Recomennded usage of standards

EDI Rules for the Construction Materials Industry

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EDI Rules Associated with Use of the NeB Standard for Electronic Commerce in the Construction Materials Industry

Change log for this document

Version	Date	Change	Approved
V01-V04		Working versions	
V05	31 March 2011	Updated after the EDI committee's meeting of 28 February 2011	
V06	27 April 2011	Updated after the EDI committee's meeting of 4 April	
V07	6 May 2011	Updated after the EDI committee's meeting of 2 May EDI processes are displayed more clearly Specification of sub-deliverable in chapter 2.3 The OB party is included in parties in 2.4 Line numbers must be numerical integers	
V08	10 May 2011	A description of the despatch advice is included	
V09	23 May 2011	The use of parties to an EDI message can be specified at the bottom of the page in chapter 3.1 Adjusted text related to "available for ordering" in chapter 3.1 Specification, use of units in orders in chapter 3.1 Specification, use of units in confirmation, despatch advice and invoice in chapter 3.6	
V10	30 May 2011	New chapter 1.4 with fields per store for communication from chain to supplier	On 27 May 2011 the SU approved EDI rules with this change
V11	12 March 2012	Portal name changed in the reader's guide Minor changes to the text in chapters 3.1 and 3.2 New chapter 6, with an explanation of the content of the purchase order and order confirmation	
V14	29 February 2016	New chapter 2.8 Use of services. Chapter 3.1 – 3.5 is upgraded concerning services. Examples in chapter 6 is removed. Chapter 3.2 is expanded with a table explaining use of status codes at line level. New chapter 6 with identification of services.	

Reader's guide
Many documents have been written through the Standardization of the construction materials industry project. This document explains EDI, and how to start using EDI simply and systematically. The document also provides some rules on how to use the message standard, both with descriptions and specification of content.
This is a natural first document to read for people with interest for EDI.
Template for each message type is available for download here.
For those who are interested in technical details, the different message standards for purchase order, order confirmation, despatch advice and invoice are described in dedicated documents that can be downloaded from here.

The level of ambition for despatch advices is described in chapter 5 of this document, and contains examples.

In chapter 6 is table with identification of services.

There is a glossary at the back of this document, explaining new words and terms that you will encounter in this document.

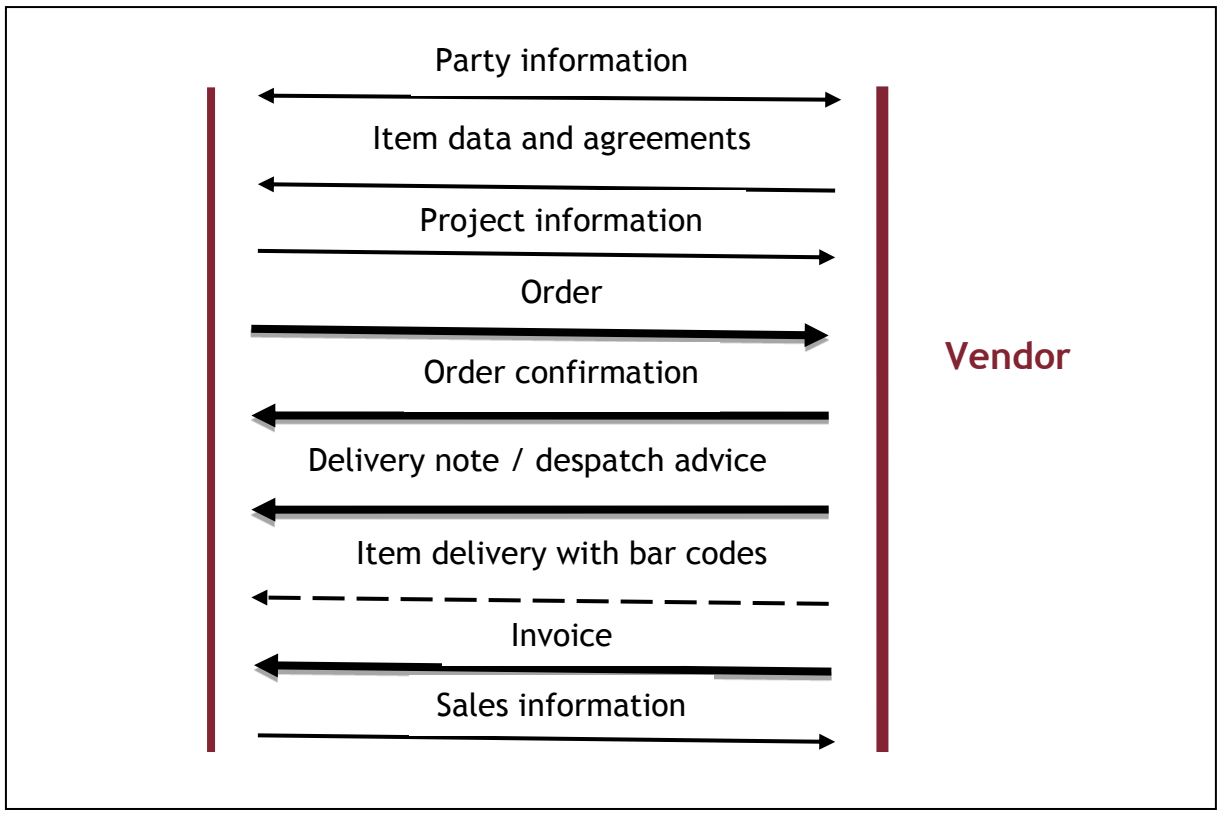
The content of the document is a joint-venture between Virke, the Enterprise Federation of Norway and the Building Materials Industry Association.

Contents

1 Beginning to Use EDI

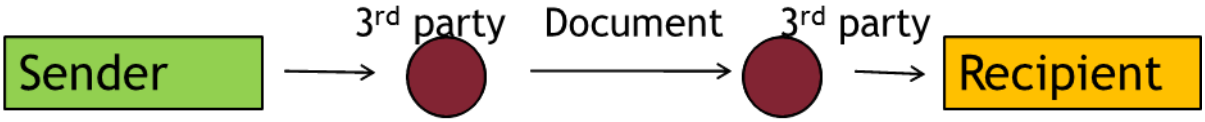
It is important that two parties planning to use EDI for interchange trading documents, first agree for a start-up meeting. A mutual overview will then be drawn up of the status of the computer system, the need for upgrades, experience with EDI, the status of the item database, item identification, packages available for ordering, party identification, use of third-parties, the EDI standard, relevant messages, messages to start with, a progress plan for the establishment phase, test phase and approval for go live.
A decision should be made regarding the use of optional fields. In chapter 4 you will find link to prototype of each message, where recommended information elements are listed with rules for presence and use.
The parties should agree on a person to serve as a coordinator during the start-up process. This person must have experience with EDI exchanges. It is a good idea for this person to come from the buying chain, but not a requirement. The reason why a coordinator is important during start-up is that the agreed plan must be followed up, and activities have to be performed. Many EDI projects have been unsuccessful due to missing start up meeting, or no defined coordinator, or missing a plan agreed on by involved parties. If a driving force or coordinator is missing, the actors often will wait for each other and nothing will happen.

