValidationResult	N/A
Show	N/A
ValidateAndSort	Mandatory, Optional or N/A depending on the related CharacteristicValue.
Confirm	N/A
GetValidationAndSortingResult	N/A
Show	N/A
Dependence requirements	None

Characteristic names are always strings without further restrictions where characteristic values can have different restrictions. All characteristic values are described in the next set of tables.

Action	Description (CharacteristicValue)
Element	SortOnPostalCodeBuildingNumber
Description	Indicates whether or not to sort the validated domestic addresses alphabetically on postal code and building number in the result file. This element is only applicable for unsorted products and will be ignored when a sorted product is used.
Type and size	boolean
Formatting	true or false

5 Information model for Address Attachment

Action	Description (CharacteristicValue)
Default value	true
Applicability	
Validate	Optional
Confirm	N/A
GetValidationResult	N/A
Show	N/A
ValidateAndSort	N/A
Confirm	N/A
GetValidationAndSortingResult	N/A
Show	N/A
Dependence requirements	This is only a valid element when an unsorted product is used. When a sorted product is used, this element is ignored.

Action	Description (CharacteristicValue)
Element	TenderUnrecognizedAddresses
Description	Indicates whether or not to create a consignment with a fixed product code that represents all unrecognized addresses.
Type and size	boolean
Formatting	true or false
Default value	false
Applicability	
Validate	Optional
Confirm	N/A
GetValidationResult	N/A
Show	N/A
ValidateAndSort	Optional
Confirm	N/A
GetValidationAndSortingResult	N/A
Show	N/A
Dependence requirements	This is only a valid element when an unsorted product is used. When a sorted product is used, this element is ignored.

Action	Description (CharacteristicValue)
Element	TransportEquipmentTypeCode
Description	Describes the way the mail pieces are packaged.
Type and size	a12

5 Information model for Address Attachment

Action	Description (CharacteristicValue)

Formatting	Allowed values:
	    "RCB" (roller cage)
	    "PEU" (pallet)

Default value	"RCB"
Applicability	
Validate	N/A
Confirm	N/A
GetValidationResult	N/A
Show	N/A
ValidateAndSort	Optional
Confirm	N/A
GetValidationAndSortingResult	N/A
Show	N/A
Dependence requirements	None

Action	Description (CharacteristicValue)
Element	MinimumNumberInABundle
Description	Minimum number of mail piece in a single bundle as requested by the customer.
Type and size	i
Formatting	N/A
Default value	System default value for minimum number in a bundle is used when this element is omitted. System minimum value for minimum number in a bundle is used when a value smaller than the system minimum value is specified.
Applicability	
Validate	N/A
Confirm	N/A
GetValidationResult	N/A
Show	N/A
ValidateAndSort	Optional
Confirm	N/A
GetValidationAndSortingResult	N/A
Show	N/A
Dependence requirements	Minimum number must be smaller or equal to maximum number.

5 Information model for Address Attachment

Action	Description (CharacteristicValue)
Element	MaximumNumberInABundle
Description	Maximum number of mail piece in a single bundle as requested by the customer.
Type and size	i
Formatting	N/A
Default value	System default value for maximum number in a bundle is used when this element is omitted. System maximum value for maximum number in a bundle is used when a value greater than the system maximum value is specified.
Applicability	
Validate	N/A
Confirm	N/A
GetValidationResult	N/A
Show	N/A
ValidateAndSort	Optional
Confirm	N/A
GetValidationAndSortingResult	N/A
Show	N/A
Dependence requirements	Maximum number must be greater or equal to minimum number.

