

APAC Procurement Business Module

Subcontracting Procedure Training Document



Local Group Companies

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<Confidential>



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Overview

Subcontracting is the process in which a material or product consisting of certain components is procured from a vendor, whereby these components are provided by the ordering enterprise, either directly or through a third party (another vendor).

The material the subcontractor is to manufacture can be requested in a purchase requisition and ordered via a purchase order or scheduling agreement item of the category **L** (subcontracting). Item category **L** enables the enterprise to create sub-items covering the components to be provided to the subcontractor.

The individual component items can be:

- Entered manually, or
- Generated via the BOM explosion, if a BOM exists for the ordered material.

For a purchase requisition for subcontracting with a source to be generated from within materials planning, the following prerequisites must be satisfied:

- A special procurement key for subcontracting must be set in the material master record (MRP View 2).
- At least one source of supply (subcontracting info record or outline purchase agreement with subcontracting item) must exist.
- The *MRP-Relevant* indicator must have been set for a source of supply in the source list. If several sources of supply exist, a quota arrangement with the special procurement type L for subcontracting can be created.
- A BOM containing the components to be provided must exist.

If a requirement arises for a material, a requisition with the item category **L** (subcontracting) or a planned order with the special procurement key "Subcontracting" is generated during the planning run. The item category **L** is assigned to the planned order when it is converted into a purchase requisition.

In the planning run, the system explodes the BOM and generates dependent requirements for the components. The dependent requirements are included in the next requirements calculation as specially designated dependent requirements (MRP element *SubReq*)

To achieve targeted control of the provision of components to the subcontractor, the latter can be defined as an MRP *area for subcontractor*. An MRP area is an organizational unit for which separate materials planning can be carried out. In the case of requirement under-coverage (shortage situation: not enough stock to cover the requirement), a stock transfer reservation is generated for the components in the MRP area. A reservation is created in the plant.

If a separate MRP area has not been set up for the related subcontractor, the enterprise can determine whether the components needed for the subcontracting item are available in the vendor's warehouse.

In the *Subcontracting Stocks per Vendor* transaction, the enterprise can also post the goods issue for the necessary components to be provided to the subcontractor, or create a delivery (outward delivery via shipping).

The goods receipt for the requested material is entered with reference to the subcontracting item. At the same time, consumption of the components is posted. It should be noted that the quantity of components actually needed to make the ordered product may differ from the quantity shown in the PO as provided for that purpose.

If an invoice is expected, it is likewise entered with reference to the purchase order. Subsequent adjustment can be made for an excess or under-consumption of subcontracting components.

Check stocks of materials provide to subcontractor:

SAP Menu → Logistics → Materials Management → Purchasing → Purchase Order → Reporting → SC Stocks per Vendor.

Subcontracting in Purchasing

A purchase requisition item for subcontracting can be created either manually or automatically from within requirements planning. If the components to be provided are already known in the requisition – either due to the BOM explosion or following manual entry – a dependent requirement is automatically generated for each component.

It is not necessary to specify the components to be provided in the purchase requisition. The components are not automatically included in the purchase requisition if a special procurement key for subcontracting has been defined in the material master record (MRP view 2) and if no BOM has been created for the material. If this material is subject to materials planning, the system creates a requisition item of the category L without the components to be provided being known. However, these components must be added when the requisition is converted into a PO at the latest.

It is possible to store conditions and enter vendor-dependent purchasing data for subcontracting in a subcontracting info record or in an outline purchase agreement (contract or scheduling agreement).

In an outline agreement, an item of category L is created for the material to be manufactured, without specification of the components to be provided to the subcontractor. The fact that the components should not be entered in the outline purchase agreements until a contract release order is created, ensures that the current BOM is always pulled. Similarly, in the case of a scheduling agreement, the components are pulled at the time the delivery schedule lines are created. For this reason, the use of a bill of material (BOM) is advisable in the case of outline agreements (contracts and scheduling agreements).

It can also be possible to utilize the source determination facility with source lists and/or quota arrangements in the subcontracting process if subcontracting info records or outline agreements have been created. In the quota arrangement, it is mandatory to enter the special procurement type L (subcontracting).

In connection with the subcontracting process in purchasing, it is necessary to note the following:

- If the PO or schedule line quantity is changed, the quantities of the components to be provided are changed proportionally provided that the *Fixed Quantity* indicator has not been set.
- If the delivery date is changed, only the date on which the components are required is recalculated; the components themselves are not re-determined from the BOM. If the components are to be re-determined, a new BOM explosion must be carried out.

Features of Procurement via Subcontracting

The item category L (subcontracting) determines that subcontracting components have to be provided for the manufacture of a material that is to be ordered. Information on other item-category-dependent controls is available in Customizing for purchasing under *External Representation of Item Categories*.

Noted that item categories cannot be changed or redefined.

The use of item category L has the following effects on a PO item:

- The PO item can be created with or without a material master record. If a PO item is created with material number, specification of an account assignment category is optional.

- The indicators for goods receipt and invoice receipt are set on the basis of the *Purchase Order Item Linked* indicator.
- The GR indicator cannot be changed. This means that a goods receipt must be posted against the purchase order. However, the IR indicator can be unset.
- The indicator for non-valuated goods receipt is not proposed; neither can it be set manually.

Noted the controls that are dependent on the item category have a higher priority than the corresponding controls based on the account assignment category.

Business Process Procedure

1. Creation of BOM Item

1.1. Access transaction by

Via Menu	Logistics → Production → Master Data → Bills of Material → Bill of Material → Material BOM → Create
Via Transaction Code	CS01

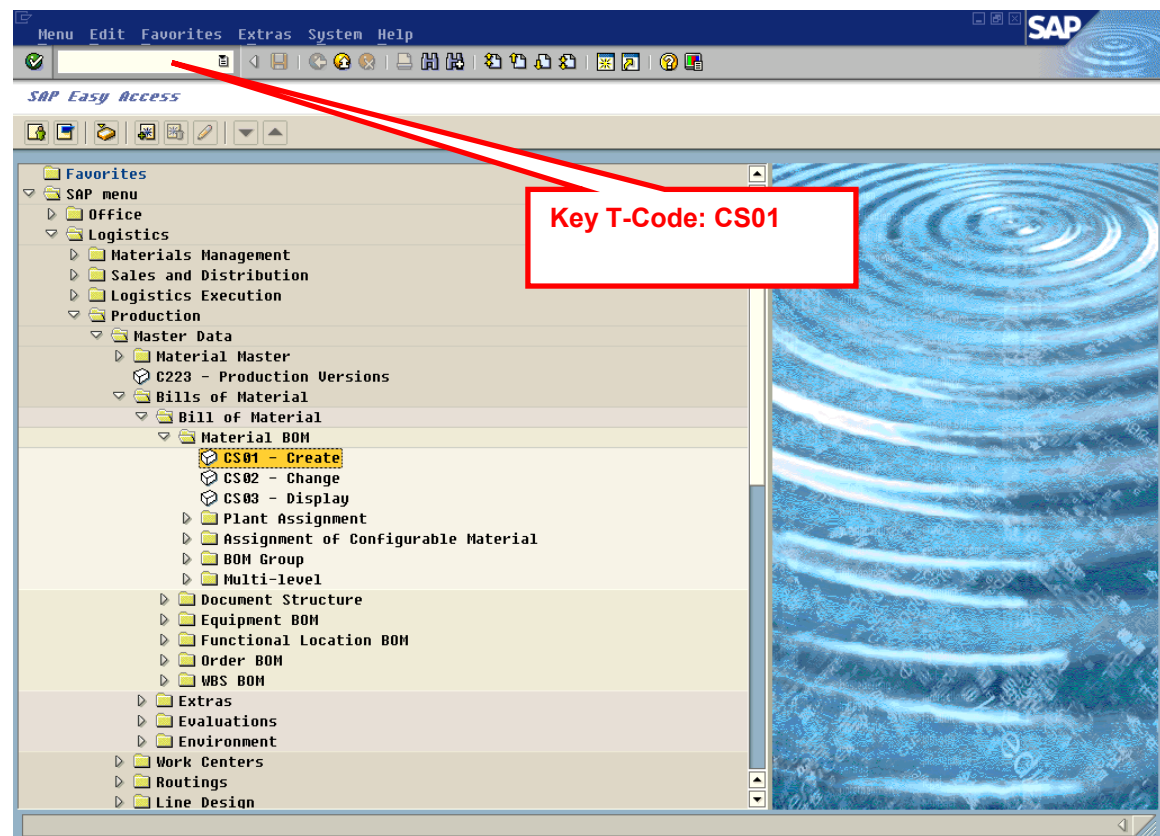
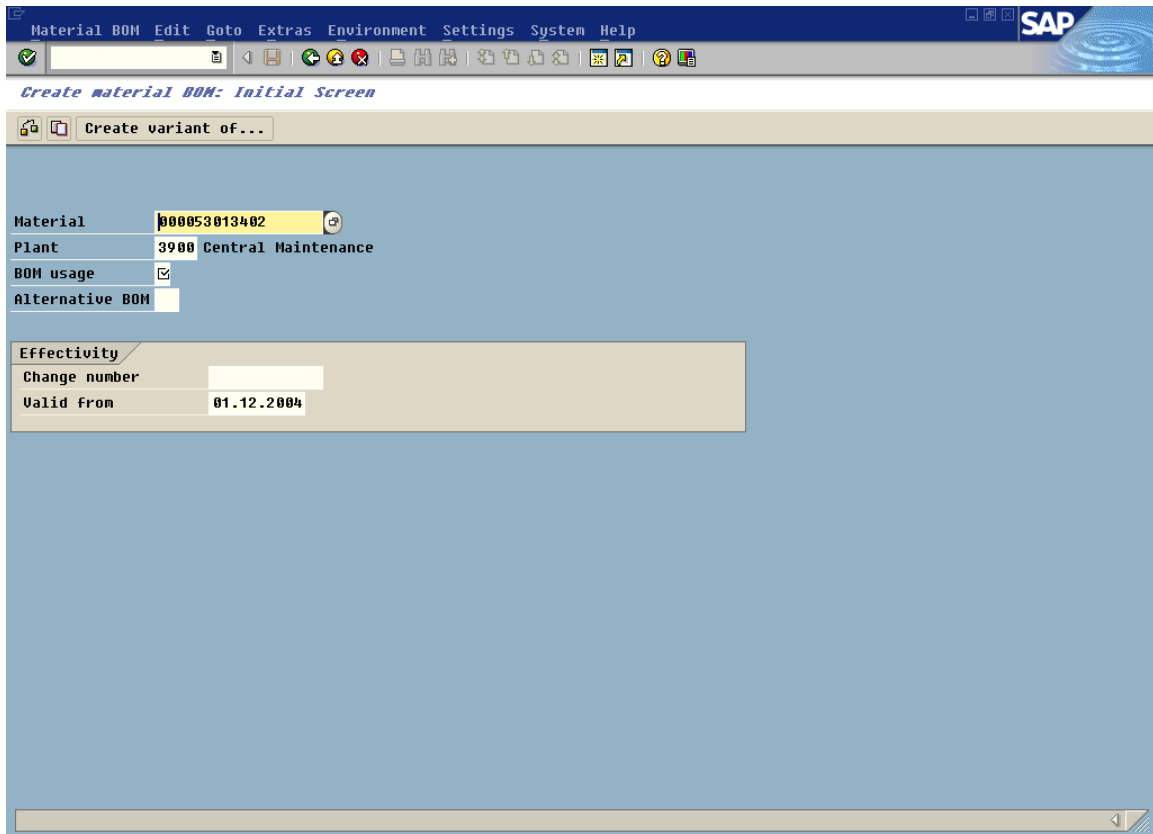


Fig-01

1.2. On “Create material BOM: Initial Screen” screen, fill in the data as below:



The screenshot shows the SAP 'Create material BOM: Initial Screen' interface. The title bar includes 'Material BOM Edit Goto Extras Environment Settings System Help' and the SAP logo. Below the title bar is a toolbar with various icons. The main area contains the following fields:

- Material:** 000053013402
- Plant:** 3900 Central Maintenance
- BOM usage:**
- Alternative BOM:**
- Effectivity:**
 - Change number:**
 - Valid from:** 01.12.2004

Fig-02

Field Name	Description	R/O/C/D	User Action and Values
Material	Alphanumeric key uniquely identifying the material	R	Enter the material number
Plant	Key uniquely identifying a plant	R	Enter the plant number
BOM usage	Key defines the area where a BOM can be used	R	Enter the BOM usage
Alternative BOM	Identifies one BOM in a BOM group	O	Enter the alternative BOM
Change number	Number used to uniquely identify a change master record	O	Enter the change number
Valid from	Specifies the start date for the validity period of an object	R	Enter the valid date
			Press “ENTER” which will lead to the General Item Overview

