Replenishment Proposal
Business Message Standard (BMS)

Release 3.1

1-May-2013, Issue 1

Document Summary

Document Item	Current Value
Document Title	Replenishment Proposal - Business Message Standard (BMS)
BMS Release	3.1
Document Version	Issue 1, 1-May-2013
Work Group Name	eCom SMG
BMS Template Version	2.3

Change Request Reference

Date of CR Submission to GSMP:	CR Submitter(s):	Refer to Change Request (CR) Number(s):
20 –Aug-2008	John Ryu, GS1	08-000209
8- Aug – 2007	Eric Maree, Accenture	07-000309
05-Nov-2004	GS1	04-000211

Business Requirements Document (BRAD) Reference

BRAD Title:	BRD Date:	BRAD Version
BRAD Upstream Standards – Demand & Supply Signals	01-Nov-2004	0.1.0
Replenishment – Business Requirement Document	30-Mar-2004	1.0.0

Document Change History

Date of Change	Version	Changed By	Reason for Change	Summary of Change
6- January - 2012	Issue 1.0.0	Coen Janssen	Publication of BMS 3.0	Noted in summary of change section
1-May-2013	BMS 3.1 issue 1	Coen Janssen	Update to 3.1	Noted in Summary of Changes

Disclaimer

WHILST EVERY EFFORT HAS BEEN MADE TO ENSURE THAT THE GUIDELINES TO USE THE GS1 STANDARDS CONTAINED IN THE DOCUMENT ARE CORRECT, GS1 AND ANY OTHER PARTY INVOLVED IN THE CREATION OF THE DOCUMENT HEREBY STATE THAT THE DOCUMENT IS PROVIDED WITHOUT WARRANTY, EITHER EXPRESSED OR IMPLIED, REGARDING ANY MATTER, INCLUDING BUT NOT LIMITED TO THE OF ACCURACY, MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, AND HEREBY DISCLAIM ANY AND ALL LIABILITY, DIRECT OR INDIRECT, FOR ANY DAMAGES OR LOSS RELATING TO OR RESULTING FROM THE USE OF THE DOCUMENT. THE DOCUMENT MAY BE MODIFIED, SUBJECT TO DEVELOPMENTS IN TECHNOLOGY, CHANGES TO THE STANDARDS, OR NEW LEGAL REQUIREMENTS. SEVERAL PRODUCTS AND COMPANY NAMES MENTIONED HEREIN MAY BE TRADEMARKS AND/OR REGISTERED TRADEMARKS OF THEIR RESPECTIVE COMPANIES. GS1 IS A REGISTERED TRADEMARK OF GS1 AISBL.

Table of Contents

1. Business Domain View

1.1. Problem Statement / Business Need

The replenishment process in broad sense addresses the business practice to exchange data between a buying party (e.g. buyer) and a supplying party (e.g. seller/supplier) related to the future demand of finished or semi-finished products, ingredients, packaging and raw materials.

Between retailer and manufacturer (the downstream supply chain) the data is basically based on future demand based on finished products and time series but it can also be restricted to actual sales date for a certain period of time. Feed-back from the manufacturer on his availability to deliver is required, where available inventories (of both sides) are taken in account.

Between manufacturer and material supplier (the upstream supply chain) the data is basically based on material requirements for production and the timing for it, and also the feedback from the material supplier on his availability to deliver and the schedule for delivery. Inventories (on both sides) are taken into account for the actual delivery schedule.

Based on the delivery schedule (replenishment proposal), a transport and shipping planning can be derived.

1.2. Objective

This standard defines the transaction model and data model for the following business message:

- Replenishment Proposal

1.3. Audience

Anyone involved in the replenishment process with another party in the (extended) supply chain process. These parties basically are retailers, manufactures and suppliers of ingredients, packaging and raw materials. But can also be parties in between like wholesalers or logistic service providers managing warehouses.