Action	Description (CharacteristicValue)
Element	MinimumWeightTransportEquipment
Description	Minimum net weight of a single transport equipment unit in kg as requested by the customer.
Type and size	i
Formatting	N/A
Default value	System default value for minimum net weight of a transport equipment is used when this element is omitted. System minimum value for minimum net weight of a transport equipment is used when a value lower than the system minimum value is specified.
Applicability	
Validate	N/A
Confirm	N/A
GetValidationResult	N/A
Show	N/A
ValidateAndSort	Optional

5 Information model for Address Attachment

Action	Description (CharacteristicValue)
Confirm	N/A
GetValidationAndSortingResult	N/A
Show	N/A
Dependence requirements	None

Action	Description (CharacteristicValue)
Element	MaximumWeightTransportEquipment
Description	Maximum net weight of a single transport equipment unit in kg as requested by the customer.
Type and size	I
Formatting	N/A
Default value	System default value for maximum net weight of a transport equipment is used when this element is omitted. System maximum value for maximum net weight of a transport equipment is used when a value greater than the system maximum value is specified.
Applicability	
Validate	N/A
Confirm	N/A
GetValidationResult	N/A
Show	N/A
ValidateAndSort	Optional
Confirm	N/A
GetValidationAndSortingResult	N/A
Show	N/A
Dependence requirements	None

Action	Description (CharacteristicValue)
Element	SplitBetweenSCAndVBL
Description	Indicates whether or not to split bundles for sorting center and VBL.
Type and size	Boolean
Formatting	true or false
Default value	false
Applicability	
Validate	N/A
Confirm	N/A
GetValidationResult	N/A

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Action	Description (CharacteristicValue)
Show	N/A
ValidateAndSort	Optional
Confirm	N/A
GetValidationAndSortingResult	N/A
Show	N/A
Dependence requirements	None

Action	Description (CharacteristicValue)
Element	SeparationCharacterBundlesAndTransportEquipment
Description	Character within the address file that marks the separation between bundles and the transport equipment type.
Type and size	a1
Formatting	Allowed values: - "#" - "*"
Default value	"*"
Applicability	
Validate	N/A
Confirm	N/A
GetValidationResult	N/A
Show	N/A
ValidateAndSort	Optional
Confirm	N/A
GetValidationAndSortingResult	N/A
Show	N/A
Dependence requirements	None

Action	Description (CharacteristicValue)
Element	SeparationCharacterLocationInFile
Description	Location of this separation character in the address file.
Type and size	a5
Formatting	Allowed values: - "First" - "Last"
Default value	"First"
Applicability	
Validate	N/A
Confirm	N/A

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Action	Description (CharacteristicValue)
GetValidationResult	N/A
Show	N/A
ValidateAndSort	Optional
Confirm	N/A
GetValidationAndSortingResult	N/A
Show	N/A
Dependence requirements	None

Action	Description (CharacteristicValue)
Element	SortingOrderSCActive
Description	Indicates whether or not a custom sorting order is used for the sorting centers when sorting addresses. When this indicator is not set the default alphabetical sorting will be used
Type and size	boolean
Formatting	true or false
Default value	false
Applicability	
Validate	N/A
Confirm	N/A
GetValidationResult	N/A
Show	N/A
ValidateAndSort	Optional
Confirm	N/A
GetValidationAndSortingResult	N/A
Show	N/A
Dependence requirements	When this element is true, a specific order must be specified in the SortingCenterOrderPosition elements.

Action	Description (CharacteristicValue)
Element	SortingCenterOrderPosition1 SortingCenterOrderPosition2 SortingCenterOrderPosition3 SortingCenterOrderPosition4 SortingCenterOrderPosition5
Description	Custom order of PostNL Sorting Centers to be used when sorting the addresses.
Type and size	a8

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Action	Description (CharacteristicValue)
Formatting	Allowed values: - "NIWG-GW" (Nieuwegein) - "ZL-AF" (Zwolle) - "ASD-AH" (Amsterdam) - "HT-S" ('s Hertogenbosch) - "RT-TB" (Rotterdam)
Default value	N/A
Applicability	
Validate	N/A
Confirm	N/A
GetValidationResult	N/A
Show	N/A
ValidateAndSort	Optional
Confirm	N/A
GetValidationAndSortingResult	N/A
Show	N/A
Dependence requirements	These 5 elements must all be specified with exactly one of the allowed values without duplicates when the SortingOrderSCActive element is true. These elements will be ignored when SortingOrderSCActive is false.