Legend: R = Required, O = Optional, C = Conditional, D = Display

1.3. On “Create material BOM: General Item Overview” screen, fill in the data as below:

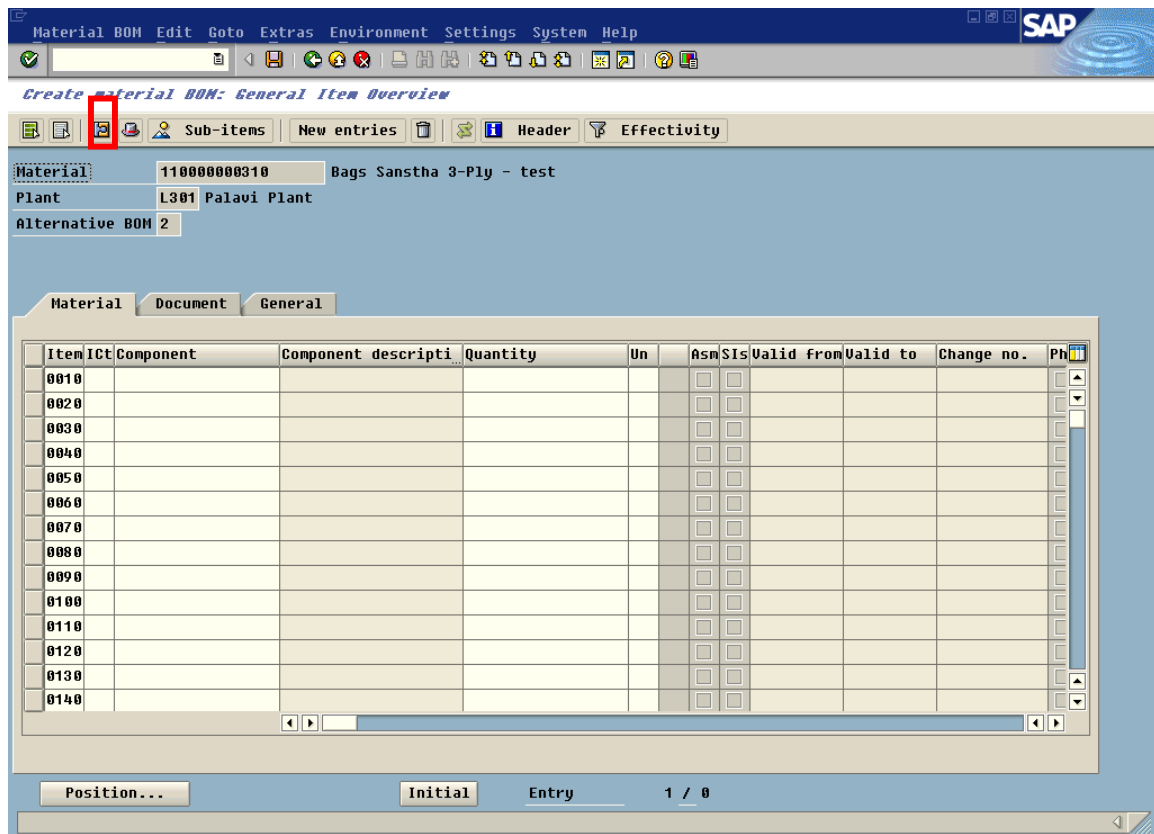



Fig-03

Field Name	Description	R/O/C/D	User Action and Values
Ict (Item category)	Categorization of the items in a BOM according to set criteria	R	Enter the item category
Component	Material number of the components that you enter, change or display as part of the BOM	R	Enter the component
Quantity	Quantity of the component	R	Enter the quantity
Un	The unit for the component quantity	R	Enter the unit
			Select the BOM item and then click on  icon to branch to the 'All Data' screen

Legend: R = Required, O = Optional, C = Conditional, D = Display

1.4. On “Create material BOM: Item: All data” screen, maintain information as specified in the table below:

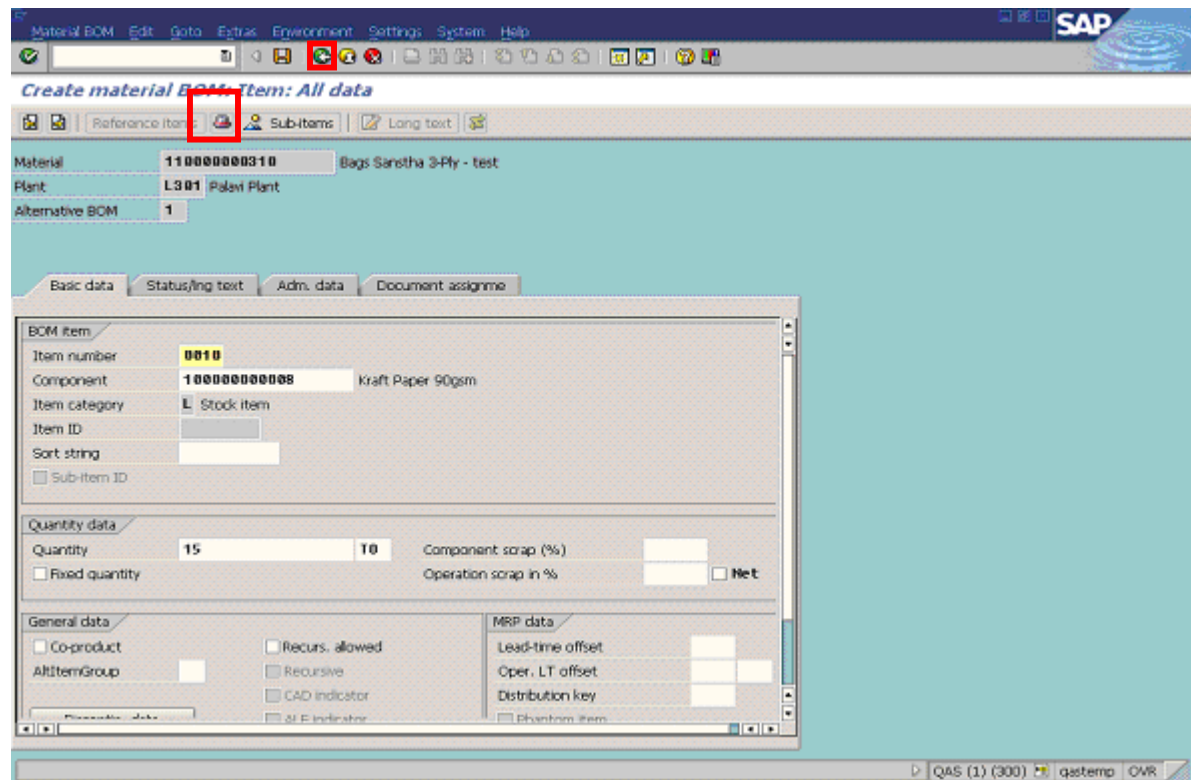


Fig-04

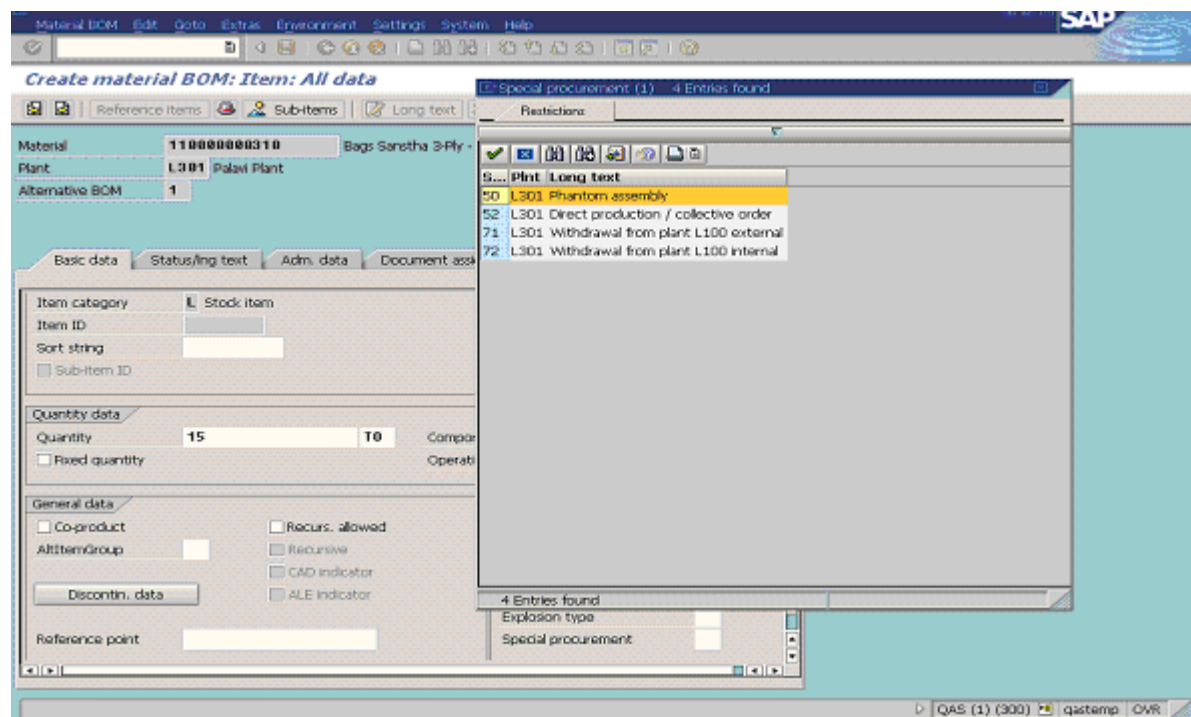
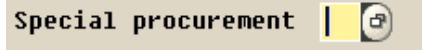




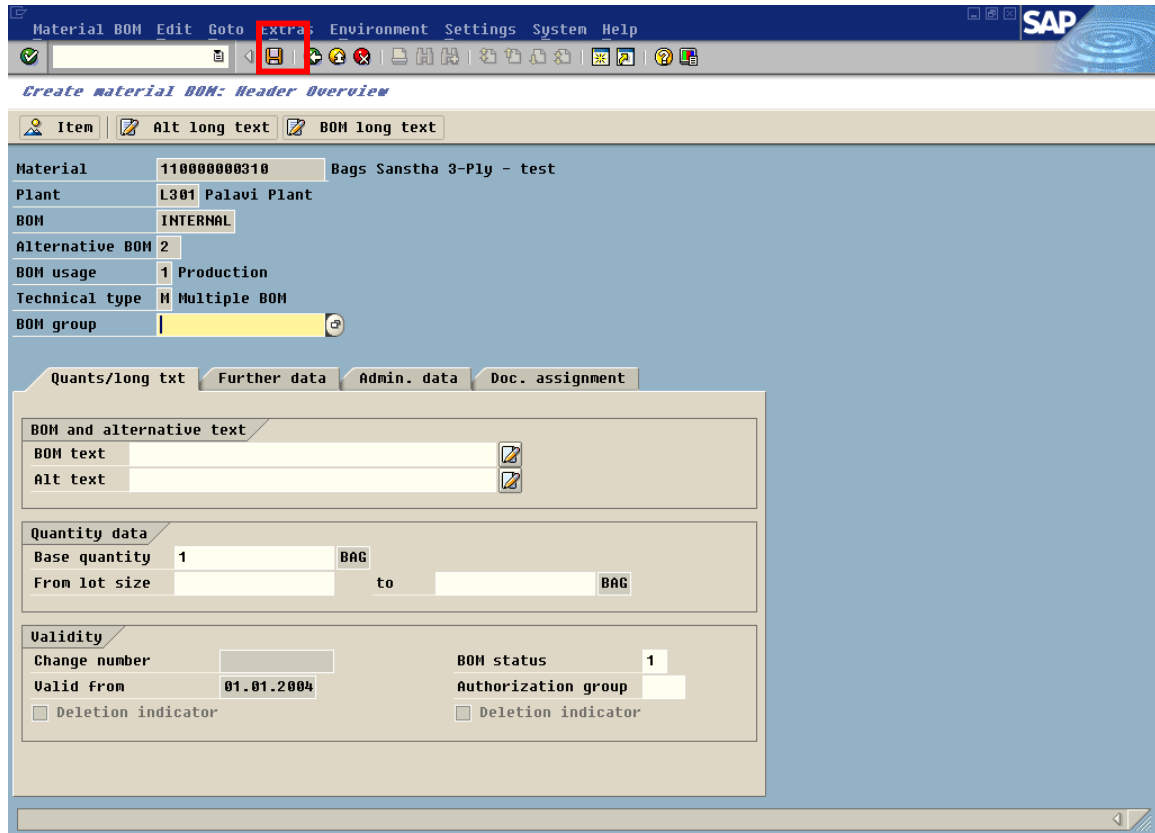
Fig-05

Field Name	Description	R/O/C/D	User Action and Values
			In case, the BOM component (raw material) is to be produced from

Field Name	Description	R/O/C/D	User Action and Values
			other plant or externally procured (from consignment stock, for instance), then click on the drop down menu  and select the special procurement type for BOM item
			Click on  icon to return to 'General Item Overview' screen. In case, it is required that the Alternative Long Text or 'BOM Text' are requested to be maintained, then click on  icon

Legend: R = Required, O = Optional, C = Conditional, D = Display

1.5. On “Create material BOM: Header Overview” screen, click on  icon to save this BOM item:



Material BOM Edit Goto **Extras** Environment Settings System Help

Create material BOM: Header Overview

Item Alt long text BOM long text

Material 110000000310 Bags Sanstha 3-Ply - test
 Plant L301 Palavi Plant
 BOM INTERNAL
 Alternative BOM 2
 BOM usage 1 Production
 Technical type H Multiple BOM
 BOM group