Below is a picture of the processes that can be solved by EDI or data interchange.
The processes highlighted can be solved by EDI messages defined in NeB. The other processes can also be solved by using computer file interchange.



1.1 Involved parties in an interchange

Chapter 1.3 of this document contains a page that is practical for establishment, testing and production of an EDI interchange. The document is used for a complete overview of the parties and persons involved in an interchange, as shown in the outline below.



For chains using flow through invoicing, it is natural to have party information for invoicing and a separate party list with each store for purchase orders, order confirmations and despatch advices. It is important for a person at the company to be responsible for maintenance of party information and distribution of it to the people/companies (vendors) who need it.

1.2 Changes associated with an interchange

Production start will be agreed on when testing of an interchange is complete, and it has been approved by the parties involved.
When production has been established, the solution should be locked from making changes. Experience tells that even the smallest change may have impact on the information flow, despite that experts say the opposite.
We know that changes may be necessary. When one of the parties involved in an interchange finds themselves in such a situation, the other parties involved in the interchange must be notified of the plan for changes and when, so that they can pay extra notice, even though it does not appear that they will be affected by the change.
This type of notification often is not given. Careful notification on this topic will probably generate good will between the parties and avoid frustration and error situations.

1.3 Party Details in an EDI Interchange

This agreement will take effect on the following date:								The agreement commits the parties equally							
SUPPLIER								INFORMATION		**CUSTOMER**					
Name:								Company		Name:					
Address:								Address		Address:					
Tel.:		GLN:								Tel.:		GLN:			
Adm contact person:								Adm head		Adm contact person:					
Tel.:		E-mail:								Tel.:		E-mail:			
Technical contact:								In case of problems		Technical contact:					
Tel.:		E-mail:								Tel.:		E-mail:			
Third party:		Contact						Postbox supplier		Third party:		Contact			
Tel.:		E-mail:								Tel.:		E-mail:			
Contact person	Tel.:	E-mail:		IG				Message	Start date	Contact person	Tel.:	E-mail:		IG	
								Order							
								Conf.							
								Desp.							
								Inv.							
The parties are under an obligation to notify the other actors involved well in advance if changes to an interchange are planned.															
Use of parties in EDI messages, or the invoicee for flow through invoicing, may be entered here.															

1.4 Stores in a chain

Chains are recommended to adopt a standardized method for distribution of store information to their suppliers.
Below is shown how a simple spreadsheet can be defined for this purpose.

The store will normally be the buyer in an EDI order (this is not the case where central warehouse performs distribution of goods to the stores).
The invoicee is also an important party in the EDI message. Most often the invoicee is the chain office or a regional office.

When a chain sends a total overview or update of store information to a supplier, it is of great help for all parties that this happens in a structured manner, and in the same way (format) each time.

It may be a good idea to use spreadsheets to distribute this information. Many chains have a spreadsheet that contains all stores, which is sent to suppliers after changes have been made. It is then important to highlight all of the fields that have been changed by using a background colour or by comment. If not, the supplier that receives the information will not be able to locate the changes that have been made.

A spreadsheet for this usage may be designed as shown here. The chain must identify themselves and put the date for distribution on the top of the sheet in the first line.
In this way the supplier is enabled to receive store information in the same format from the customers and this information may be used for EDI purposes.
All stores should be distributed whenever any information is changed.

The spreadsheet consists of columns from A to AE for each store and one store on each line.
If a store (customer) is expired, the expire date must be written in column A.
If the line indicate a new store, the column A must contain “New from” and date.
Column A must be used by the sender to inform which line and what is the changed.

Column	Main field	Sub field	Rule	Explanation
			M=Mandatory O=Optional	
A	**Comment to the change**		**O**	**What is changed**
B	**Chain/profile**		**O**	**If several sub chains/profiles or customer groups**
C	**Name**		**M**	
D	**Email**		**M**	
E	**Legally name**		**M**	
F	**Company reg.no.**		**M**	
G	**GLN-number**		**M**	
H	**County**			**If this is in use**
	Postal address		**M**	
I		**Address**	**M**	
J		**Postal number**	**M**	
K		**Postal place**	**M**	
	Visiting address		**M**	
L		**Address**	**M**	