Action	Description (CharacteristicValue)
Element	BundleStrapType
Description	Type of strap used for bundles.
Type and size	a10
Formatting	Allowed values: - "Strapex" - "Elastiek" - "Touwtjes"
Default value	"Strapex"
Applicability	
Validate	N/A
Confirm	N/A
GetValidationResult	N/A
Show	N/A
ValidateAndSort	Optional
Confirm	N/A
GetValidationAndSortingResult	N/A

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Action	Description (CharacteristicValue)
Show	N/A
Dependence requirements	None

Action	Description (CharacteristicValue)
Element	CustomerReferenceInformation
Description	A free text that can be specified by the customer that is printed on each roller cage label or pallet label.
Type and size	a25
Formatting	N/A
Default value	N/A
Applicability	
Validate	N/A
Confirm	N/A
GetValidationResult	N/A
Show	N/A
ValidateAndSort	Optional
Confirm	N/A
GetValidationAndSortingResult	N/A
Show	N/A
Dependence requirements	None

5.7 ProcessedResultCharacteristics
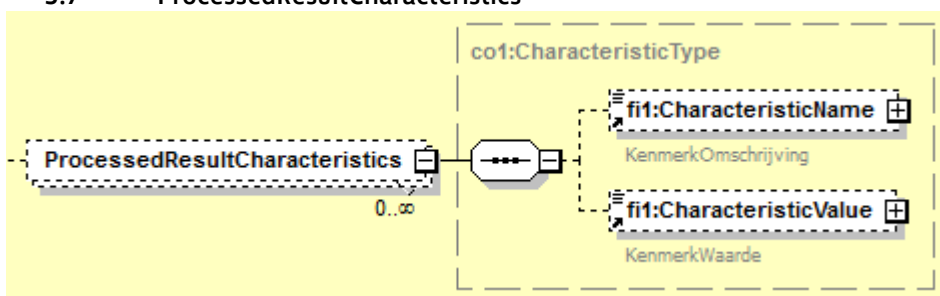
Characteristics defined in this section of the AddressAttachment message acts as output parameters for the result of a ShowValidationResult or ShowValidationAndSortingResult action. Each characteristic is described by its name and a value. The next table lists all supported characteristics for the result.

Characteristic name	Action	Description

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Characteristic name	Action	Description
NumberOfAddresses	ShowValidationResult ShowValidationAndSortingResult	Total number of addresses found in the input file.
NumberOfRecognizedAddresses	ShowValidationResult ShowValidationAndSortingResult	Number of addresses in the input file that were recognized during validation. This can be both domestic and foreign addresses.
NumberOfUnrecognizedAddresses	ShowValidationResult ShowValidationAndSortingResult	Number of addresses in the input file that were not recognized during validation.
NumberOfDomesticAddresses	ShowValidationResult ShowValidationAndSortingResult	Number of recognized domestic addresses in the input file.
NumberOfForeignAddresses	ShowValidationResult ShowValidationAndSortingResult	Number of recognized foreign addresses in the input file.
NumberOfTransportEquipmentUnits	ShowValidationAndSortingResult	Number of roller cages or pallets that are used.
NumberOfBundles	ShowValidationAndSortingResult	Number of bundles that are used.
MinimumNumberInABundle	ShowValidationAndSortingResult	Actual minimum value that was used during the sorting process. See also the input element with the same name.
MaximumNumberInABundle	ShowValidationAndSortingResult	Actual maximum value that was used during the sorting process. See also the input element with the same name.

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Characteristic name	Action	Description
MaximumWeightTransportEquipment	ShowValidationAndSortingResult	Actual maximum value that was used during the sorting process. See also the input element with the same name.

For each characteristic, the characteristic name and value must be supplied. All characteristic names must be supplied as described in the next table.