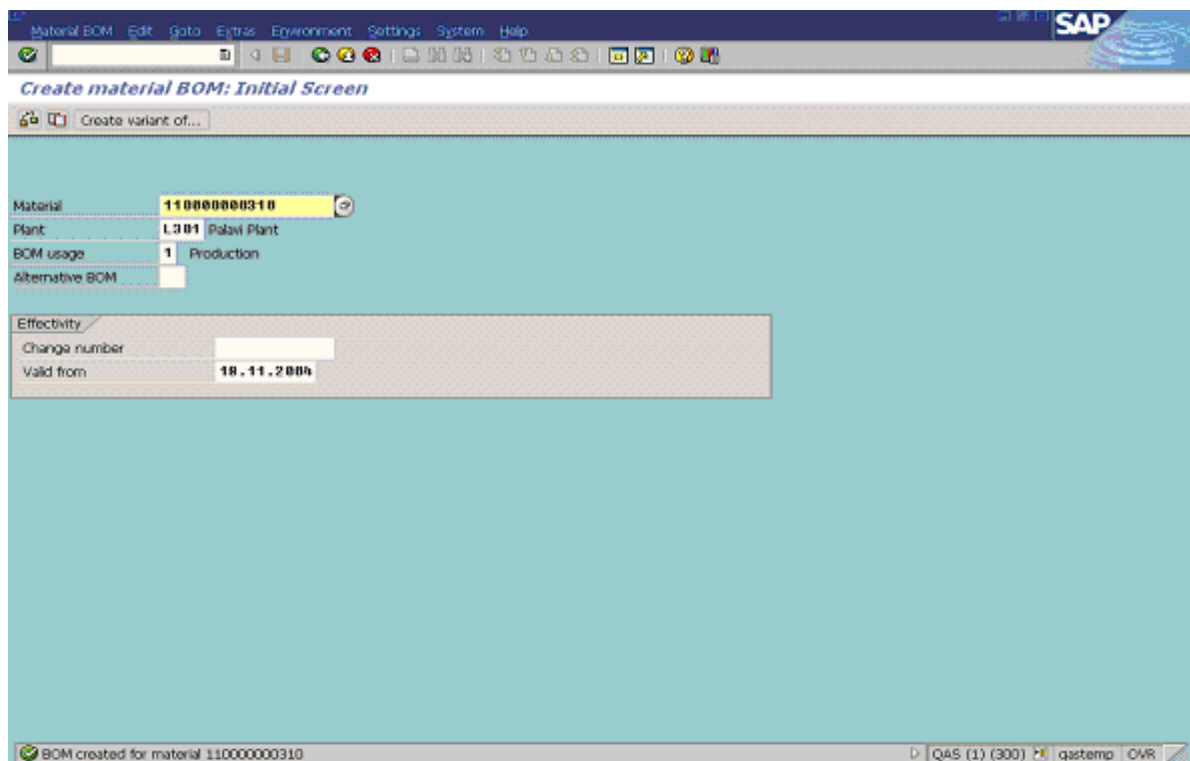
Quants/long txt Further data Admin. data Doc. assignment

BOM and alternative text
 BOM text
 Alt text

Quantity data
 Base quantity 1 BAG to BAG
 From lot size to

Validity
 Change number BOM status 1
 Valid from 01.01.2004 Authorization group
 Deletion indicator Deletion indicator

Fig-06



Material BOM Edit Goto Extras Environment Settings System Help

Create material BOM: Initial Screen

Create variant of...

Material 110000000310
 Plant L301 Palavi Plant
 BOM usage 1 Production
 Alternative BOM

Effectivity
 Change number
 Valid from 18.11.2004

BOM created for material 110000000310

QAS (1) (300) qstemp OVR

Fig-07

2. Maintenance of the Material Master Record for BOM Header

2.1. Access transaction by

Via Menu	Logistics → Materials Management → Material Master → Material → Change → Immediately
Via Transaction Code	MM02

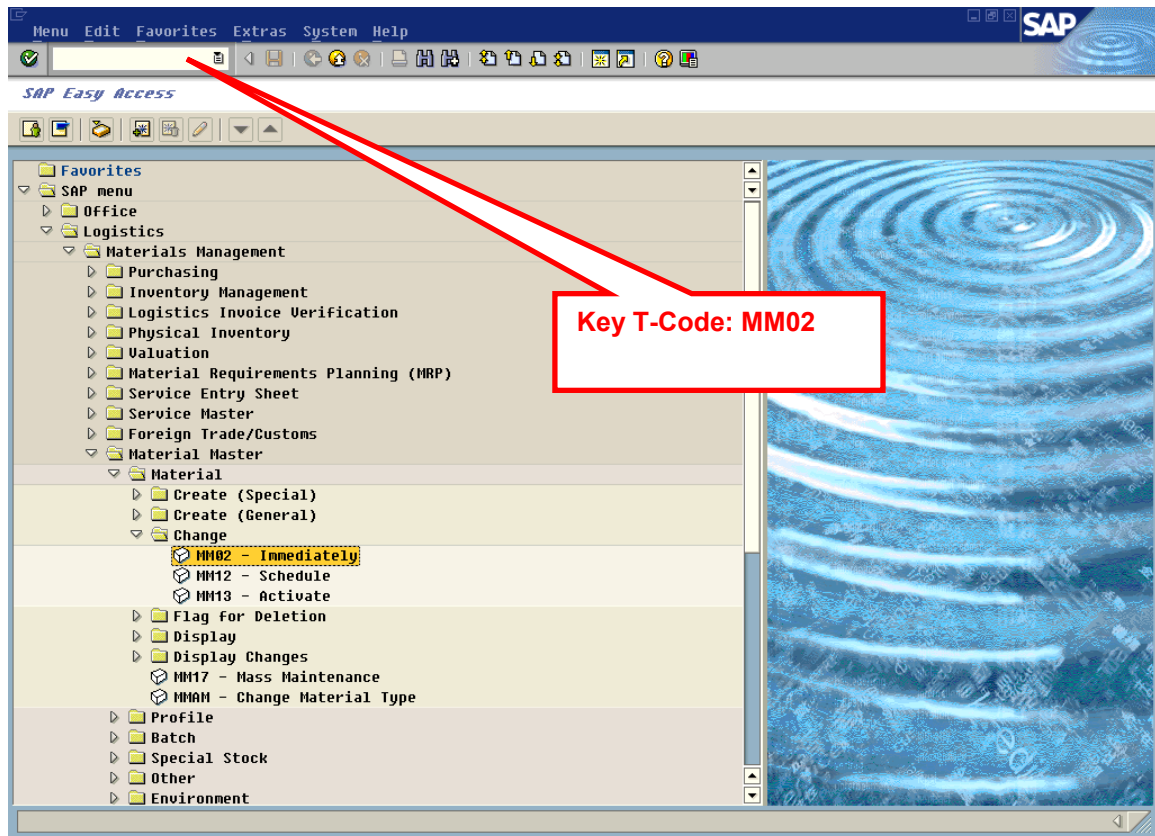


Fig-08

2.2. On “Change Material (Initial Screen)” screen, fill in the data as below:

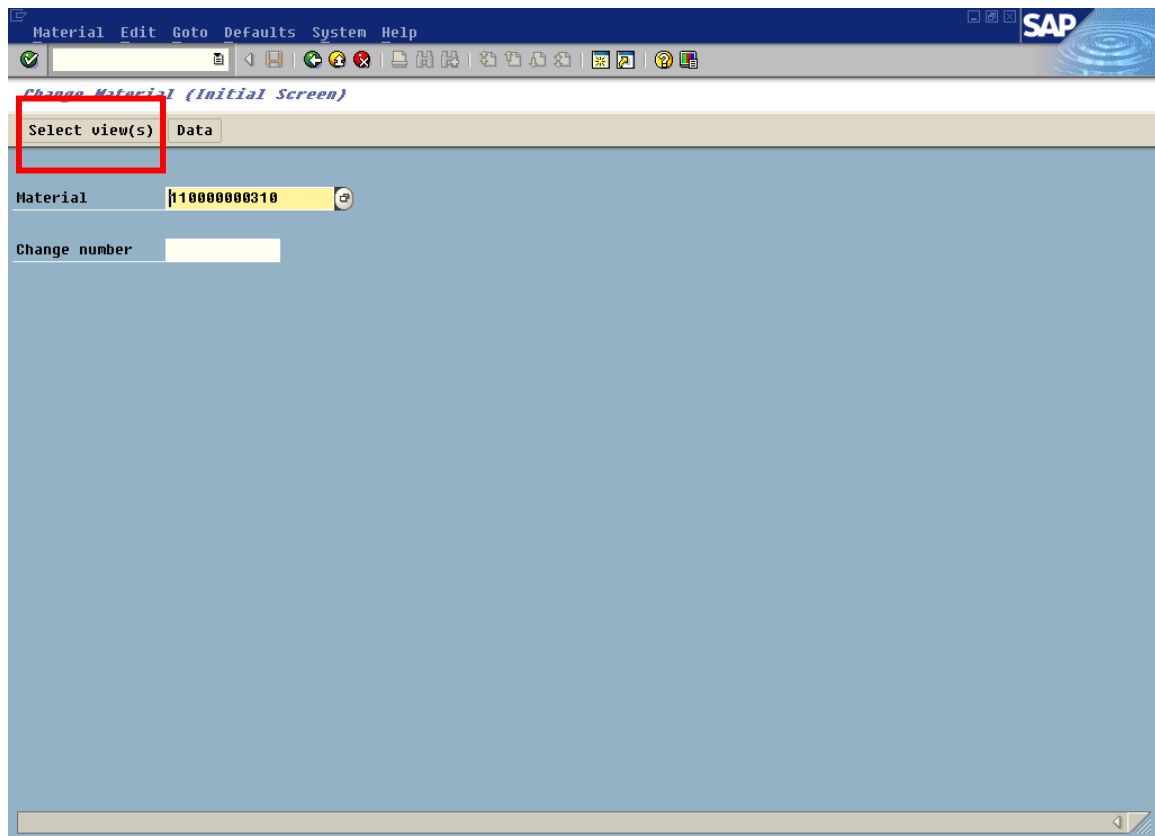


Fig-09

Field Name	Description	R/O/C/D	User Action and Values
Material	Alphanumeric key uniquely identifying the material	R	Enter the material number
			Press 'ENTER' or click on Select view(s) icon to select appropriate logical screen

Legend: R = Required, O = Optional, C = Conditional, D = Display

2.3. On the pop up screen, maintain information as specified in the table below:

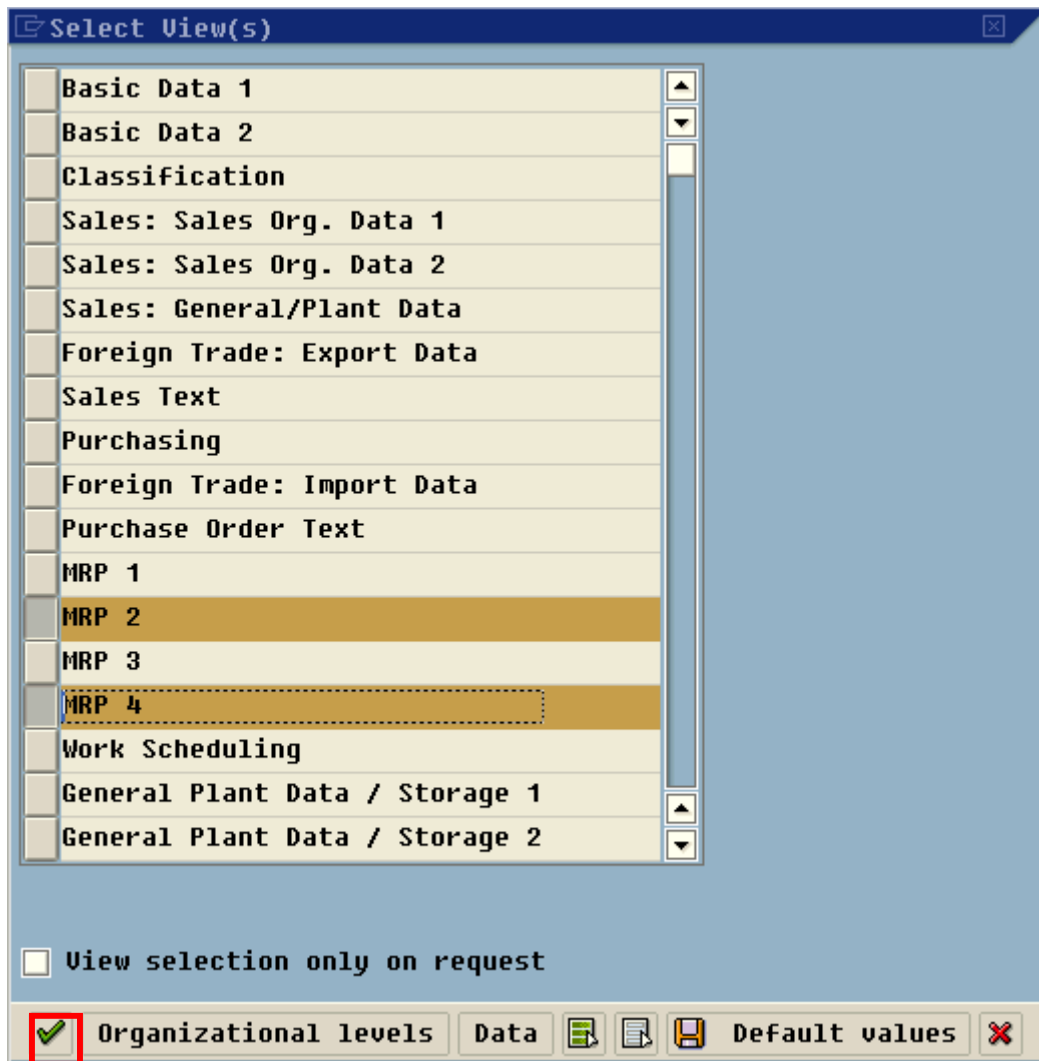



Fig-10

Field Name	Description	R/O/C/D	User Action and Values
			Select 'MRP 2' and 'MRP 4' and then click on  icon to access directly to the related view