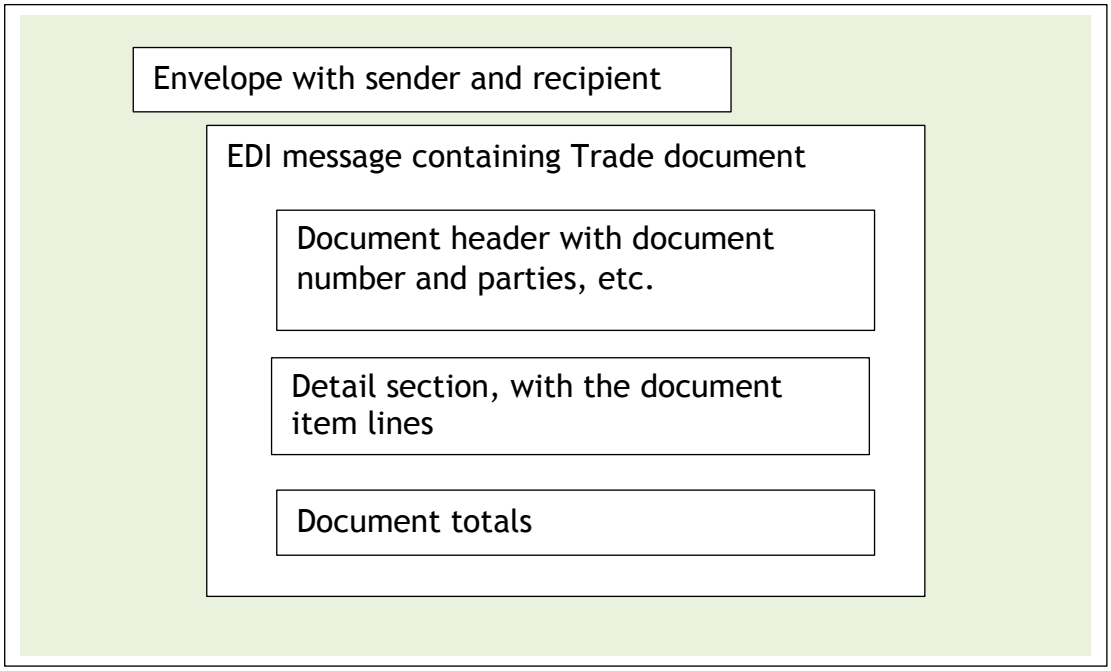
M		**Postal number**	**M**	
N		**Postal place**	**M**	
O	**Fax**		**M**	
P	**Phone**		**M**	
Q	**Mobile**		**O**	
	Invoicee		**M**	
R		**GLN**	**M**	
S		**Name**	**M**	
T		**Address**	**M**	
U		**Postal no.**	**M**	
V		**Postal place**	**M**	
	Delivery place		**O**	**To be used if delivery place differs from visiting address**
W		**GLN**	**O**	
X		**Name**	**O**	
Y		**Address**	**O**	
Z		**Postal no.**	**O**	
AA		**Postal name**	**O**	
	Emails		**O**	**To be used if necessary**
AB		**Ordering office**	**O**	
AC		**Invoice receive**	**O**	
AD		**Goods receive**	**o**	
AE	**Customer number**		**O**	**If chain customer number is used**

2 Rules for EDI Messages

2.1 EDI messages

The NeB standard has been developed for EDI messages for the construction materials industry and their customers through a joint-venture between organizations in Norway and Sweden. This standard contains messages for purchase order, order confirmation, despatch advice and invoice. The standard exists in both an Edifact and a XML version. Each message is shown as a template in addition to a User Guide. The standards can be downloaded from here.

Structurally, an EDI message looks as shown within the outer frame of the outline below.



A trade document (e.g. invoice) is split into three parts, which appear in the figure as boxes (header, item lines and totals). Each box in the figure represents a group of information that is described in the following chapters.
An envelope may contain several EDI documents, each of which consisting of the three components in the figure (header, item lines and totals). An EDI interchange consists of an envelope containing one or more EDI documents.

2.2 Sender and recipient of an EDI message

When sending an EDI message, the address section of the envelope must contain the Address both for the sender and recipient of the message. This can be compared with the address label with recipient identification on a company postal envelope with pre-printed sender details.
EDI messages use a GLN (Global Location Number) to identify the sender and recipient. GS1 Norge provides this identification number.
In a purchase order, the sender is normally the chain office, store or central warehouse, and the supplier is the recipient.
In an order confirmation, the sender is normally the supplier, and the recipient is the chain office, store or central warehouse.
On a despatch advice, the sender is normally the supplier, and the recipient is normally the store or central warehouse. However, a delivery to a construction site will not be covered by this.

The place of delivery is thus the ideal place to address a despatch advice, but it is seldom possible to send an EDI message to a construction site. This is why the buyer must be the normal recipient of the despatch advice.
For an invoice, the recipient will be the party specified in the trade agreement between the buyer and vendor.
The invoicee must be present in the EDI purchase order and in accordance with the trade agreement. If a deviation arises anyway, the agreement in the supplier's system will take precedence.
It is important that the use of parties is agreed on during the start-up meeting.

2.3 The one-to-one principle

The one-to-one principle must be used. This means that one invoice can only contain invoiced articles from one despatch advice (delivery), one order confirmation and one purchase order. This enables the option of partial deliveries. The rules for this must be agreed between the parties. Partial deliveries are permitted unless otherwise stated.
The one-to-one principle will make the processing rules in the data systems clear and simple, and both the automated and the manual follow-up will be straight forward.

2.4 Identification of the parties

All of the parties involved must be identified in an EDI message. Identification follows the GLN, as discussed in chapter 2.2. The regular parties in a message are the buyer, the supplier, the place of delivery, pick up place and the invoicee.
In an invoice every party in the message must be listed by name and address. The full address of the place of delivery must be stated on every message.
The place of delivery does not require the use of a GLN.
We recommend that the party's name always is present in the other messages. This makes it easier to check if you need to examine an EDI message.
When a chain starts an EDI interchange, for example an invoice, the chain must ensure that necessary information for all stores is communicated to the supplier.
Another aspect of these party details is that updated information must be sent to all suppliers regularly. Sending an updated spreadsheet is not enough. What is changed or new must be clearly highlighted. ***See chapter 1.4 for where to find a guide for information*** that needs to be included and how to highlight changes.

The following parties may/should be part of an EDI message:

EDIFACT code	***Original EDIFACT designation***	***Interpretation***	***Requirement***
BY	Buyer	Party (company) to whom items are sold (buyer).	Must
SU	Supplier	Party (company) considered the supplier of the items.	Must
IV	Invoicee	Party (company) to whom the invoice will be sent.	Must
DP	Delivery Party	Party (company) to whom the items are delivered. Party (company) for whom the items are made available.	Must
UD	Ultimate customer	End-recipient of items. The supplier labels items with this name	Used as agreed
OB	Ordered By	Party that orders the items. May be a chain office ordering on behalf of a store or the store's customer.	Used as agreed
CA	Carrier	Party (company) that provides transportation of items between two specified locations.	Can
SF	Ship From	Identification of party from which items are picked up.	Must with EXW
II	Issuer of invoice	Identification of the invoice issuer. Used to identify chain's head office when invoicing stores in a flow through solution.	Only for flow through invoicing

2.5 Document identification

Each EDI document must be identified on unique bases by a document number. This document number is assigned by the sender's computer system. For example, each purchase order has a buyers purchase order number which can be referred to later in the order confirmation, despatch advice and invoice documents. The invoice must also contain a reference to the order confirmation and despatch advice. A credit notes must make reference to the original order and invoice number and an explanation of the reason for credit note (free text).
In some cases, the purchase order number may be missing due to an order being placed by phone. Orders without a purchase order number should be avoided because they require manual handling and control at later stages for the buyer.
It is important to run duplicate checks on the document number when receiving a document type. The rules for duplicate checks must be agreed on between the trading parties.