Action	Description
Element	CharacteristicName
Description	Name of the characteristic that relates to the attachment.
Type and size	a
Formatting	One of the values listed in the table above must be used.
Default value	N/A
Applicability	
Validate	N/A
Confirm	N/A
GetValidationResult	N/A
Show	Mandatory, Optional or N/A depending on the related CharacteristicValue.
ValidateAndSort	N/A
Confirm	N/A
GetValidationAndSortingResult	N/A
Show	Mandatory, Optional or N/A depending on the related CharacteristicValue.
Dependence requirements	None

Characteristic names are always strings without further restrictions where characteristic values can have different restrictions. All characteristic values are described in the next tables.

Action	Description (CharacteristicValue)
Element	NumberOfAddresses
Description	Total number of addresses found in the input file.
Type and size	i
Formatting	N/A
Default value	N/A
Applicability	

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Action	Description (CharacteristicValue)
Validate	N/A
Confirm	N/A
GetValidationResult	N/A
Show	Mandatory
ValidateAndSort	N/A
Confirm	N/A
GetValidationAndSortingResult	N/A
Show	Mandatory
Dependence requirements	

Action	Description (CharacteristicValue)
Element	NumberOfRecognizedAddresses
Description	Number of addresses in the input file that were recognized during validation. This can be both domestic and foreign addresses.
Type and size	i
Formatting	N/A
Default value	N/A
Applicability	
Validate	N/A
Confirm	N/A
GetValidationResult	N/A
Show	Mandatory
ValidateAndSort	N/A
Confirm	N/A
GetValidationAndSortingResult	N/A
Show	Mandatory
Dependence requirements	Recognized addresses can be both domestic and foreign.

Action	Description (CharacteristicValue)
Element	NumberOfUnrecognizedAddresses
Description	Number of addresses in the input file that were not recognized during validation.
Type and size	i
Formatting	N/A
Default value	N/A
Applicability	
Validate	N/A

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Action	Description (CharacteristicValue)
Confirm	N/A
GetValidationResult	N/A
Show	Mandatory
ValidateAndSort	N/A
Confirm	N/A
GetValidationAndSortingResult	N/A
Show	Mandatory
Dependence requirements	None

Action	Description (CharacteristicValue)
Element	NumberOfDomesticAddresses
Description	Number of recognized domestic addresses in the input file.
Type and size	i
Formatting	N/A
Default value	N/A
Applicability	
Validate	N/A
Confirm	N/A
GetValidationResult	N/A
Show	Mandatory
ValidateAndSort	N/A
Confirm	N/A
GetValidationAndSortingResult	N/A
Show	Mandatory
Dependence requirements	An address is considered domestic only when the specified country code or country name specifies this or when country code and country name are not present.

Action	Description (CharacteristicValue)
Element	NumberOfForeignAddresses
Description	Number of recognized foreign addresses in the input file.
Type and size	i
Formatting	N/A
Default value	N/A
Applicability	
Validate	N/A
Confirm	N/A
GetValidationResult	N/A

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Action	Description (CharacteristicValue)
Show	Mandatory
ValidateAndSort	N/A
Confirm	N/A
GetValidationAndSortingResult	N/A
Show	Mandatory
Dependence requirements	An address is considered foreign only when the specified country code or country name specifies this.

Action	Description (CharacteristicValue)
Element	NumberOfTransportEquipmentUnits
Description	Number of roller cages or pallets that are used.
Type and size	i
Formatting	N/A
Default value	N/A
Applicability	
Validate	N/A
Confirm	N/A
GetValidationResult	N/A
Show	N/A
ValidateAndSort	N/A
Confirm	N/A
GetValidationAndSortingResult	N/A
Show	Mandatory
Dependence requirements	

Action	Description (CharacteristicValue)
Element	NumberOfBundles
Description	Number of bundles that are used.
Type and size	i
Formatting	N/A
Default value	N/A
Applicability	
Validate	N/A
Confirm	N/A
GetValidationResult	N/A
Show	N/A
ValidateAndSort	N/A
Confirm	N/A