Legend: R = Required, O = Optional, C = Conditional, D = Display

2.4. On the pop up screen, fill in the data as below:

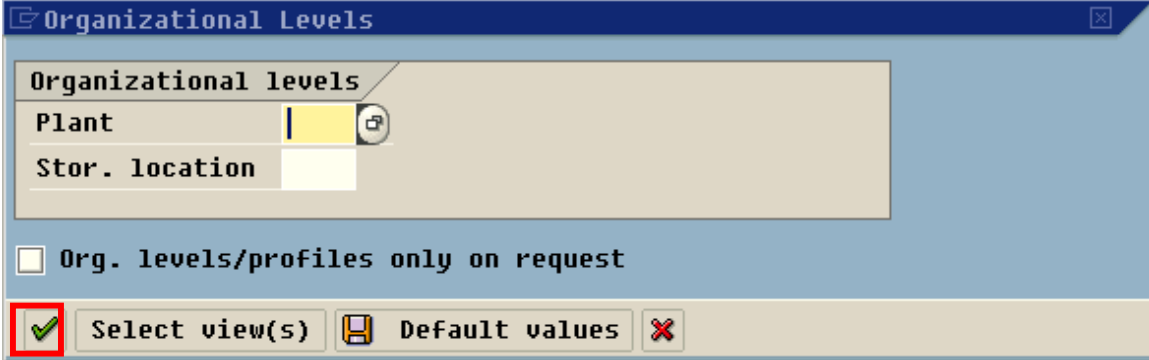



Fig-11

Field Name	Description	R/O/C/D	User Action and Values
Plant	Key uniquely identifying a plant	R	Enter the plant number
Stor. location	Number of the storage location at which the material is stored	O	Enter the storage location number
			Click on  icon

Legend: R = Required, O = Optional, C = Conditional, D = Display

2.5. On “Change Material XXXXXXXXXXXXX (SEA-Semi-Finished Product)” screen, fill in the data as below:

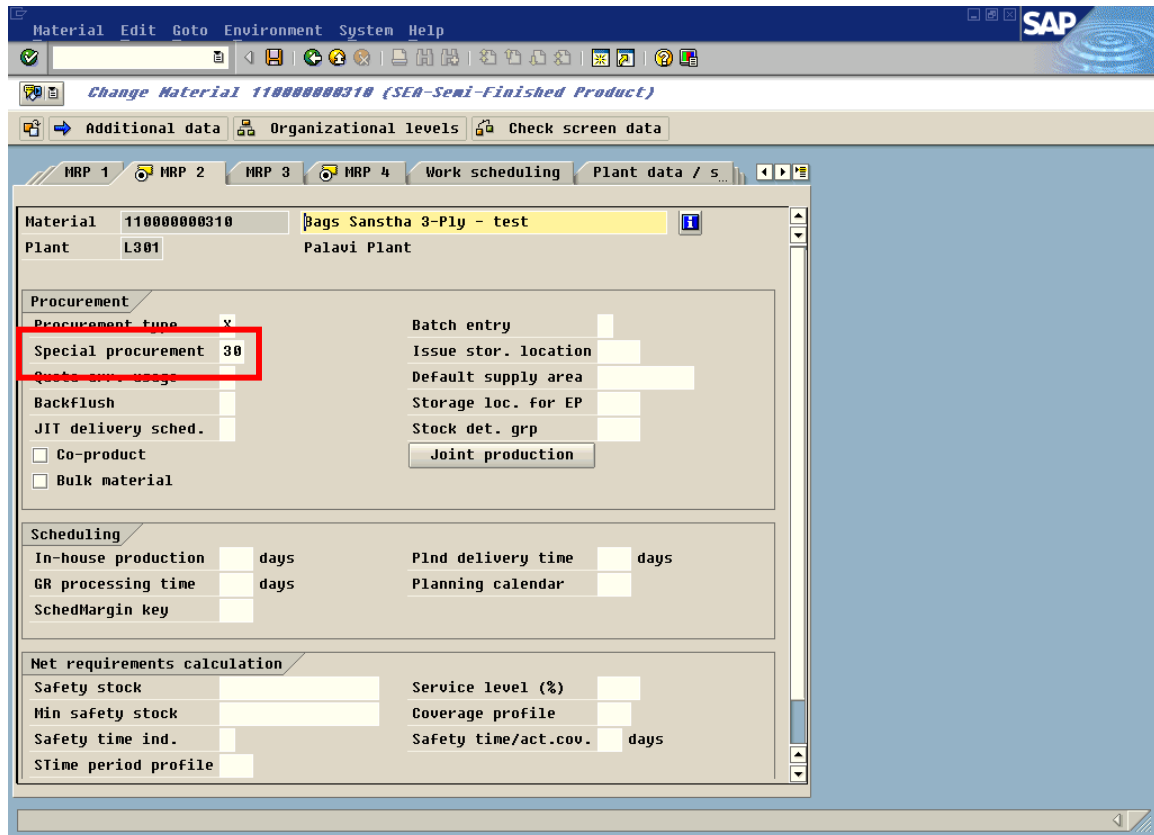


Fig-12

Field Name	Description	R/O/C/D	User Action and Values
Special procurement	Special procurement type	R	Select '30' to indicate that this is for subcontracting process
			Press 'ENTER' to continue branching to 'MRP 4' view of the material master

Legend: R = Required, O = Optional, C = Conditional, D = Display

2.6. On “Change Material XXXXXXXXXXXXX (SEA-Semi-Finished Product)” screen, fill in the data as below:

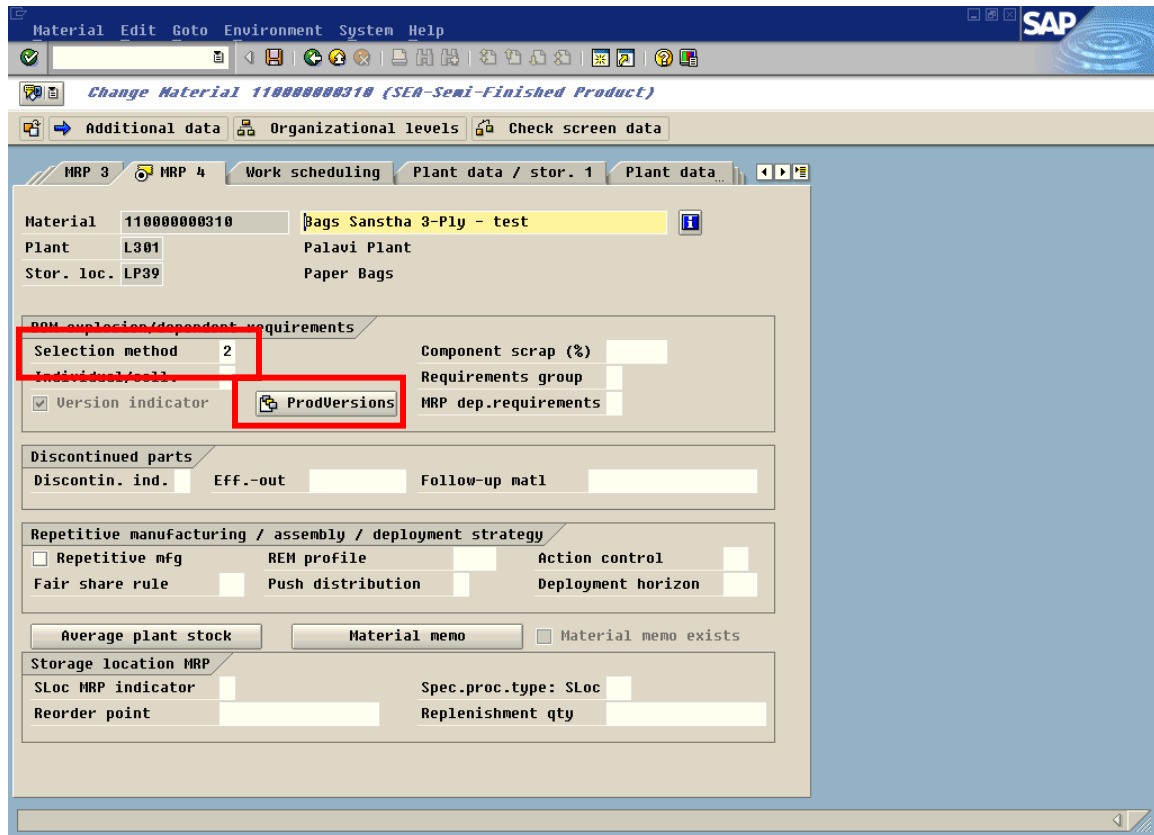

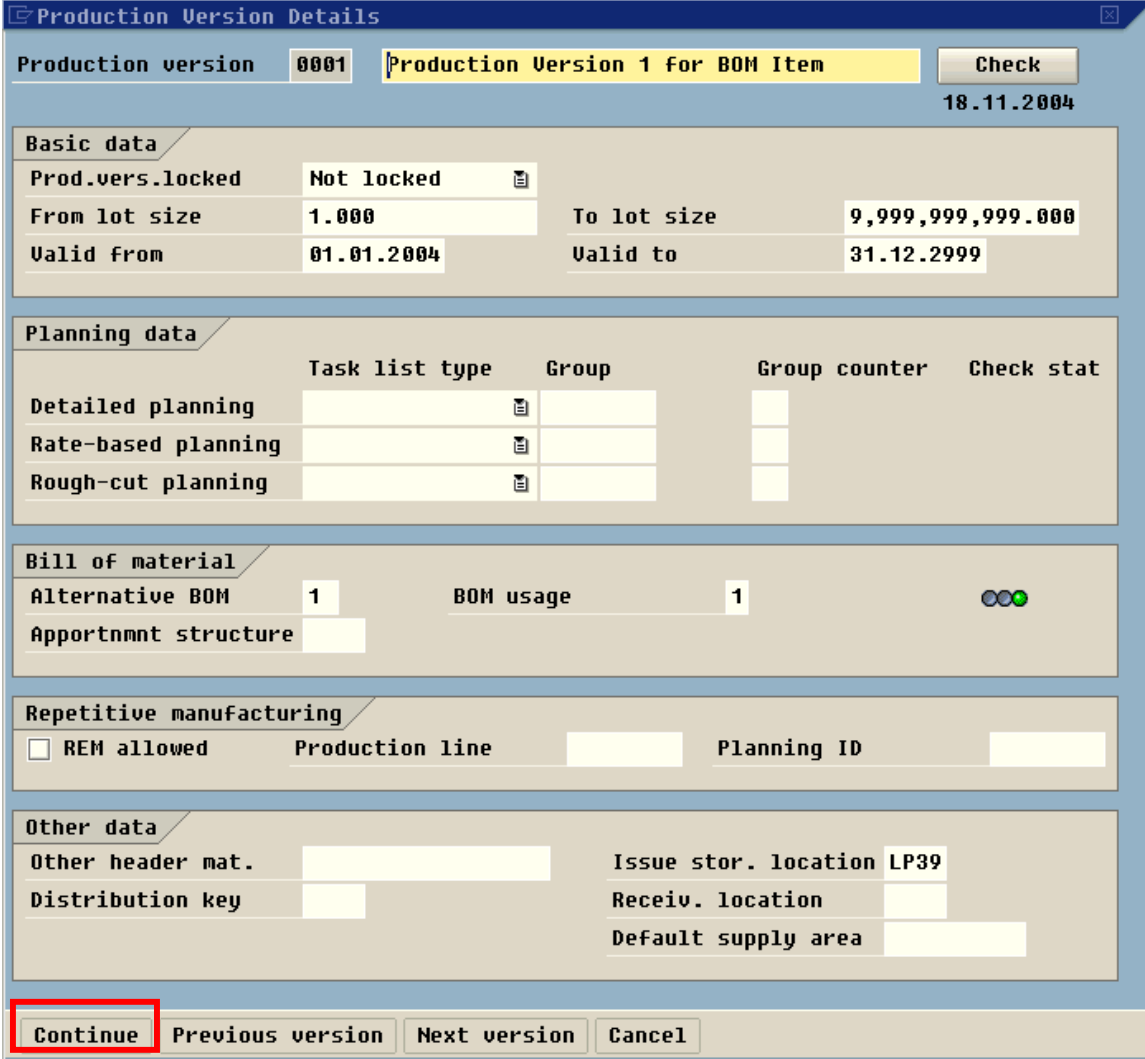


Fig-13

Field Name	Description	R/O/C/D	User Action and Values
Section method	Indicator determining the selection of the alternative BOM when requirements are exploded in material requirements planning	R	Select '2'
			Click on  ProdVersions icon

Legend: R = Required, O = Optional, C = Conditional, D = Display

2.8. On the pop up screen, maintain information as specified in the table below:



Production Version Details

Production version: 0001 | Production Version 1 for BOM Item | Check | 18.11.2004

Basic data

Prod.vers.locked: Not locked


From lot size: 1.000 | To lot size: 9,999,999,999.000

Valid from: 01.01.2004 | Valid to: 31.12.2999

Planning data

	Task list type	Group	Group counter	Check stat
Detailed planning				
Rate-based planning				
Rough-cut planning				

Bill of material

Alternative BOM: 1 | BOM usage: 1 | 

Apportnmt structure:

Repetitive manufacturing

REM allowed | Production line: | Planning ID:

Other data

Other header mat.: | Issue stor. location: LP39

Distribution key: | Receiv. location:


Default supply area:

Buttons: Continue (highlighted), Previous version, Next version, Cancel

Fig-15

Field Name	Description	R/O/C/D	User Action and Values
			Maintain all related information/data and then click on Continue icon twice to return to 'MRP 4' view of the material master record

Legend: R = Required, O = Optional, C = Conditional, D = Display

2.9. On “Change Material XXXXXXXXXXXX (SEA-Semi-Finished Product)” screen, click on  icon to update the change in both these MRP Views

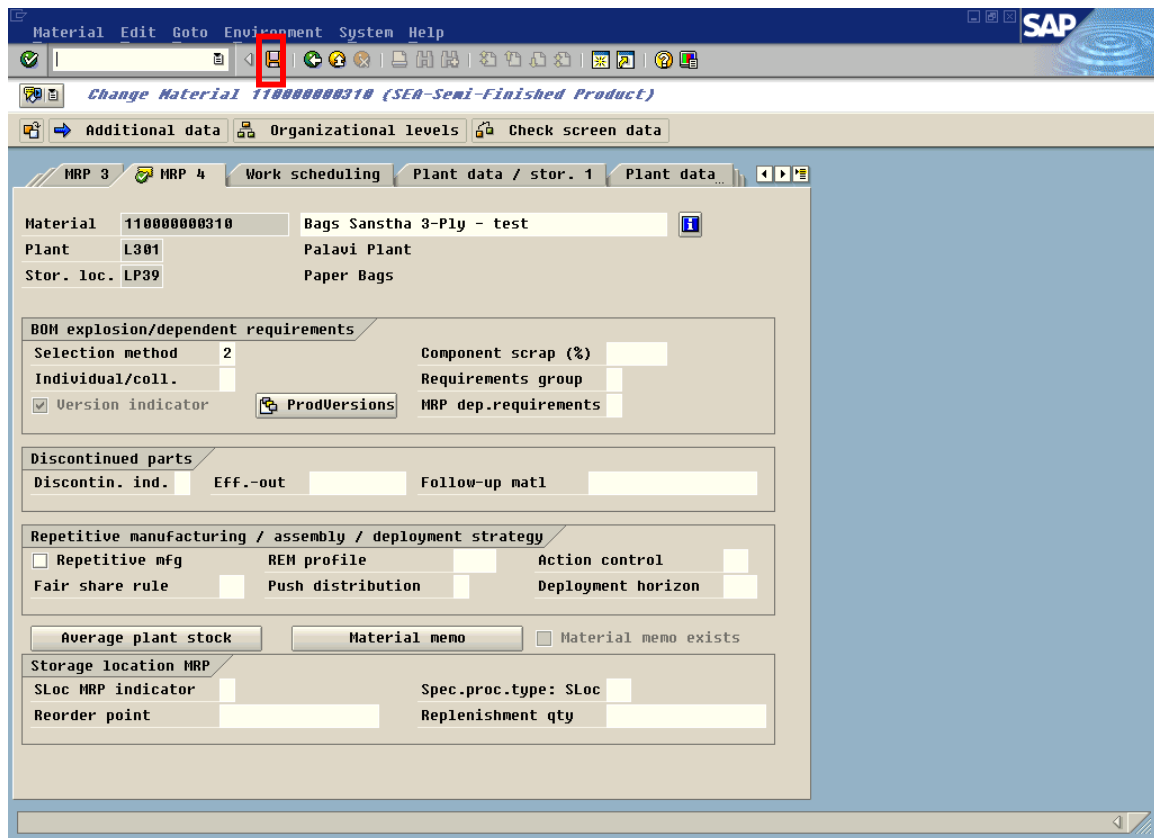


Fig-16

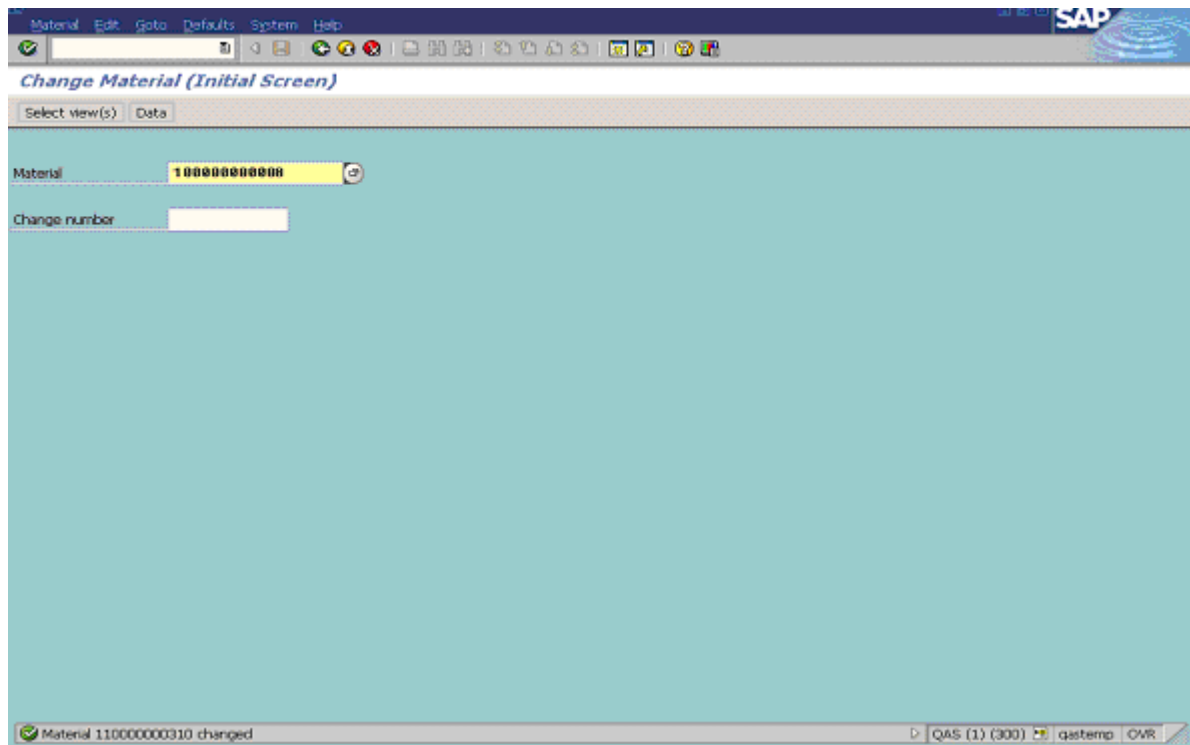


Fig-17

3. Create Subcontract Purchasing Info Record

3.1. Access transaction by

Via Menu	Logistics → Materials Management → Purchasing → Master Data → Info Record → Create
Via Transaction Code	ME11

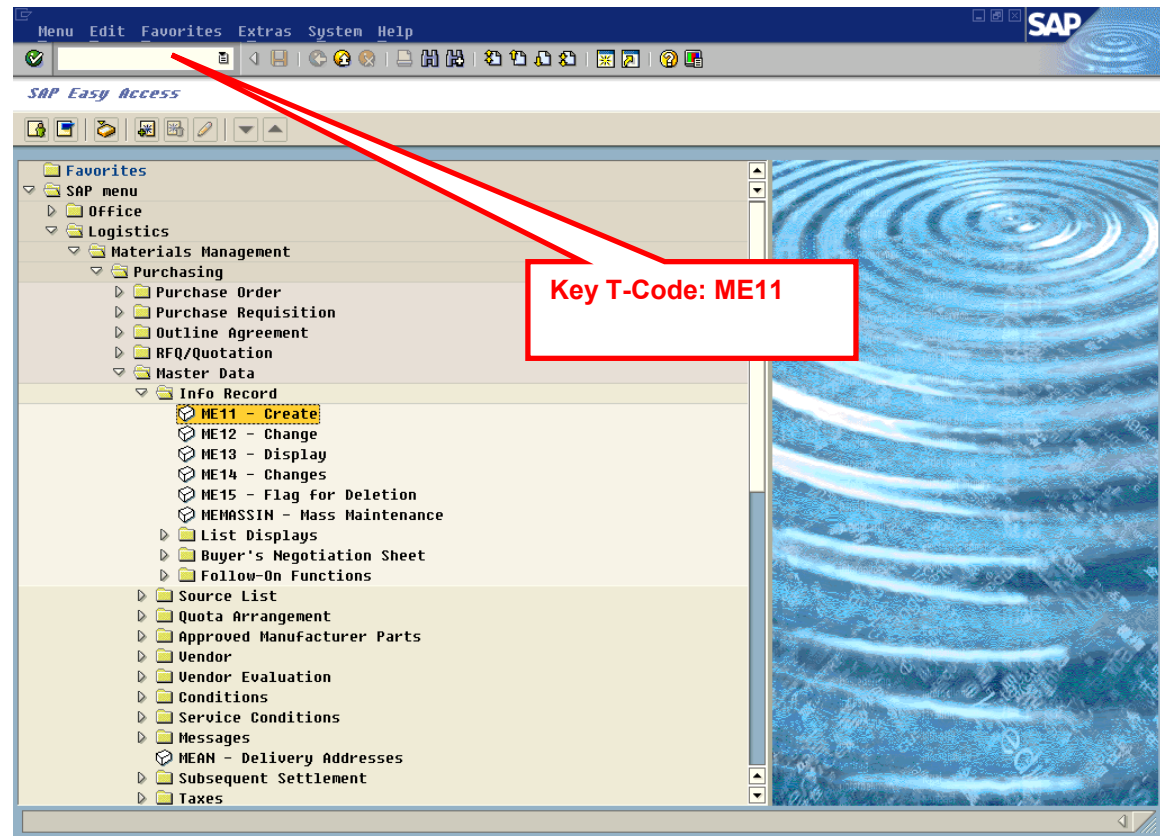


Fig-18

3.2. On “Create Info Record: Initial Screen” screen, fill in the data as below:

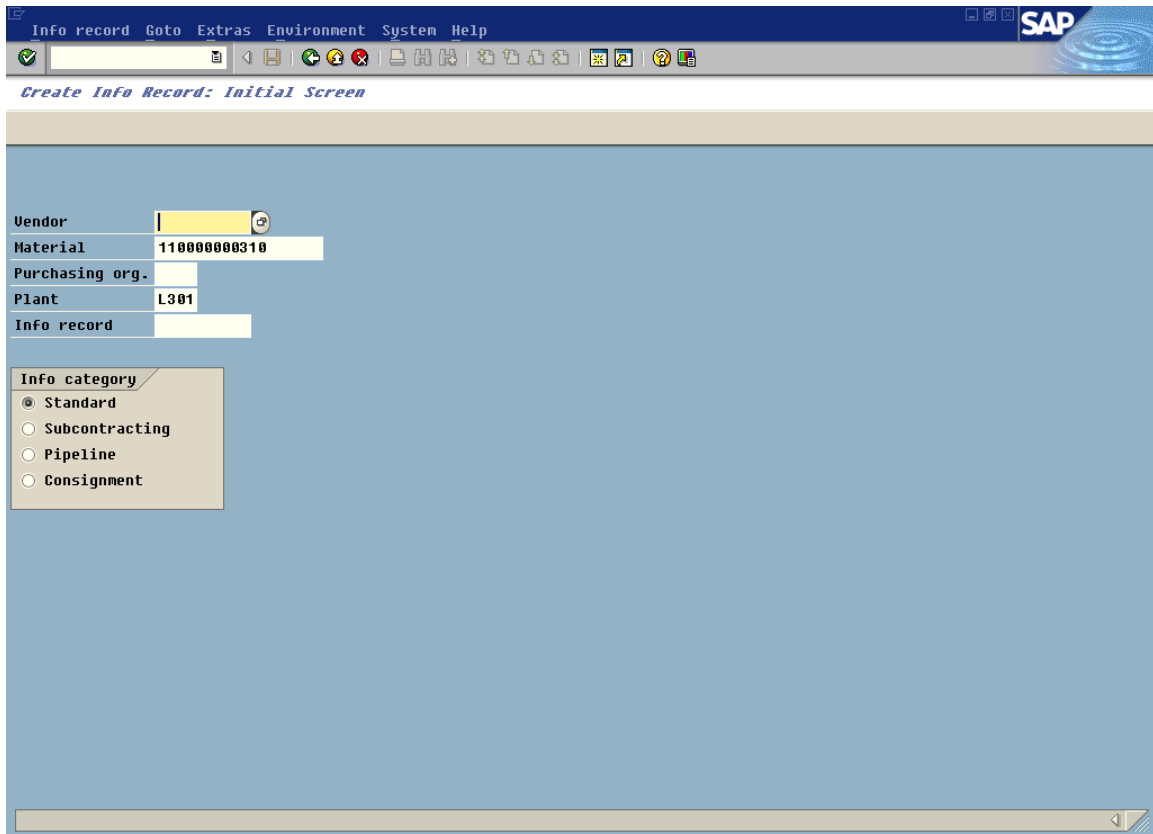


Fig-19

Field Name	Description	R/O/C/D	User Action and Values
Vendor	Alphanumeric key uniquely identifying a vendor	R	Enter the vendor number
Material	Alphanumeric key uniquely identifying the material	R	Enter the material number
Purchasing org	Denotes the purchasing organization	O	Enter the purchasing organization
Plant	Specifies the key for a production facility of branch office within the company	O	Enter the plant number
Info record	Specifies the number that uniquely identifies a purchasing info record	O	Enter the info record
Info category	Indicator	R	Flag <input checked="" type="radio"/> Subcontracting on button
			Press “ENTER” to branch directly to ‘General Data’ Tab View of Subcontract Purchasing Info Record