2.6 Item lines in an EDI message

Each item line in an EDI message must be identified by a line number that is assigned by the sender's computer system. This line number carries the item line data, and must be included in references to the item line in the order. For example, lines in all subsequent documents for a purchase order must contain a reference to the purchase order number and the corresponding item line number. This allows the receiving computer system to link an item line in an invoice to the correct item line in an purchase order.
The item line number must be a numerical integer.

2.7 Identification of items on lines

The use of a GTIN (Global Trade Item Number) is strongly recommend to identify the item ordered, confirmed, delivered or invoiced. The advantage of a GTIN is that it identifies both the item and the package in which the item is located or packed.
A dedicated GTIN for each F-pak (consumer package), D-pak (retail package) and T-pak (transport package, often a pallet) ensures clarity of identification.
The new standardization work in NOBB will ensure that GTINs are in place for all packages that can be ordered.

2.8 The use of Services in an EDI-transaction

The buyer has an interest in presence of the buyer purchase order number and line number in every item line in the invoice from the supplier. This feature enables automatic invoice control and approval.
Some of the invoice lines may be of the type “freight”, “special package”, “lift up on the roof” or other cases. Cost elements of this type are defined as “services” in NOBB and identified with a NOBB-number and a GTIN. Every supplier may use these “service articles” in their own system and assign their own price to them.
This means that the buyer may order “freight” as a line item in his purchase order.
In the same way a buyer may order “lift up on roof” as an item line in a purchase order for roof tiles.
The supplier can then confirm the price and cost for the actual service in the order confirmation message. The buyer can approve the service cost and update the purchase order. When the EDI-invoice arrives it should contain line items to match all lines in the purchase order.
Chapter 6 presents the defined services for time being.

3 Rules for each document type

The use of free text should be limited as a general rule that applies for all trade document types. Normally a free text used in an EDI order will result in a stop in the processing at the receiver and initiate a manual check/processing. The use of free text will therefore stop automatic processing of EDI trade documents.
Sometimes the use of free text is important because it supplies information to the receiver of the message. However, this way of solving information gaps should be avoided if possible.

Another rule is that every party listed in the order should be part of the subsequent messages.

3.1 EDI order

The purchase order is a document to be sent from buyer to supplier where buyer tells which articles and quantities he orders with delivery place and delivery time. The item lines may include both articles and services (chapter 2.8). Invoicee must be present in the purchase order.
Delivery date is the required date for delivery at the delivery place. Using EXW this will be the ramp at suppliers warehouse.
A GTIN must be used in the purchase order to identify the article and package (unit) ordered. During a transitional period, a GTIN, NOBB number and the supplier's item number may be used in the EDI purchase order. It is important that the buyer checks that the package that is ordered is labelled "available for ordering" in NOBB (see the NOBB rules).

The ideal procedure is when using GTIN in the purchase order line item, the supplier will not need any other identification or indicator for unit of measure. He finds that information in his own master data.
Recommendation: During a transitional period, a GTIN, NOBB number and the supplier's item number may be used for identification purposes.
Industry and the chains agree on the following:
If a GTIN has been used in the order item line and the supplier sees it as an invalid GTIN, the supplier must reject the item line and notify the buyer either in the order confirmation or by phone/e-mail.
When the item has been identified with a GTIN, no other checks will be performed in order to see if other identifiers in the item line are correct.

If a package does not have a GTIN, it must be identified with a NOBB number and NOBB unit of measure in the ordered quantity. In this case, it is important that the NOBB unit of measure is correct. Necessary validity checks for the unit must be conducted by the supplier, and the order confirmation must be returned with the same identification terms as those used in the purchase order.

3.2 EDI order confirmation

The order confirmation is a document sent from the supplier to the buyer confirming the deliveries which were required in a specific purchase order. The order confirmation returns the same item lines as in the purchase order, possibly with the addition of lines for other cost elements identified as services.
The item lines include a status code that shows whether the line has been changed or not, or if the line is new (e.g. service or partial delivery).
If an item in a purchase order cannot be identified by the supplier's system, the status code of the line in the order confirmation may either state "item line rejected" or the line may not be part of the order confirmation, but the supplier's ordering office notifies the buyer of this deviation.
It is important that all cost elements appear as line items in the order confirmation message. These elements should also appear in the same way in both despatch advice as deliveries and in the invoice at line level in the same way as in the order response message. This means that charges never will occur at header level of the invoice.
There should only be one order confirmation per order. The parties must agree on the possibility of sending more than one order confirmation and the buyer must have support for this in his ERP system.

The item line number in the order confirmation is assigned by the supplier's ERP system.

Each item line in the order confirmation must have a reference to a purchase order number and line number from the purchase order. If there is no order number for some reason, the reference will be sent without data (empty).

It is not the purpose of the order confirmation to state the package structure in the final delivery.

The order confirmation will return the same item identification as were used in the purchase order.

The following situations may occur at the supplier when an item line from a purchase order is processed in the ERP system.

1. Ordered quantity and required delivery date is confirmed unchanged with status code 5 (accept without change).
2. Ordered quantity with later delivery date than ordered, is confirmed with status code 3 (accept with change). The use of an earlier delivery date than ordered, must be settled in the agreement.
3. If supplier is not able to deliver ordered article and quantity (out of stock and will not be available in near future) the confirmed quantity shall be set to 0 (zero). When this confirmed line is received in the buyer ERP system, this line item may be rejected and the buyer must be informed. Value of confirmed delivery date is of no interest in this case. Status code 7 (not accepted) shall be used.
4. If ordered quantity cannot be delivered as a entirety, and the missing part is not available in near future, the deliverable quantity shall be confirmed with actual delivery date. No information for partial delivery shall be given. In buyer ERP this shall be reflected as a complete delivery without any residual delivery. Status code 3 (accepted with change) shall be used.
5. If ordered quantity will be accomplished through several deliveries, the first delivery quantity with delivery date must be given in the main line with status code 3 (accepted with change). Each residual delivery must be informed in a new line item with quantity and delivery date supported with status code 1 (new line).
6. If the article in the purchase order line is not recognised by supplier ERP, the status code must be set to 7 (not accepted) in the order response line.
   If the supplier ERP system is not able to process the line in this case, the supplier order office has to inform the buyer.

If a later order response is sent for correction of quantities or delivery dates, only line items with changes must be sent. Only reference to original purchase order line number may be used.
It may be difficult for the supplier to correct an earlier sent order response message. It should be avoided if the first order response contained the feature “new lines”. Corrections in these situations must be carried out manually.