1.4. References

	Reference Name	Description
[Ref1]	BMS eCom Domain Common Library Release 3.1	The documented design of components that are used in multiple messages within the eCom domain.
[Ref2]	BMS Shared Common Library Release 3.1	The documented design of components that are used in both the eCom domain and GDSN.
[Ref3]	BRAD Upstream Standards - Demand & Supply Signals 0.1.0	
[Ref4]	Replenishment – Business Requirement Document 1.0.0	

1.5. Acknowledgements

1.5.1. Work Group

Function	Name	Company / organisation
Co-chair	Rossner (Pottier), Natascha	GS1 France
Co-chair	Schmidt, Tom Eric	August Storck KG
Member	Bemrose, Jonathan	R&R Ice Cream
Member	Bodemer, Petra	dm-drogerie markt GmbH + Co. KG
Member	Boikanyo, Rebone	GS1 South Africa / Consumer Goods Council of South Africa
Member	Canada, ON	M3B 3L1
Member	Carlson, Jim	General Mills, Inc.
Member	Chresta, Richard	GS1 Switzerland
Member	Cook, Don	Wal-Mart Stores, Inc.
Member	Cox, Marc	Philips Electronics N.V.
Member	Darnell, David	Systrends
Member	De Flou, Nele	GS1 Belgium & Luxembourg
Member	Dicks, Arne	GS1 Germany
Member	Duvinger, Karina	GS1 Sweden
Member	Foerderer, Klaus	GS1 Germany
Member	Gathmann, Stefan	GS1 Ireland
Member	Grangard, Anders	GS1 Global Office
Member	Harpell, Eileen	GS1 Community Room Staff
Member	Herregodts, Kurt	GS1 Belgium & Luxembourg
Member	Kempkes, Fred	Unilever N.V.
Member	Kernan, Brendan	GS1 Ireland
Member	Kidd, Robin	Nestle
Member	Krid, Anne-Claire	GS1 France
Member	Lanoue, Tom	General Mills, Inc.
Member	Laur, Rita	GS1 Canada
Member	Lenman, Mia	GS1 Sweden
Member	Lerch, Hanjoerg	METRO Group
Member	Moberg, Dale	Axway
Member	Montes de Oca, Alejandra	GS1 Mexico
Member	Ng, Ella	GS1 Australia
Member	Peelen, Esther	GS1 Netherlands
Member	Pelekies, Andreas	GS1 Germany
Member	Perrier, Patricia	GS1 France

Function	Name	Company / organisation
Member	Przybilla, Christian	GS1 Germany
Member	Pujol, Xavier	GS1 Spain
Member	Racek, Greg	Wal-Mart Stores, Inc.
Member	Repetto, Mirko	GS1 Italy
Member	Robba, Steven	1WorldSync Holdings, Inc.
Member	Rosell, Pere	GS1 Spain
Member	Rosenberg, Steven	GS1 US
Member	Schmid, Sue	GS1 Australia
Member	Schneider, Christian	GS1 Switzerland
Member	Sehorz, Eugen	GS1 Austria
Member	Sharma, Vishal	General Mills, Inc.
Member	Shimazaki, Ayako	GS1 Japan
Member	Sion, Emilie	GS1 France
Member	Souza, Nadia	GS1 Brasil
Member	Strand, Roman	GS1 Germany
Member	Tan, Milton	GS1 Malaysia
Member	Tompsett, Simon	Waitrose
Member	Trelle, Ute	1WorldSync Holdings, Inc.
Member	Tse, Steve	GS1 Hong Kong
Member	Tyson, Betty	Knouse Foods Cooperative, Inc
Member	Van den Bergh, Senne	GS1 Belgium & Luxembourg
Member	Van der Eijk, Pim	OASIS - Sonnenglanz Consulting BV
Member	Veldhuis, Saskia	Procter & Gamble Co.
Member	Welch, Shan	GS1 UK
Member	Westerkamp, Jan	GS1 Netherlands
Member	Wilson, Mary	GS1 US
Member	Windsperger, Bekki	Best Buy Co., Inc.
Member	Yang, Shaopeng	GS1 China
Member	Yusdiar, Dani	GS1 Indonesia
Member	Zwanziger, Greg	SUPERVALU