Legend: R = Required, O = Optional, C = Conditional, D = Display

3.3. On “Create Info Record: General Data” screen, fill in the data as below:

The screenshot shows the SAP 'Create Info Record: General Data' screen. The main data fields are:

- Vendor: 2600001
- Material: 14000000923
- Material group: 011301

The Vendor data section includes:

- Reminder 1, 2, 3: days
- Vendor mat. no.:
- Sub-range:
- USR sort no.:
- Vend. mat.group:
- Points: / 1 TO
- Salesperson:
- Telephone:
- Return Agreement:
- Prior vendor:

The Origin data section includes:

- Certif. categ.:
- Certificate:
- Valid to:
- Ctry of origin: LK
- Region:
- Number:
- Manufacturer:

The Supply option section includes:

- Available from:
- Available to:
- Regular vendor

The Order unit (Purchasing) section includes:

- Order unit: TO
- Equal to: 1 TO <-> 1 TO
- Var. order unit: Not active

Fig-20

Field Name	Description	R/O/C/D	User Action and Values
Reminder 1, 2, 3	Number of days presenting the time interval at which reminders or urging letters/messages are to be issued to the vendor	R	Enter the number A negative number of days means that a reminder is to be issued to the vendor n days prior to a certain date. A positive number of days means that a letter or message urging delivery of submission of a quotation etc. is to be issued n days after the due date.
Order Unit	Specifies the unit of measure in which the material is ordered	R	Enter the order unit
			Press “ENTER” again to get access to Purchasing Organization Data 1 for supplementary entry

Legend: R = Required, O = Optional, C = Conditional, D = Display

3.4. On “Create Info Record: Purch. Organization Data 1” screen, maintain information as specified in the table below:

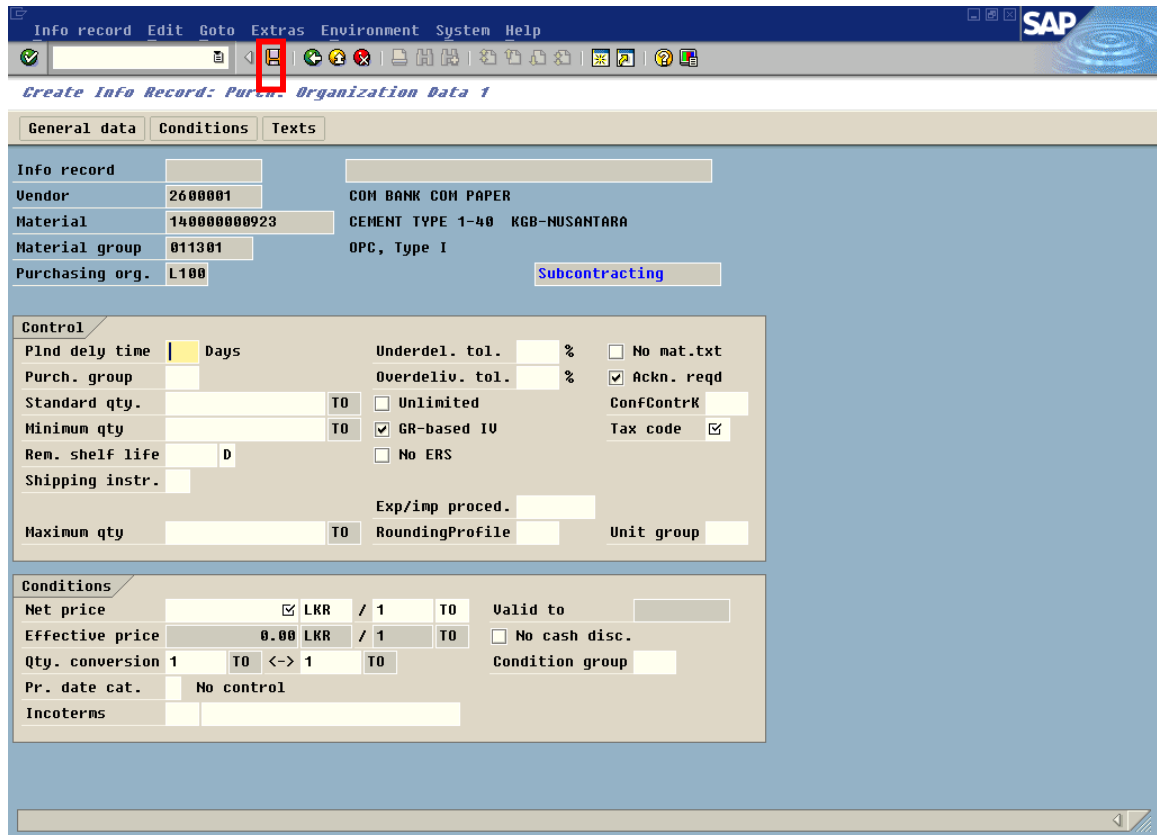



Fig-21

Field Name	Description	R/O/C/D	User Action and Values
			<p>If additional pricing conditions are required to be maintained/extended, then click on Conditions icon to update.</p> <p>Otherwise, click on  icon to post this Subcontracting Purchasing Info Record</p>

Legend: R = Required, O = Optional, C = Conditional, D = Display

4. Creation of Subcontracting Purchasing Order

4.1. Access transaction by

Via Menu	Logistics → Materials Management → Purchasing → Purchase Order → Create → Vendor/Supplying Plant Known
Via Transaction Code	ME21N

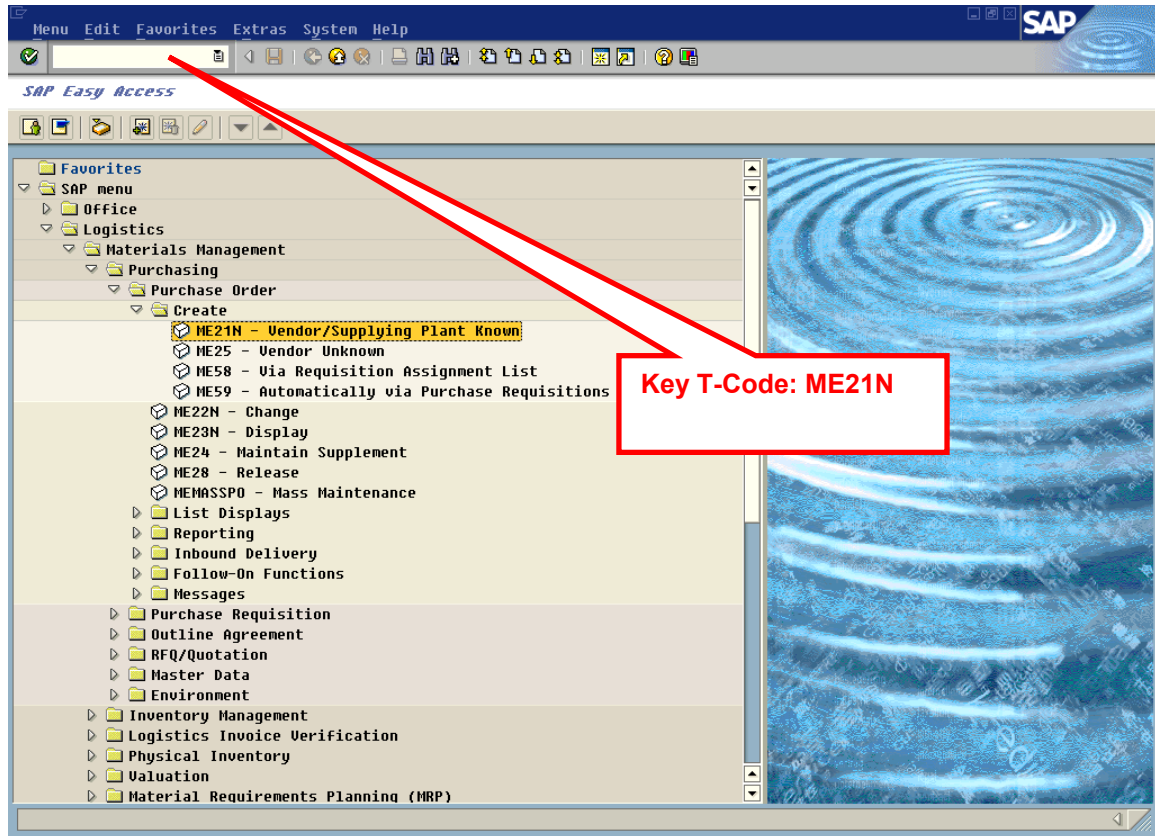


Fig-22

4.2. On “Create Purchase Order” screen, fill in the data as below:

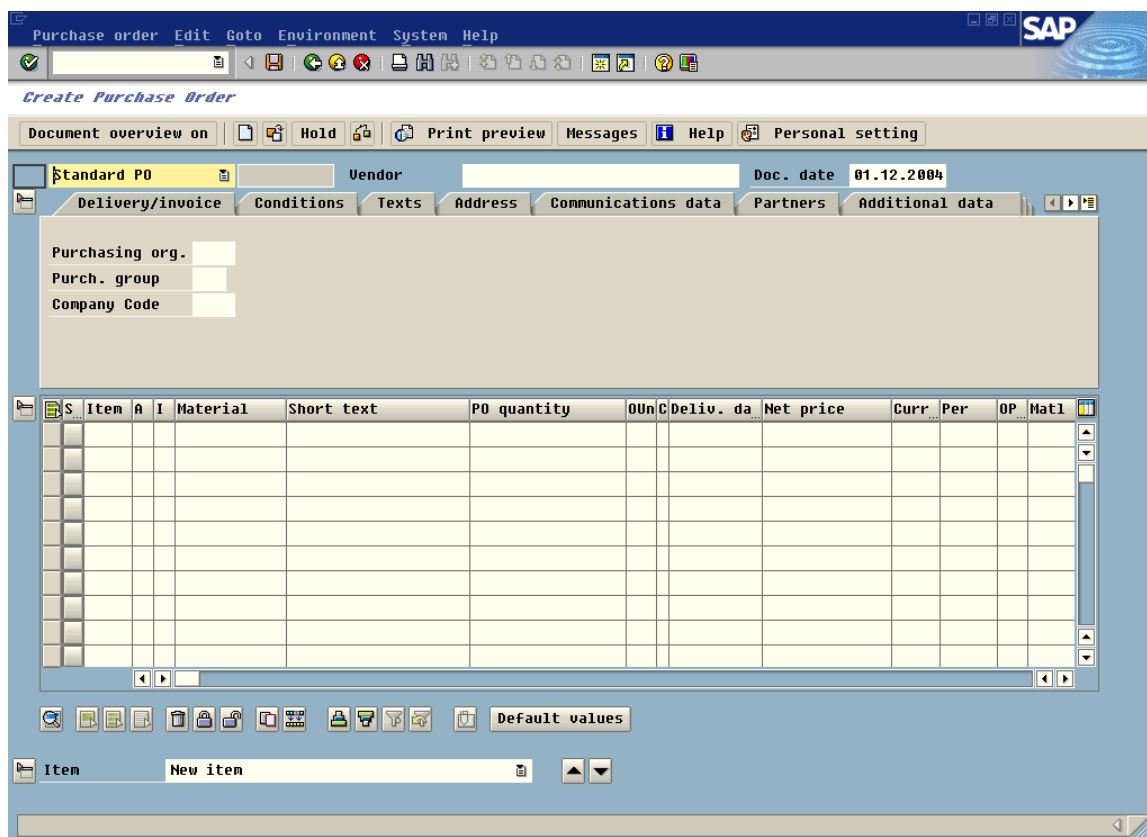


Fig-23

Field Name	Description	R/O/C/D	User Action and Values
Purchasing org.	Denotes the purchasing organization	R	Enter the purchasing organization
Purch. group	Key for a buyer or a group of buyer, who is/are responsible for certain purchasing activities	R	Enter the purchasing group
Company code	An organization unit within financial accounting	R	Enter the company code
I (Item category in purchasing document)	Key define how the procurement of a material or service item is controlled	R	Enter the item category
Material	Uniquely identifies a material	R	Enter the material number
PO quantity	Quantity ordered by the buyer, to be supplied by the vendor	R	Enter the PO quantity
OUn (Order unit)	Specifies the unit of measure in which the material is ordered	R	Enter the order unit
C (Category of delivery date)	Indicates whether the delivery date is to be entered and displayed as a calendar day, week or month	R	Enter the category of delivery date

Field Name	Description	R/O/C/D	User Action and Values
Deliv. date (Delivery date)	Date on which the goods are to be delivered or the service is to be performed	R	Enter the delivery date
Net price	Net price per price unit	R	Enter the net price
Currency	Currency key for amounts in the system	R	Enter the currency
Per (Price unit)	Specifies how many units of the purchase order price unit the price is valid for	R	Enter the price unit
OPUn (Order price unit)	Indicates the unit of measurement to which the purchase order price relates	R	Enter the order price unit
			Press 'ENTER'