3.3 Purchase order/order confirmation quantity

When ordering a quantity of an item identified by GTIN, the GTIN identifies the actual package of the article. Ordered quantity tells the number of ordered packages.
The order confirmation must confirm quantity based on the same GTIN and package level as used in the purchase order item line.
In addition, the confirmed quantity must also be stated and numbered in price units.
The supplier must use NOBB unit of measure for all quantities in the order confirmation, unless otherwise agreed.
It is important to respect the flag "available for ordering" for the package.
Main principle is that ordered number of the GTIN, is confirmed, delivered and invoiced.

3.4 Despatch advice

The despatch advice is a document sent from the supplier to the buyer telling delivery date and quantity of articles and services contained in the delivery referring to the purchase order.
All line items from the order confirmation shall occur in one or more despatch advices.
The despatch advice with its different levels of ambition and associated examples are described in chapter 5.

3.5 Invoice

The invoice is a document sent from the supplier to the invoicee stated in the purchase order if no other agreements have been made. Free text used on the header and line level is intended for printout on invoice copies for the archive, etc.
All item lines in from order response and despatch advice presented as services or cost elements, shall be presented in the invoice as separate item line.
Avoid to send:
Item lines with the quantity zero (0).
Item lines with the amount zero (0).
Zero invoices – invoices with the total amount zero (0).

3.6 Unit of measure and international trade

International chains have stores in many countries, and must have a joint item master that is used in all of these countries. It is difficult to use national article standards like NOBB, TUN and FINFO, as the units in these databases do not follow any international rules. International chains may use ISO units in their master data. In general, it is possible to create conversion tables between ISO units and the units in NOBB, TUN and FINFO.
Introducing and adopting GTIN as a package identifier means that international trade does not need to use units. Even though ISO units are used in an EDI order, this unit will be overlooked when there is a GTIN.
As long as the package ordered has a GTIN, the supplier (by a lookup in his article master) will be able to understand this GTIN, identify the item and package, and generate an order confirmation. Units used in order confirmations, despatch advices and invoices will be the units entered in NOBB by the supplier, not the ISO unit.

Orders with a NOBB number and ISO unit will not work in Norway. Only the NOBB unit is the unit to use in Norway when the NOBB number is intended to identify the item.

3.7 Unit of measure and use of GTIN

As long as the ordered package has a GTIN, the supplier (by a lookup in his article master) will be able to understand this GTIN, identify the item and package type (unit of measure).
In the same way the buyer shall perform a lookup (based on GTIN) for check in his article master when he receives an order response, despatch advice or invoice.
In this way unequal use of unit of measure in the buyer and supplier ERP will not cause stop in the processing.

4 Data Requirements in EDI Messages

It is important that two parties intending to start EDI interchanging carefully have a look at information content in the message standard to be used and compare with information elements available in their own data system.
In Norway the recommended information elements for each message type have been documented in templates, one for each message. These templates have been approved by the SU (Standardiseringsutvalget) and in this way can serve as good examples for each message.

Note that the use of GTIN on lines to identify an article and package will not always be possible, especially in the beginning. Never the less the use of GTIN is marked as a requirement.

Note that each message in NeB allows more data, but the template complies with Norwegian practice.
The use of free text should be avoided if possible.

Templates and User guides are available here.

5 Despatch Advice – Purpose, Structure, Level of Ambition

5.1 Purpose

The despatch advice is an electronic message from the supplier/vendor to the buyer, and is an announcement of a delivery in the near future. It states what parcels the delivery consists of, and what items and quantities are contained in the delivery. In a more advanced solution, also the content per parcel or package may be stated.
The despatch advice makes reference to a previous purchase order.
The message can be used both for delivery to a cross-docking terminal, to a central warehouse or to a store. It should also be possible to use the electronic despatch advice for direct deliveries to business clients or customers.
The advantage of electronic despatch advice is that the recipient of the document is able to prepare for the reception of announced quantity of goods (equipment and storage space).
When the shipment arrives, a fast arrival check may be performed by scanning the labelling on the external packaging of each parcel, and by comparing the content of each parcel with the description of the content in the despatch advice.

5.2 Principles

A despatch advice may contain several orders or parts thereof (outstanding order). Still the recommendation is to use the one-to-one principle where one despatch advice only contains item lines from one purchase order.
This simplifies the program checks and the control function, as there are direct one-to-one references from the purchase order via the order confirmation and despatch advice to the invoice.
One order should only cover **one** delivery to **one** place of delivery (location) and **one** desired delivery date. This information is provided in the message header.

It is important that the despatch advice number is unique for each despatch advice sent by a supplier, and it is the responsibility of the recipient (buyer) to reject a despatch advice with a number that has already been received and processed.

SSCC code (Serial Shipment Container Code) is a unique number (barcode) used for outer marking on a package ready for transport. The despatch advice may contain this code for each package and used for check and control during transport and delivery (at package level).
The warehouse or end-recipient performs line-level checks as the detail check.

SSCC codes may also be provided for exposure / sales pallets and for customer-packed deliveries from the supplier to the end-recipient via the co-loading terminal.

If any information is provided about the delivery situation on the order confirmation, every attempt must be made to ensure that this information is correct.
The despatch advice must contain the correct quantity information. In this way the invoice control will be performed in a simpler way.

Short time frames between order and actual delivery may cause difficulties to meet the buyer's request for an electronic despatch advice in advance of the delivery.

5.3 Level of ambition

The despatch advice can be used (produced) in four different ways, where the header is the same, but the details and line section is organized differently:

1. No package information
This is the simplest form, and only states that it is a delivery (CPS+1), and which items that make up the delivery, regardless of the packaging (pallets, boxes, etc.).
No packaging information is given

2. The packaging information is given without any links to articles.

The more advanced form expands the point above by stating the types of packaging (packaging types that the shipment consists of: pallets, boxes etc.) and the number of them, and the option of indicating which SSCCs the shipment consists of.
The item lines are not linked to which package they are in.

3. The package information linked to the articles inside
The advanced version also provides information about the packaging hierarchy (CPS+m+n), and the packages that make up the delivery, with identification (SSCC). The items are also linked to the package they are located in.

4. Expansion of level 3 to customer-packed deliveries
This is the most advanced version, allowing the statement of SSCC codes for exposure/sales pallets and for customer-packed deliveries from the supplier to the end-recipient via the chains' co-loading terminal (cross-docking). The last option thus covers delivery of several customer orders on the same despatch advice to a co-loading terminal (breaks the one-to-one principle).
This principle has not been documented so far with an example.