1.5.2. Development Team Members

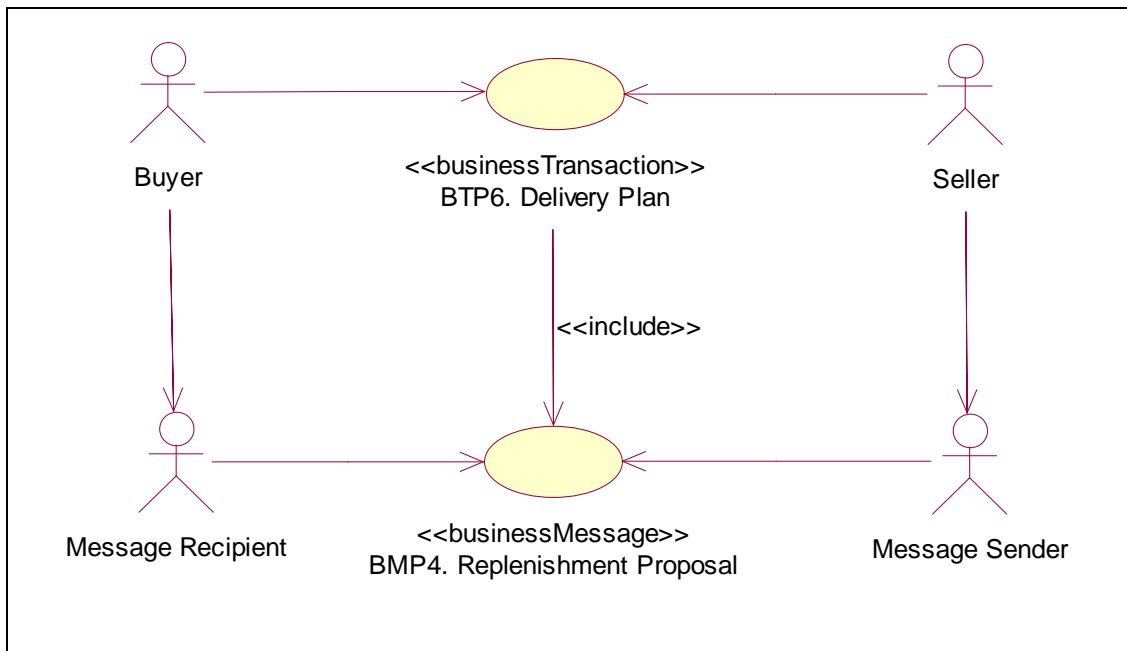| Function	Name	Organisation
GSMP Process Lead	Jean-Luc Champion	GS1 Global Office
Standards Content Lead	Coen Janssen	GS1 Global Office
Technical Development Lead	Ewa Iwicka	GS1 Global Office
Peer Review	Eric Kauz	GS1 Global Office

2. Business Context

Context Category	Value(s)
Industry	All
Geopolitical	All
Product	All
Process	Plan
System Capabilities	GS1 System
Official Constraints	None

3. Business Transaction View

3.1. Business Transaction – Delivery Plan

Use Case Diagram

Figure 3-1 Use Case Diagram: Business Transaction

Use Case Description

Use Case ID	BTP6
Use Case Name	Delivery Plan
Use Case Description	The Delivery Plan is sent by the supplier and communicates to the buyer the quantities of which items will be delivered when & where by the supplier.
Actors (Goal)	Seller: To send the Delivery Plan. Buyer: To receive the Delivery Plan.