Legend: R = Required, O = Optional, C = Conditional, D = Display

4.3. On “Create Purchase Order” screen, maintain information as specified in the table below:

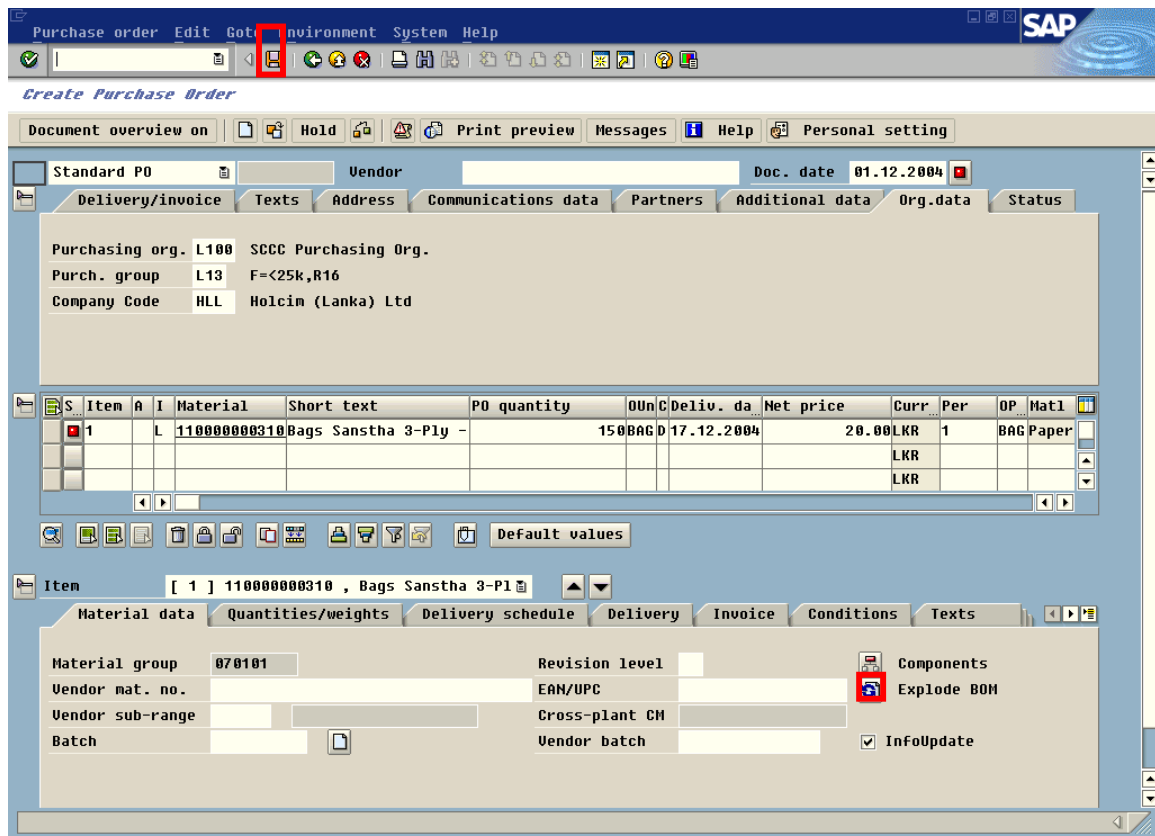


Fig-24

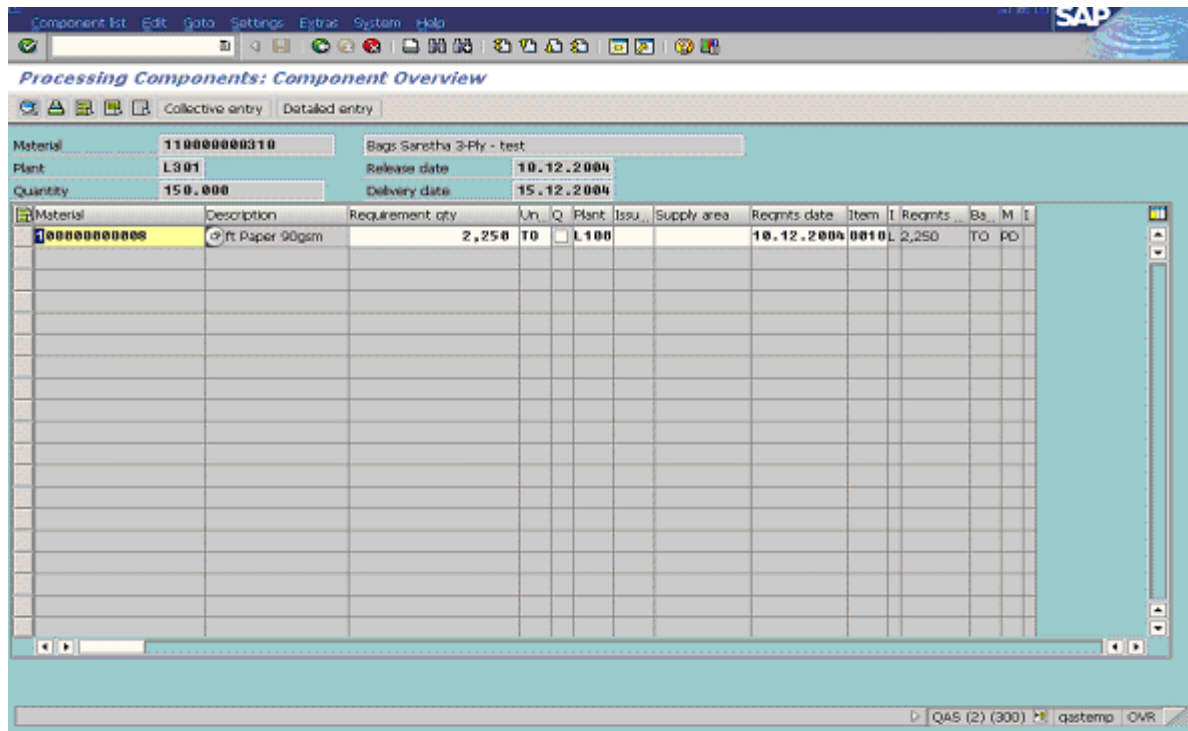





Fig-25

Field Name	Description	R/O/C/D	User Action and Values
			To view the BOM component, click 

Field Name	Description	R/O/C/D	User Action and Values
			on  icon
			Click on  icon to post the subcontract PO

Legend: R = Required, O = Optional, C = Conditional, D = Display

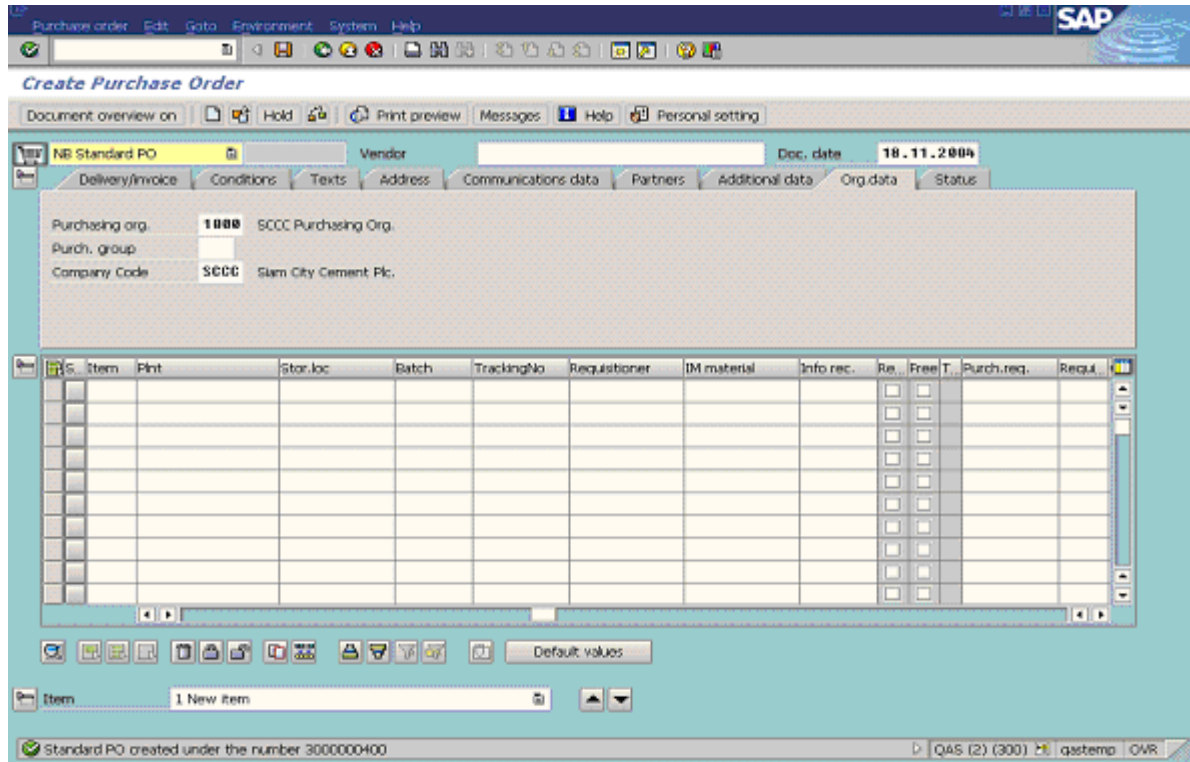


Fig-26

5. Performance of Stock Transfer of BOM Components to the Vendor/Subcontractor

5.1. Access transaction by

Via Menu	Logistics → Materials Management → Inventory Management → Goods Movement → Transfer Posting
Via Transaction Code	MB1B