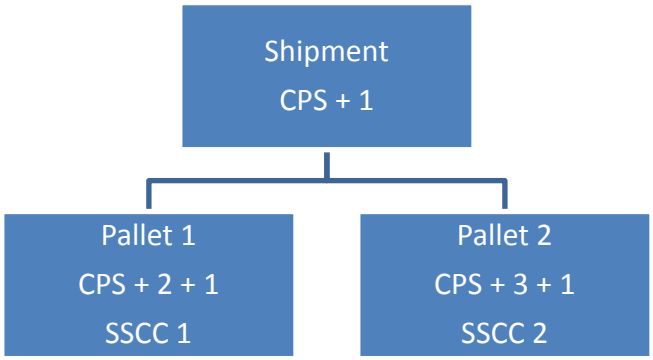
5.4 Structure

The structure of an electronic despatch advice allows different levels of ambition (see the Ambition Level chapter).
The message consists of a header, a detail section and a total section. The detail section is divided into a package section and a line section.
The package section makes it possible to provide information about how the delivery is packed, the levels of packing that it consists of and the packaging types used. It is possible to link both data on numbering and physical measurements and weight to each package. Also handling rules can be entered here.
The line section on despatch advice consists of a repeating segment group that always starts with identification of a line item. Each line in the despatch advice must refer to an item line from a purchase order.

For details about information, have a look at the Template for despatch advice.

5.5 Examples

Our starting-point is a delivery that consists of two pallets which can be illustrated as follows in a package structure:



CPS+1	Identifies the shipment
CPS+2+1	Identifies pallet no. 1 in a packaging hierarchy, and is identified with SSCC1
CPS+3+1	Identifies pallet no. 2 in a packaging hierarchy, and is identified with SSCC2

In the CPS+M+N syntax, M lists the number in a packaging hierarchy, and N the package number that is M's parent.

In the following, each ambition level will be described in separate examples, and the delivery will be the same two pallets shown above.

Only the packaging section and lines will be shown in the examples. The header and total section of the despatch advice message are shown here with a marked space for the details which are shown in the examples. The data below is thus identical in the three examples.

EDIFACT statement	Description
UNA:+,? '	
UNB+UNOC:3+9876543210321:14+1234567890123:14+080330:1115+4401’	9876543210321:14=sender GLN 1234567890123=receiver GLN 080330:1115=date and time of converting 4401=Message reference
UNH+1+DESADV:D:03A:UN:NEB01’	
BGM+351+30811’	30811=Vendor delivery note number
DTM+137:200803301110:203’	200803241010=Vendor date and time for producing the message
DTM+17:20080331:102'	20080331=Delivery date estimated
RFF+ON:42770’	Buyers purchase order number
RFF+VN:3081’	Vendors order number
NAD+SU+1234567890123::9'	1234567890123=Vendors GLN
RFF+VA:NO987654321MVA'	987654321=VAT number for vendor
NAD+BY+2345678901123::9'	2345678901123=Buyers GLN
NAD+IV+1230123456789::9'	1230123456789=Invoicees GLN
NAD+DP+7080000448494::9++Byggmakker Skattum+Valdresveien 4+Gjøvik++2815'	Address of delivery place
NAD+UD+++Lise Olsen+Biriveien+Biri++2820'	End customer name to be used for marking of goods in case of a customer order
TDT+20+3’	Transport information
TOD+6++DDP:106’	DDP=Terms of delivery with Incoterms code
UNS+S'	Section delimiter
CNT+2:1'	1=Number of item lines
UNT+28+1'	28=Number of segments 1=Reference in UNH
UNZ+1+4401'	1=One message in this envelope 74001=Message reference (same as in UNB)

Example, ambition level 1

Only CPS+1 will be stated for ambition level 1, and then relevant item lines with quantity.

EDIFACT statement	Description
CPS+1’	Delivery spec starts here
LIN+10++1234567890123:EN'	10=Item line number 1234567890123=GTIN number for article
IMD+F++:::Description'	Article description
QTY+12:8:PCE'	8=Quantity to be delivered
RFF+ON:42770:1’	Ref. to purchase order and line number
RFF+VN:3081:10’	Ref. to Vendor order and line number
LIN+20++2345678901231:EN'	20=Item line number 2345678901231=GTIN number for article
IMD+F++:::Description'	Article description
QTY+12:38:PCE'	38=Quantity to be delivered
RFF+ON:42770:2’	Ref. to purchase order and line number
RFF+VN:3081:20’	Ref. to Vendor order and line number

Example, ambition level 2

Only CPS+1 will be stated for ambition level 2, as well as types of package and quantity, and then all item lines with quantity.

EDIFACT statement	Description
CPS+1’	Delivery spec starts here
PAC+2++PX’	Delivery consist of two pallets
PCI+33E’	SSCC number is used for identification
GIN+BJ+123456789012345678+234567890112345678’	The pallets are identified by these SSCC number.
LIN+10++1234567890123:EN'	10=Item line number 1234567890123=GTIN number for article
IMD+F++:::Description'	Article description
QTY+12:8:PCE'	8=Quantity to be delivered
RFF+ON:42770:1’	Ref. to purchase order and line number
RFF+VN:3081:10’	Ref. to Vendor order and line number
LIN+20++2345678901231:EN'	20=Item line number 2345678901231=GTIN number for article
IMD+F++:::Description'	Article description
QTY+12:38:PCE'	38=Quantity to be delivered
RFF+ON:42770:2’	Ref. to purchase order and line number
RFF+VN:3081:20’	Ref. to Vendor order and line number

Example, ambition level 3

For ambition level 3, each package is placed in a package hierarchy and identified in the hierarchy with CPS+M+N'. Relevant item lines are linked to their package.