Performance Goals	
Preconditions	Delivery Plan: CALCULATED
Post conditions	Delivery Plan: COMMUNICATED
Scenario	**Begins when:** Seller has calculated the delivery plan. **Continues with**:

Step #	Actor	Activity Step
1.	Seller	Sends Replenishment Proposal message to the Buyer.
2.	Buyer	Receives Replenishment Proposal message

Ends when: Buyer receives Replenishment Proposal message

Alternative Scenario	**Not Applicable**
Guidelines	**Not Applicable**

Activity Diagram(s)

Not Applicable
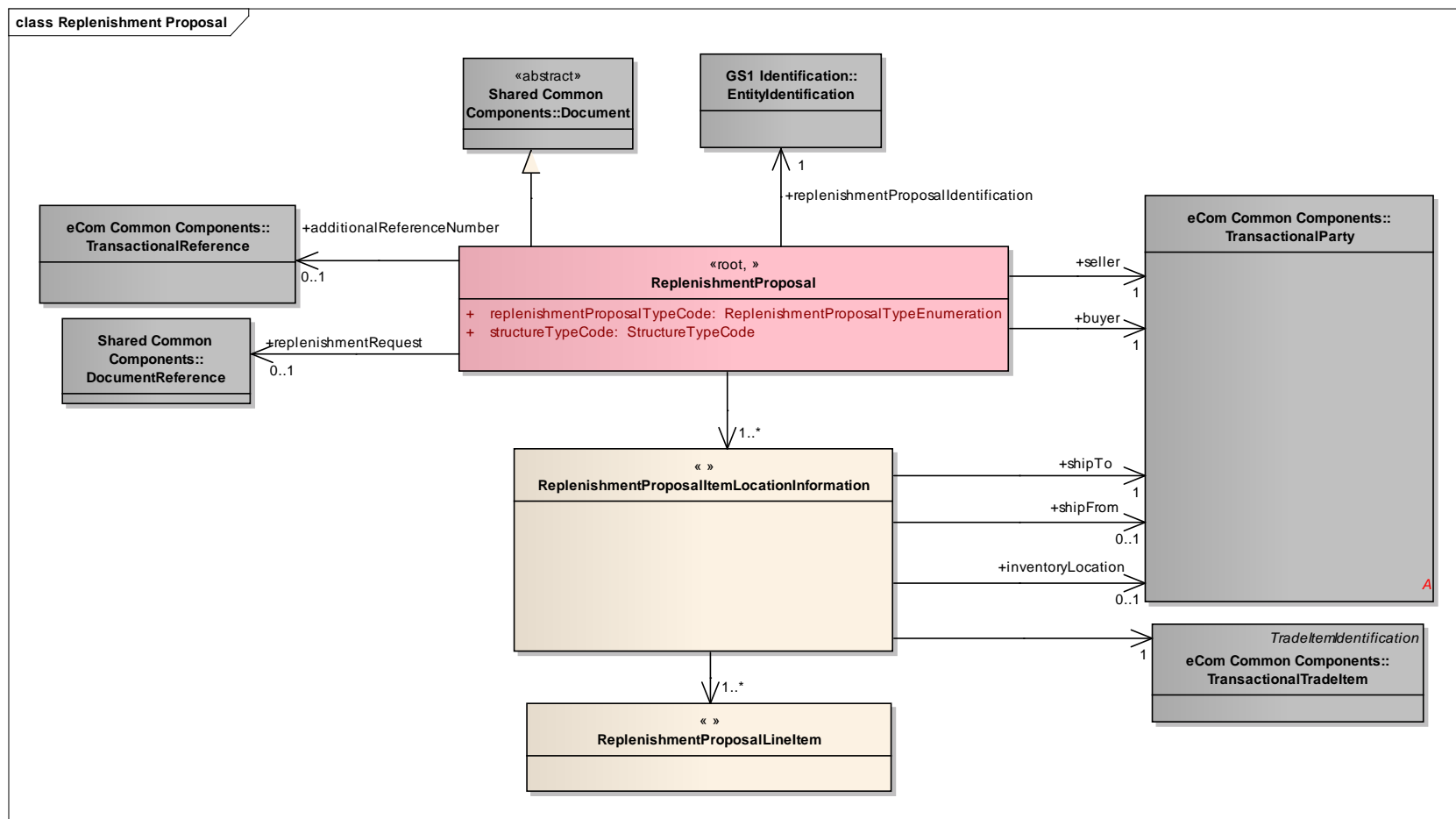
Sequence Diagram(s)