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Action	Description (CharacteristicValue)
GetValidationAndSortingResult	N/A
Show	Mandatory
Dependence requirements	

Action	Description (CharacteristicValue)
Element	MinimumNumberInABundle
Description	Minimum number of mail piece in a single bundle.
Type and size	i
Formatting	N/A
Default value	N/A
Applicability	
Validate	N/A
Confirm	N/A
GetValidationResult	N/A
Show	N/A
ValidateAndSort	N/A
Confirm	N/A
GetValidationAndSortingResult	N/A
Show	Mandatory
Dependence requirements	This element contains the actual value that was used during the sorting process. This value can differ from the same element that was provided as input parameter when the provided value was lower than the minimum as defined by PostNL.

Action	Description (CharacteristicValue)
Element	MaximumNumberInABundle
Description	Maximum number of mail piece in a single bundle.
Type and size	i
Formatting	N/A
Default value	N/A
Applicability	
Validate	N/A
Confirm	N/A
GetValidationResult	N/A
Show	N/A
ValidateAndSort	N/A
Confirm	N/A

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Action	Description (CharacteristicValue)
GetValidationAndSortingResult	N/A
Show	Mandatory
Dependence requirements	This element contains the actual value that was used during the sorting process. This value can differ from the same element that was provided as input parameter when the provided value was greater than the maximum as defined by PostNL.

Action	Description (CharacteristicValue)
Element	MaximumWeightTransportEquipment
Description	Maximum net weight of a single transport equipment unit in kg.
Type and size	i
Formatting	N/A
Default value	N/A
Applicability	
Validate	N/A
Confirm	N/A
GetValidationResult	N/A
Show	N/A
ValidateAndSort	N/A
Confirm	N/A
GetValidationAndSortingResult	N/A
Show	Mandatory
Dependence requirements	This element contains the actual value that was used during the sorting process. This value can differ from the same element that was provided as input parameter when the provided value was greater than the maximum as defined by PostNL.

5 Information model for Address Attachment

6 Error handling

Remark: The list of error codes may not be complete yet and might be extended in the future.

There are 2 components reserved for holding status and error codes and descriptions as described in sections 4.5 and 5.2. The header part of the message (section 4.5) can contain errors regarding:
- Message structure;
- Message validation;
- Functionality (for example when a non-existing ConsignmentId is provided).

The Status part of the message (section 5.2) contains status codes and status messages regarding:
- State of the address attachment object. An example is the progress state when validation or sorting is being executed.

Section 6.1 lists the supported errors in message structure and section 6.2 lists the supported validation and functional errors.

When an AddressAttachment message was processed correctly, the specific success code and status code "0" with message "Success" are returned.
When an error is encountered, a specific error code and error message are returned.

6.1 Success
Error code 0 and message "Success" is returned.

Code	Message
0	Success

6.2 Message structure error codes and messages
The range "E0001 – E0999" is reserved for message structure errors.

Code	Message
E0001	The element '{0}' cannot be null
E0002	The parameter '{0}' cannot be null
E0003	The parameter '{0}' does not contain elements
E0004	The value of parameter '{0}' cannot be null
E0005	Exactly one '{0}' should be specified
E0006	Calling party is not authorized to use B2B-service.
E0007	The user is not authorized or does not exist. Verify the provided Id in '{0}'
E0008	A unknown error has occurred

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Code	Message
E0009	A backend system was not available to process your request. Please try again.
	Keep an eye on the website of MijnPost in case it is a general failure of the PostNL systems.
E0010	User validation failed. Please try again.
E0011	Consignment retrieving failed. Please try again.

6.3   Validation and <mark>functional error codes</mark> and messages

The range "E1000 – E1999" is reserved for validation and functional errors. The error codes provided by the B2B webservice are not related to specific addresses that are provided in an address attachment. See also chapter 5.2 Status.