EDIFACT statement	Description
CPS+1’	Delivery spec starts here
CPS+2+1’	Main package 1
PAC+1++PX’	Main package 1 is a pallet
PCI+33E’	SSCC number is used for identification
GIN+BJ+123456789012345678’	The pallet is identified by this SSCC number
	Articles on first pallet
LIN+10++1234567890123:EN'	10=Item line number 1234567890123=GTIN number for article
IMD+F++:::Description'	Article description
QTY+12:8:PCE'	8=Quantity to be delivered
RFF+ON:42770:1’	Ref. to purchase order and line number
RFF+VN:3081:10’	Ref. to Vendor order and line number
CPS+3+1’	Main package 2
PAC+1++PX’	Main package 2 is a pallet
PCI+33E’	SSCC number is used for identification
GIN+BJ+234567890112345678’	The pallet is identified by this SSCC number
	Articles on second pallet
LIN+20++2345678901231:EN'	20=Item line number 2345678901231=GTIN number for article
IMD+F++:::Description'	Article description
QTY+12:38:PCE'	38=Quantity to be delivered
RFF+ON:42770:2’	Ref. to purchase order and line number
RFF+VN:3081:20’	Ref. to Vendor order and line number

6 Services

Table shows services defined in NOBB with Norsk Byggtjeneste as article owner.

NOBB nr	Article owner	Article Description	Article group	Article group	Price unit	Pack #1 UOM	Pack #1 GTIN
26924696	Norsk Byggtjeneste AS	TRANSPORT	0101100	Transport Tillegg	STK	STK	7043010000502
26924704	Norsk Byggtjeneste AS	TRANSPORT PAID	0101100	Transport Tillegg	STK	STK	7043010000243
26924712	Norsk Byggtjeneste AS	STAMPS	0101100	Transport Tillegg	STK	STK	7043010000144
26924720	Norsk Byggtjeneste AS	WAIT TIME	0101100	Transport Tillegg	T	T	7043010000069
26924738	Norsk Byggtjeneste AS	PICKUP CHARGE	0101100	Transport Tillegg	STK	STK	7043010000182
26924746	Norsk Byggtjeneste AS	EXPRESS CHARGE	0101100	Transport Tillegg	STK	STK	7043010000366
26924753	Norsk Byggtjeneste AS	ZONE CHARGE	0101100	Transport Tillegg	STK	STK	7043010000403
26924761	Norsk Byggtjeneste AS	CRAIN CHARGE	0101100	Transport Tillegg	STK	STK	7043010000113
26924779	Norsk Byggtjeneste AS	LIFT TO ROOF	0101100	Transport Tillegg	STK	STK	7043010000229
26924787	Norsk Byggtjeneste AS	BLOWING	0101100	Transport Tillegg	STK	STK	7043010000083
26924803	Norsk Byggtjeneste AS	PICK UP COMPENSATION	0101100	Transport Tillegg	STK	STK	7043010000434
26924829	Norsk Byggtjeneste AS	BROKEN PACKAGE CHARGE	0101100	Transport Tillegg	STK	STK	7043010000274
26924837	Norsk Byggtjeneste AS	PACKAGE COST	0101100	Transport Tillegg	STK	STK	7043010000205
26924845	Norsk Byggtjeneste AS	DIVIDE PART CHARGE	0101100	Transport Tillegg	STK	STK	7043010000496
26924852	Norsk Byggtjeneste AS	PARTIAL DELIVERY CHARGE	0101100	Transport Tillegg	STK	STK	7043010000106
26924878	Norsk Byggtjeneste AS	PREPARATIONS	0102100	Bearbeiding, Montering	STK	STK	7043010000298
26924886	Norsk Byggtjeneste AS	CUTTING	0102100	Bearbeiding, Montering	STK	STK	7043010000373
26924894	Norsk Byggtjeneste AS	RECESS	0102100	Bearbeiding, Montering	STK	STK	7043010000427
26924902	Norsk Byggtjeneste AS	PRINTING CHARGE	0102100	Bearbeiding, Montering	STK	STK	7043010000472
26924910	Norsk Byggtjeneste AS	COVER PREPARATIONS	0102100	Bearbeiding, Montering	LM	LM	7043010000137
26924928	Norsk Byggtjeneste AS	PICK UP CHARGE	0102100	Bearbeiding, Montering	LM	LM	7043010000465
26924936	Norsk Byggtjeneste AS	REPOSITIONING	0102100	Bearbeiding, Montering	STK	STK	7043010000168
26924951	Norsk Byggtjeneste AS	ASSEMBLY	0102100	Bearbeiding, Montering	STK	STK	7043010000199
26924969	Norsk Byggtjeneste AS	CRAIN ASSEMBLY	0102100	Bearbeiding, Montering	STK	STK	7043010000441
26924985	Norsk Byggtjeneste AS	ENVIRONMENT CHARGE	0103100	Avgifter	STK	STK	7043010000151
26924993	Norsk Byggtjeneste AS	FEE	0103100	Avgifter	STK	STK	7043010000328
26925016	Norsk Byggtjeneste AS	CUSTOMS	0103100	Avgifter	STK	STK	7043010000236
26925024	Norsk Byggtjeneste AS	RETURN FEE	0103100	Avgifter	STK	STK	7043010000410
26925032	Norsk Byggtjeneste AS	CHARGE	0103100	Avgifter	STK	STK	7043010000311
26925057	Norsk Byggtjeneste AS	GIFT CARD	0104100	Gavekort	STK	STK	7043010000342
26925065	Norsk Byggtjeneste AS	GAIN	0104100	Gavekort	STK	STK	7043010000175
26925081	Norsk Byggtjeneste AS	BROCHURES	0104200	Reklamemateriell	STK	STK	7043010000489
26925099	Norsk Byggtjeneste AS	ADVERTISING MATERIAL	0104200	Reklamemateriell	STK	STK	7043010000076
26925115	Norsk Byggtjeneste AS	RENTAL TRAILER	0104300	Utleie	STK	STK	7043010000281
26925123	Norsk Byggtjeneste AS	RENTAL CONTAINER	0104300	Utleie	STK	STK	7043010000359
26925131	Norsk Byggtjeneste AS	RENTAL EQUIPMENT	0104300	Utleie	STK	STK	7043010000458
26925156	Norsk Byggtjeneste AS	EURO PALLET HALF STD	0401001	Pallekarmer	STK	STK	7043010000304
26925164	Norsk Byggtjeneste AS	EURO PALLET WHOLE STD	0401001	Pallekarmer	STK	STK	7043010000397
26925172	Norsk Byggtjeneste AS	PALLET SPECIAL STD	0401001	Pallekarmer	STK	STK	7043010000250
26925180	Norsk Byggtjeneste AS	PALLET FRAME STD	0401001	Pallekarmer	STK	STK	7043010000090
26925198	Norsk Byggtjeneste AS	PALLET RETURN STD	0401001	Pallekarmer	STK	STK	7043010000335
26925206	Norsk Byggtjeneste AS	ORDER DISCOUNT ONLY SPECIAL DISCOUNT	0104400	Rabatter	STK	STK	7043010000120
26925214	Norsk Byggtjeneste AS	DISCOUNT/CREDIT COMPLAINT	0104400	Rabatter	STK	STK	7043010000267
46396295	Norsk Byggtjeneste AS	TRAINING	0104200	Reklamemateriell	STK	STK	7043010000809
46725454	Norsk Byggtjeneste AS	SERVICE / MAINTENANCE	0102100	Bearbeiding, Montering	STK	STK	7043010000816
47294096	Norsk Byggtjeneste AS	DRIVING COSTS	0101100	Transport Tillegg	STK	STK	7043010000519
47294126	Norsk Byggtjeneste AS	CONSTUCTION SITE DELIVERY	0101100	Transport Tillegg	STK	STK	7043010000915
47294395	Norsk Byggtjeneste AS	TECKNICAL SERVICE	0102100	Bearbeiding, Montering	STK	STK	7043010000939
47464684	Norsk Byggtjeneste AS	LIABILITY APPLICATION	0102100	Bearbeiding, Montering	STK	STK	7043010000953
48636817	Norsk Byggtjeneste AS	WAREHOUSE RENT	0103100	Avgifter	STK	STK	7043010000960
48636821	Norsk Byggtjeneste AS	CALIBRATION	0102100	Bearbeiding, Montering	STK	STK	7043010000977
48887493	Norsk Byggtjeneste AS	PRIVATE DELIVERY	0101100	Transport Tillegg	STK	STK	7043010000984
48935066	Norsk Byggtjeneste AS	SPEDISJON NOTIFICATION	0101100	Transport Tillegg	STK	STK	7043010001011
48935074	Norsk Byggtjeneste AS	SPEDISJON FREE OF CHARGE	0101100	Transport Tillegg	STK	STK	7043010001028