Not Applicable

4. Business Information View

✅ **Note:** Reference Shared Common Library Business Message (BMS) Release 3.0.0 and eCom Domain Common Library Business Message (BMS) Release 3.0.0 for all common information.
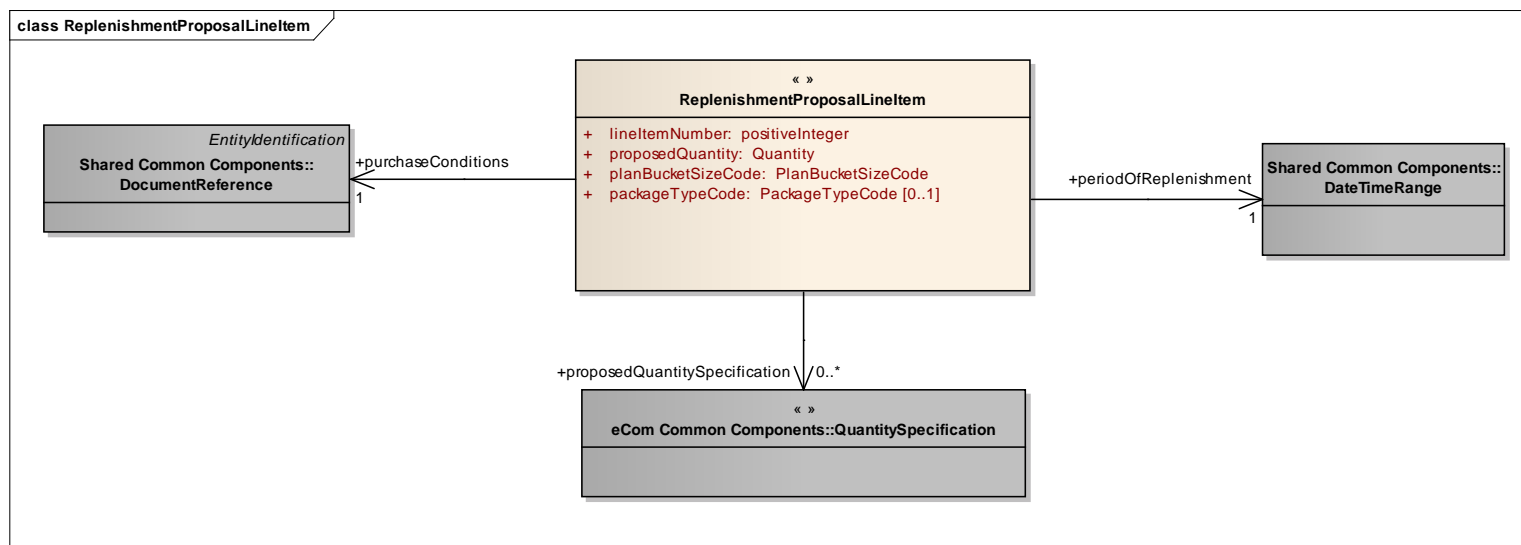
4.1. Replenishment Proposal

Class Diagram

GDD Report

Content	Attribute / Role	Datatype /Secondary class	Multiplicity	Definition	Requirements
ReplenishmentProposal				Contains the seller delivery or production plan for the buyer for given trade items and locations for specific time periods.	
Association	replenishmentProposalIdentification	EntityIdentification	1..1	Unique replenishment proposal number assigned by supplying party.	
Association	seller	TransactionalParty	1..1	Contains the identification of the party that is selling the goods.	
Association	buyer	TransactionalParty	1..1	Contains the identification of the party that is buying the goods.	
Association		ReplenishmentProposalItemLocationInformation	1..*	Contains the Replenment Proposal for given trade items and locations for specific time periods.	
Association	additionalReferenceNumber	TransactionalReference	0..1	Assigned by buying party. Includes date and reference number.	replaced associated class, was TypedEntityIdentification
Association	replenishmentRequest	DocumentReference	0..1	Reference to the replenishment request on which the proposal has been based.	
Generalization		Document		Basic information about the content of the message including version number, creation date and time.	
Attribute	replenishmentProposalTypeCode	ReplenishmentProposalTypeEnumeration	1..1	Contains the type of replenishment plan. E.g. production or delivery.	renamed from replenishmentProposalDocumentTypeCode
Attribute	structureTypeCode	StructureTypeCode	1..1	Contains the type of grouping and sequence of the business document.	
ReplenishmentProposalItemLocationInformation				Contains the Replenishment Proposal for a given trade item and location for specific time periods.	
Association		TransactionalTradeItem	1..1	Contains the identification of the trade item that will be delivered.	
Association	shipTo	TransactionalParty	1..1	Contains the identification of the location whereto the required goods will be delivered.	