Code	Message
E1000	'{0}' has an invalid value. Therefore, the value cannot be parsed.
E1001	'{0}' {1} was provided but method '{2}' is invoked. Therefore, the provided '{0}' is invalid.
E1002	The provided value for the property '{0}' is not supported.
E1003	Parameter '{0}' contains an error: {1}
	See additional table in section 6.3.1.
E1004	At least one required 'CharacteristicName' is missing. CharacteristicType: {0}, MissingCharacteristics: {1}.
E1005	Parameter 'WorkSheetName' contains an invalid value. The provided file does not contain a worksheet named '{0}' or the worksheet has no content.
E1006	The column number of parameter '{0}' is less than zero or is greater than de maximum amount of columns found in the provided file
E1007	The column number of parameter '{0}' is required. Therefore the value should be greater than zero.
E1008	Column '{0}' should not occur in combination with another column
E1009	Column '{0}' has a conflicting value compared to another column (or columns)
E1010	When invoking 'ValidateAndSortAddressAttachment' a valid 'TransportEquipmentTypeCode' should be provided. The provided value {0} is not supported.
E1011	Characteristic 'MinimumNumberInABundle' is greater than 'MaximumNumberInABundle'. Therefore the provided value is invalid.
E1012	Characteristic '{0}' is invalid because the provided value '{1}' is not supported.
E1013	The provided location '{0}' does not exist.
E1014	Each location provided in the SortCenterOrder should be unique. The provided location '{0}' does appear more than once.
E1015	'{0}' Not found. The provided '{0}' does not exist.
E1016	An Error has occurred while processing the file.
E1017	Parameter '{0}' should not contain more than {1} characters
E1018	For the provided delivery date, the sorting table not yet available. Therefore, you cannot sort yet.
E1019	The maximum duration for retrieving the results is exceeded.

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Code	Message
E1020	No status is found.
E1021	FileType '{0}' does not match the extension as specified for FileName '{1}'
E1022	FileType '{0}' does not match the actual file specified in the EmbeddedData element.
E1023	Sorting and/or validating of an address file is not allowed for product '{0}'.
E1024	Validating of an address file is not allowed for product '{0}'.
E1025	Sorting and/or validating of an address file is not allowed at this time. This consignment with the chosen product and deliverydate should already have been sorted and/or validated.
E1100	ConsignmentID should be numeric 12 and without blank spaces (123456789000).
E2045	Unfortunately PostNL cannot process the uploaded address file. It may contain too many unrecognized addresses, or there may be another cause. Please contact PostNL: Logistic Support department at 088-8688800 or logistieksuppport@postnl.nl. Save the unrecognized address file in your own environment, so that it can be used for further analysis if necessary. Business portal / Sorteren (Dutch): Helaas kan PostNL het geüploade adressenbestand niet verwerken. Mogelijk bevat het te veel niet-herkende adressen, of is er een andere oorzaak. Neem alsjeblieft contact op met PostNL: afdeling Logistieksupport op telefoonnummer 088-8688800 of logistieksuppport@postnl.nl. Sla het niet-herkende adressenbestand in je eigen omgeving op, zodat dit eventueel gebruikt kan worden voor verdere analyse.

6.3.1 Attachment error codes

When an **E1003** error occurs regarding an attachment, an additional error code is provided as part of the error message. These additional error codes are listed in the table below.

Code	Description
1001	Bestand is leeg
1002	Bestand is te groot
1003	Bestand is verplicht
1008	Archief is leeg
1009	Archief is te groot
1010	Archief bevat te veel bestanden
1011	Archief type wordt niet ondersteund
1012	Archief is versleuteld
1013	Bestand in archief is te groot
1014	Bestand in archief is versleuteld
1015	Bestand in archief wordt niet ondersteund

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1016	Bestand in archief is leeg
1017	Archief is ongeldig
1018	Bestandstype is onbekend
1019	Onbekende archief fout
1020	Bestandsinhoud is incorrect
1021	Bestand is versleuteld

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