7 Terminology definitions

This is an attempt to explain a number of words and expressions that are used in connection with electronic commerce.

Term	***Definition***
Trade message	*An electronic transfer of a structured message with a given function. The messages are described in the Nordic eBuilding standard from Virke (the Federation of Norwegian Commercial and Service Enterprises). They can follow Edifact and/or XML syntax.*
Purchase Order	*The buyer orders items or services by placing an purchase order that is based on an agreement where the parties agree on the terms. The vendor receives the order, processes it, and notifies the buyer by sending an order confirmation.*
e-Communication agreement. Interchange agreement	*There is a list of parties on page 3 of this document that can be expanded with several specifications. It is best if the standard agreement between the parties contains a chapter describing necessary details.*
D-pak	*D = retail package, and is understood as the package that the retailer (store) normally orders from the supplier. A D-pak contains a certain number of F-paks. See also F-pak and T-pak.*
EDI	*EDI, Electronic Data Interchange, means a standardized, electronic and to great extent automated data interchange between business systems, independent of formats like Edifact/XML.*
EDIFACT	*EDIFACT is an EDI standard that defines electronic documents for structure and data content, developed by UN/CEFACT.*
Electronic business operation	*Exploit the EDI options in the ERP system to interchange electronic commerce documents with relevant trading partners*
Units	*Unit of Measure (UOM). The unit a quantity is given in.* *Other units:* *Price unit - The unit the price is given in* *NOBB unit - Units used in NOBB to describe a unit* *Package unit - unit that states whether a package is a consumer unit (F or CU-Consumer Unit), retailer unit (D or TU-Traded Unit) or transport unit (T or DU-Despatched Unit)* *Other unit types are also used with ERP systems:* *Sales unit - Unit of an item that the vendor uses towards its customers* *Stock unit - Unit used by an actor to indicate an item's stock status* *Procurement unit - The buyer's procurement unit for an item in collaboration with its suppliers* *Basic unit - a term often used by ERP suppliers in their system. This term often coincides with sales unit, stock unit or procurement unit.*
Simple e-Commerce	*When the party that places an order can use their regular business system to send orders that are not EDI, but which can be adapted to telefax or e-mail, depending on the recipient. Simple e-Commerce is also a matter of having simpler price list templates that are easy for the 'little' supplier to generate. Simple e-Commerce can even be combined in steps or be designed for Web EDI. See also Web EDI.*
ERP	*Enterprise Resource Planning (ERP) = a computer system to serve the company with processing services like accounts, wages, statistics, logistics, procurement, sales, and with functionality to also raise selected services to electronic business operation*
F-pak	*F = consumer package, and is understood as the package of an article that is on the shelf in a store, and is intended for the consumer. See also D-pak and T-pak.*

GLN	*Global Location Number is an international number series from GS1 to identify parties and their addresses. GLN applications can be made at* www.gs1.no
GS1	*An international organization that creates standards for trade, for example in e-Commerce, labelling and identification of articles and packaging, etc., see www.gs1.no*
GTIN	*Global Trade Item Number from GS1 is a unique global number to identify a commercial package of an item*
Transport label	*A recommendation from Virke on how to label transport parcels. The labels contain information in both clear text and bar codes.*
Receipt	*A technical system confirmation about a message has arrived. The receipt has both legal and practical importance.*
Nordic e-Building	*A standard for electronic trade messages that is a joint-venture between BEAst, TUN and Virke. It contains descriptions of trade messages in the item supply process, and builds on standards from UN/Cefact.*
Third-party supplier	*See VAN supplier*
T-pak	*T = transport package, and is understood as the package that can be used for transport of an item for large orders. This is normally a pallet. A T-pak contains a certain number of D-paks. See also F-pak and D-pak.*
UNSPSC	*United Nations Standard Product and Services Codes is a standard for classification of products and services (item group).*
VAN supplier	*A company that offers VAN services (Value Added Network), for example to convert and communicate business transactions (EDI). Also called post box supplier or third-party supplier.*
Web EDI	*A solution where a party has EDI communication; i.e. messages are generated and received directly in the business system, while the other party uses a Web interface to present and process trade messages. The party that uses the Web interface must keep the ERP system updated with the data received and sent in the Web interface. This can be a challenge and can easily lead to errors.*
NOBB	*Norsk Byggevarebase is a central item database operated by Norsk Byggtjeneste AS. Rules have been drawn up for storage of article data in this database.*
XML	*eXtensible Markup Language is a format standard from W3C to structure and handle data, regardless of the presentation form. XML does not have a standardized content, and must be supplemented with descriptions or 'standards'.*
Exterior packaging labelling	*There is a description of this in a separate document, "Standard for identification and labelling of construction materials".*