Content	Attribute / Role	Datatype /Secondary class	Multiplicity	Definition	Requirements
Association	inventoryLocation	TransactionalParty	0..1	Identification of the physical place at the receiving side where the items are to be stored.	
Association	shipFrom	TransactionalParty	0..1	Contains the identification of the location wherefrom the required goods will be delivered.	
Association		ReplenishmentProposalLineItem	1..*	The planned delivery quantities per time bucket.	

4.2.   Replenishment Proposal Line Item

Class Diagram

GDD Report

Content	Attribute / Role	Datatype /Secondary class	Multiplicity	Definition	Requirements
ReplenishmentProposalLineItem				Contains the planned delivery quantities per time bucket.	

Content	Attribute / Role	Datatype /Secondary class	Multiplicity	Definition	Requirements
Association	periodOfReplenishment	DateTimeRange	1..1	Contains the start and end dates and optionally start and end times of the replenishment period.	
Association	proposedQuantitySpecification	QuantitySpecification	0..*	Contains additional quantity information for the time bucket. Example: In Transit, Produced.	
Association	purchaseConditions	DocumentReference	1..1	Contains a reference to the commercial agreement under which the goods are supplied.	
Attribute	lineItemNumber	positiveInteger	1..1	Provides the line number associated to the Replenishment Proposal Line Item.	
Attribute	proposedQuantity	Quantity	1..1	The number of units planned to be replenished.	
Attribute	planBucketSizeCode	PlanBucketSizeCode	1..1	Code describing the size of the planning period.	
Attribute	packageTypeCode	PackageTypeCode	0..1	Code specifying the kind of logistic unit in which the goods will be delivered.	

4.3. Code Lists

4.3.1. ReplenishmentProposalTypeEnumeration

Code Value	Code Name	Code Definition
ACTUAL_PRODUCTION	Actual production	Document contains quantities of goods manufactured in previous periods.
DELIVERY_PLAN	Delivery plan	Not Available
PRODUCTION_PLAN	Production plan	Not Available

Note: Reference Shared Common Library Business Message (BMS) Release 3.0.0 and eCom Domain Common Library Business Message (BMS) Release 3.0.0 for all Code Lists

Class	Codelist	Referenced in
ReplenishmentProposal	StructureTypeCode	eCom Domain Common Library Business Message (BMS) Release 3.0.0
ReplenishmentProposal LineItem	PlanBucketSizeCode	Shared Common Library Business Message (BMS) Release 3.0.0
ReplenishmentProposal LineItem	PackageTypeDescrip tionCode	eCom Domain Common Library Business Message (BMS) Release 3.0.0

5. Business Message Example

The following is an example of a delivery plan message. The message is send out on January 11th at 11 AM. The message is identified with the unique identifier 20050014. The content owner is the sending party, in this case the material supplier (Seller 8812345678901).

The delivery plan is sent by the material supplier (Seller 8812345678901) to the manufacturer (Buyer 8712345678911).

For informational purposes the material supplier includes the name of the material requirements planner of the manufacturer (Mr. Kramer).

The delivery plan is for one delivery site (Ship to 8712345670001), one supplier site (Ship from 8712345678960). For one of the products there is a specific storage location specified (Inventory location 8712345670077). It has an additional seller assigned id (ROTTERDAM-01).

The delivery plan contains two items: Item A (GTIN 08712345678901) and item B (GTIN 08712345678920 and buyer item number AB77770004). Item A has two planned deliveries:

- on February 11th of 1000 units of which 500 units are in transit.
- on February 12th of 200 units.

The contract used for this product (2004000012) issued by the material supplier. Within the contract line 23 refers to this item.

Item B has one planned delivery on February 9th of 500 units. This needs to be delivered between 8 AM and 9 AM.

The contract used for this product (2004000012) issued by the material supplier. Within the contract line 25 refers to this item.

ReplenishmentProposal	
- creationDateTime	2005-01-11T11:00:00
- documentStatusCode	ORIGINAL
- replenishmentProposalTypeCode	DELIVERY_PLAN
- structureType	LOCATION_BY_ITEM
EntityIdentification (+replenishmentProposalIdentification)	
- entityIdentification	20050014
PartyIdentification (+contentOwner)	
- gln	8812345678901
TransactionalParty(+seller)	
- gln	8812345678901
TransactionalParty (+buyer)	
- gln	8712345678911
Contact	
- personName	KRAMER
- responsibility	Material requirements planner
ReplenishmentProposalItemLocationInformation *1	
TransactionalParty (+shipTo)	
- gln	8712345670001
TransactionalParty (+shipFrom)	
- gln	8712345678960
TransactionalTradeItem	
- gtin	08712345678901
ReplenishmentProposalLineItem *1.1	
- lineItemNumber	1
- planBucketSizeCode	DAY
- proposedQuantity (value, unitOfMeasure)	1000
DateTimeRange (+requirementsPeriod)	
- beginDate	2005-02-11
- endDate	2005-02-11
DocumentReference (+purchaseConditions)	
- lineItemNumber	23
EntityIdentification	
- entityIdentification	2004000012
TransactionalParty (+contentOwner)	

ReplenishmentProposal	
- gln	8812345678901
QuantitySpecification (+proposedQuantitySpecification)	
- quantitySpecificationType	IN_TRANSIT
- specificQuantity (value, unitOfMeasure)	500
ReplenishmentProposalLineItem *1.2	
- lineItemNumber	2
- planBucketSizeCode	DAY
- proposedQuantity (value, unitOfMeasure)	200
DateTimeRange (+requirementsPeriod)	
- beginDate	2005-02-12
- endDate	2005-02-12
DocumentReference (+purchaseConditions)	
- entityIdentification	2004000012
- lineItemNumber	2
PartyIdentification (+contentOwner)	
- gln	8812345678901
ReplenishmentProposalItemLocationInformation *2	
TransactionalParty (+shipTo)	
- gln	8712345670001
TransactionalParty (+shipFrom)	
- gln	8712345678960
TransactionalParty (+InventoryLocation)	
- gln	8712345670077
- additionalPartyIdentification	ROTTERDAM-01 (SELLER_ASSIGNED_IDENTIFIER_FOR_A_PARTY)
TransactionalTradeItem	
- gtin	08712345678920
- additionalTradeItemIdentification	AB77770004 (BUYER_ASSIGNED)
ReplenishmentProposalLineItem *2.1	
- lineItemNumber	3
- planBucketSizeCode	DAY
- proposedQuantity (value, unitOfMeasure)	500
DateTimeRange (+requirementsPeriod)	
- beginDate	2005-02-09T08:00:00
- endDate	2005-02-09T09:00:00
DocumentReference (+purchaseConditions)	
- entityIdentification	2004000012

ReplenishmentProposal	
- lineItemNumber	25
PartyIdentification (+contentOwner)	
- gln	8812345678901

6.   Implementation Considerations

Not Applicable

7.   Appendices

Not Applicable

8.   Summary of Changes

8.1.   BMS Release 3.0

Change	BMS Version	Associated CR
▪ Updated to reflect changes in modelling	Issue 3.0.0	Not Applicable
For Publication ▪ Changed Status to Approved ▪ Removed year reference in footer copyright statement ▪ Replaced Section 10 with updated AG Principles	Issue 3.0.0	Not Applicable

8.2.   BMS Release 3.1

No work requests. Indirect changes due to upgrade to new Shared and eCom Common libraries.

All contents copyright © GS1