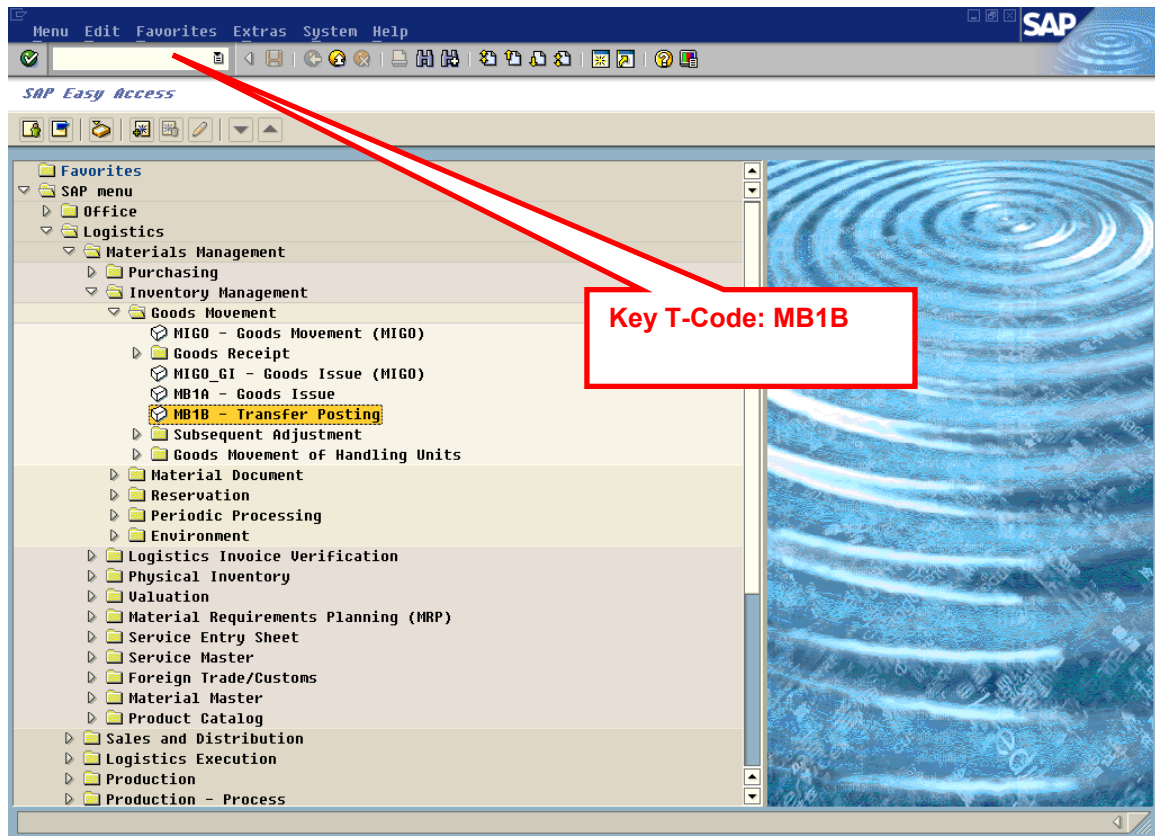


Fig-27

5.2. On “Enter Transfer Posting: Initial Screen” screen, fill in the data as below:

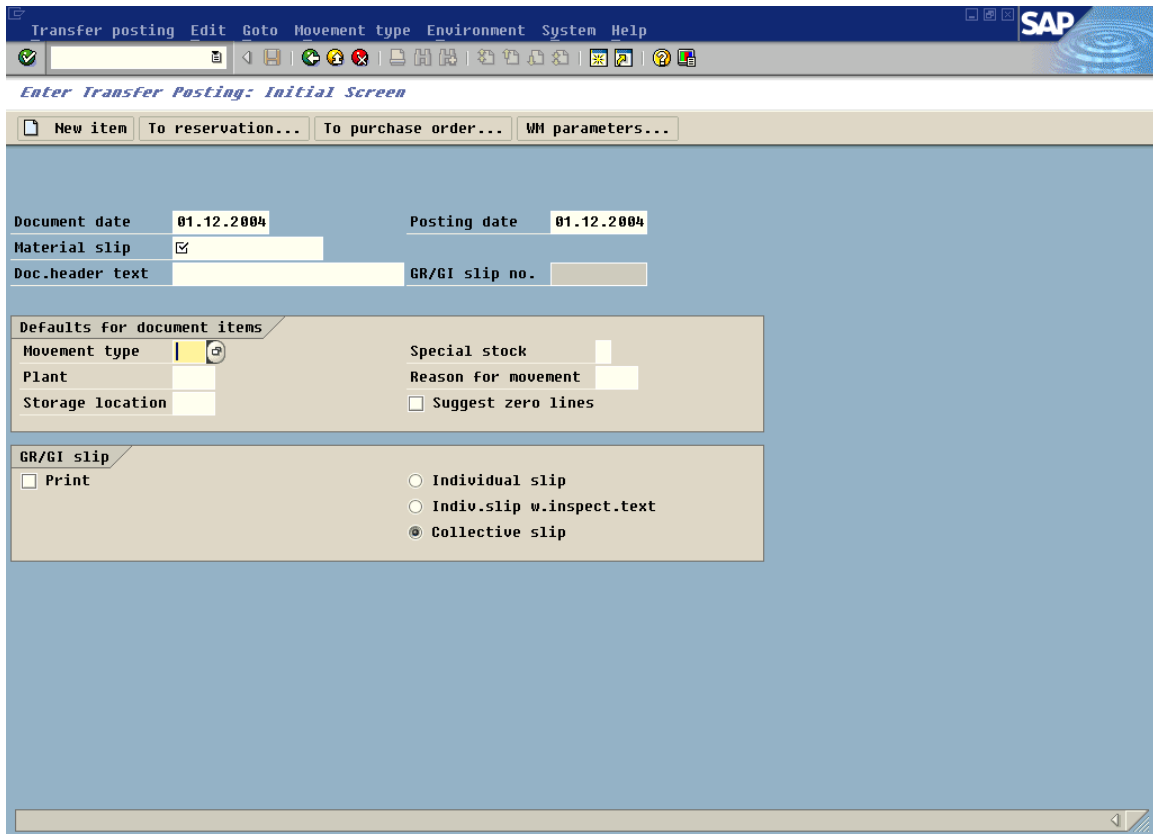


Fig-28

Field Name	Description	R/O/C/D	User Action and Values
Document date	The date on which the original document was issued	R	Enter the document date
Posting date	Date which is issued when entering the document in Financial Accounting or Controlling	R	Enter the posting date
Material slip	Specifies the identifier on an external document	R	Enter number of external material slip
Doc. header text	Explanations or notes which apply to the document	O	Enter the document header text
Movement type	Specifies a key for the type of goods movement	R	Enter the movement type
Plant	Key uniquely identifying a plant	R	Enter the plant number
Storage location	Number of storage location at which the material is stored	R	Enter the storage location number
Special stock	Specifies the special stock type	O	Enter the special stock type
Reason for movement	Specifies a key you can use to call up a standard text stipulating the reason	O	Enter the reason for movement

Field Name	Description	R/O/C/D	User Action and Values
	for a goods movement		
			Press "ENTER"

Legend: R = Required, O = Optional, C = Conditional, D = Display

5.3. On "Enter Transfer Posting: New Items" screen, fill in the data as below

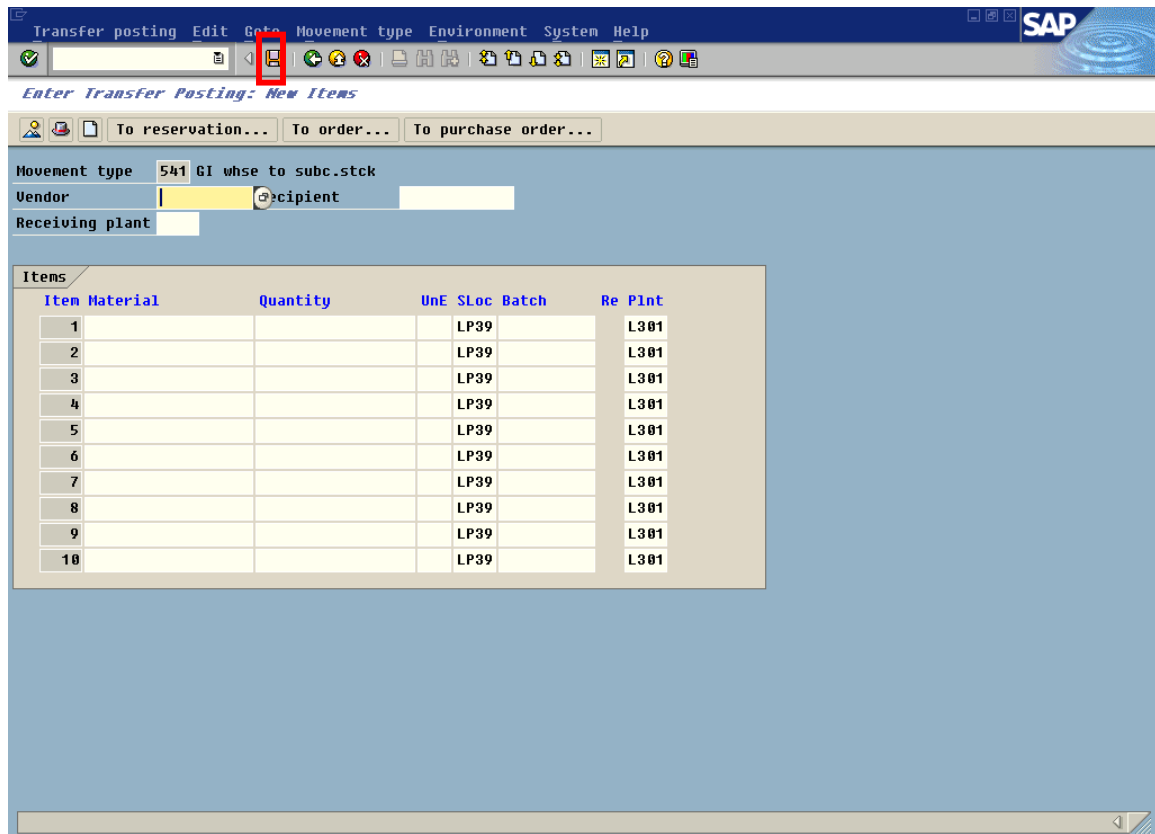



Fig-29

Field Name	Description	R/O/C/D	User Action and Values
Vendor	Alphanumeric key uniquely identifying a vendor	R	Enter the vendor number
Receiving plant	Indicates the receiving or issuing plant	R	Enter the receiving plant
Material	Alphanumeric key uniquely identifying the material	R	Enter the material number
Quantity	Specifies the quantity to be moved in the unit of entry	R	Enter the quantity
			Click on  icon to post transfer document

Legend: R = Required, O = Optional, C = Conditional, D = Display

6. Performance of Goods Receipt for BOM Header with reference to Subcontract PO

6.1. Access transaction by

Via Menu	Logistics → Materials Management → Inventory Management → Goods Movement → Goods Movement (MIGO)
Via Transaction Code	MIGO

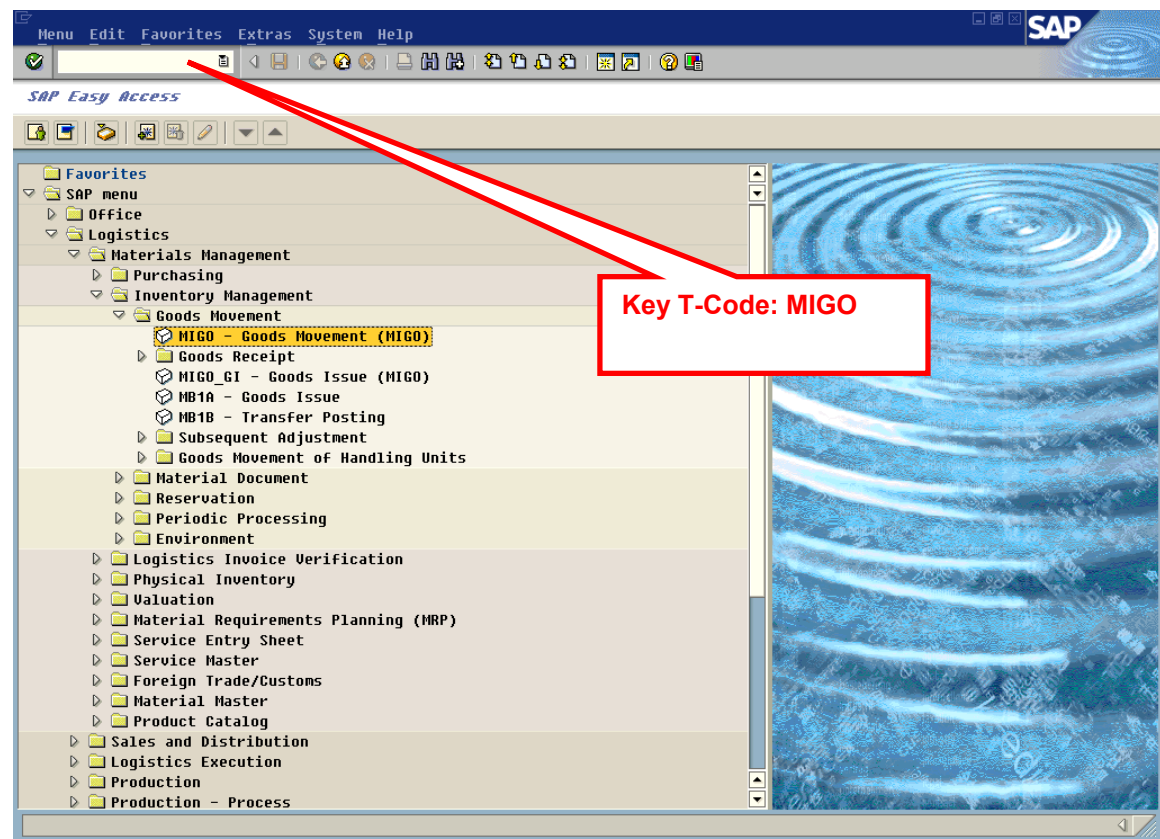


Fig-30

6.2. On “Goods receipt Others” screen, select **Purchase order** in the drop down menu:

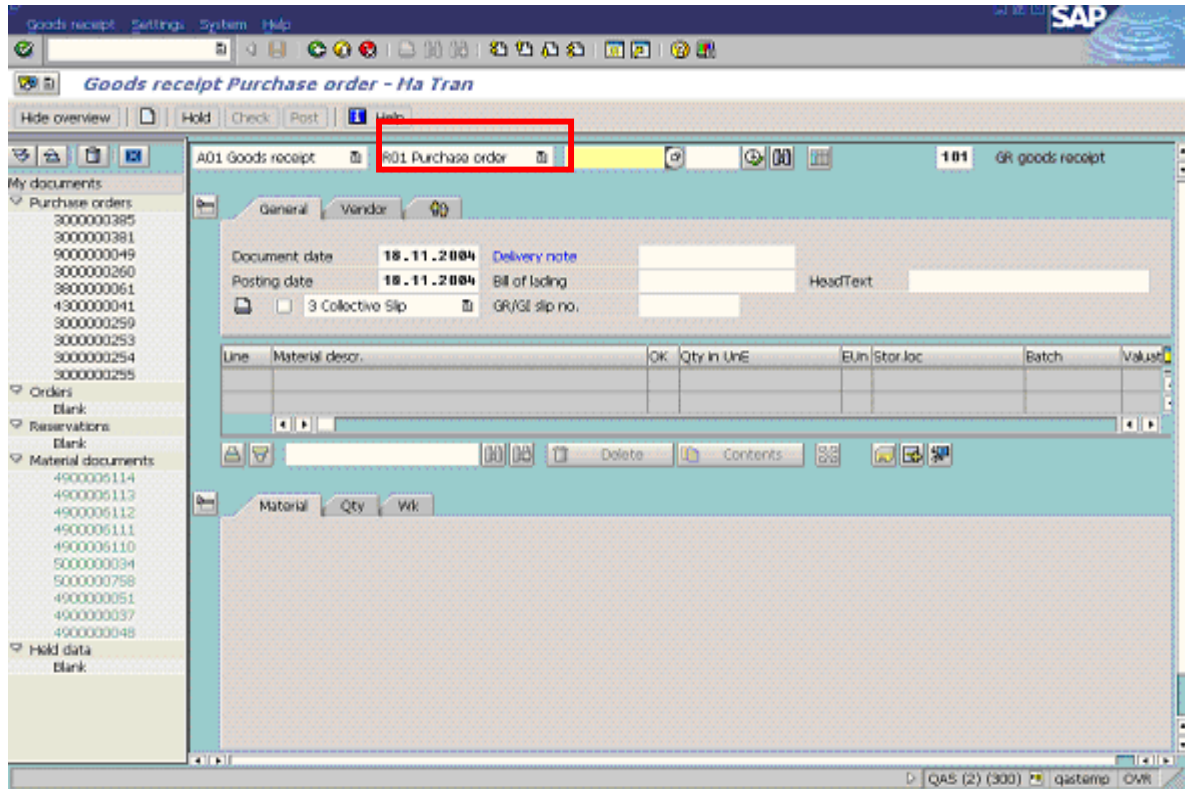


Fig-31

6.3. On “Goods receipt Purchase order” screen, fill in the data as below:

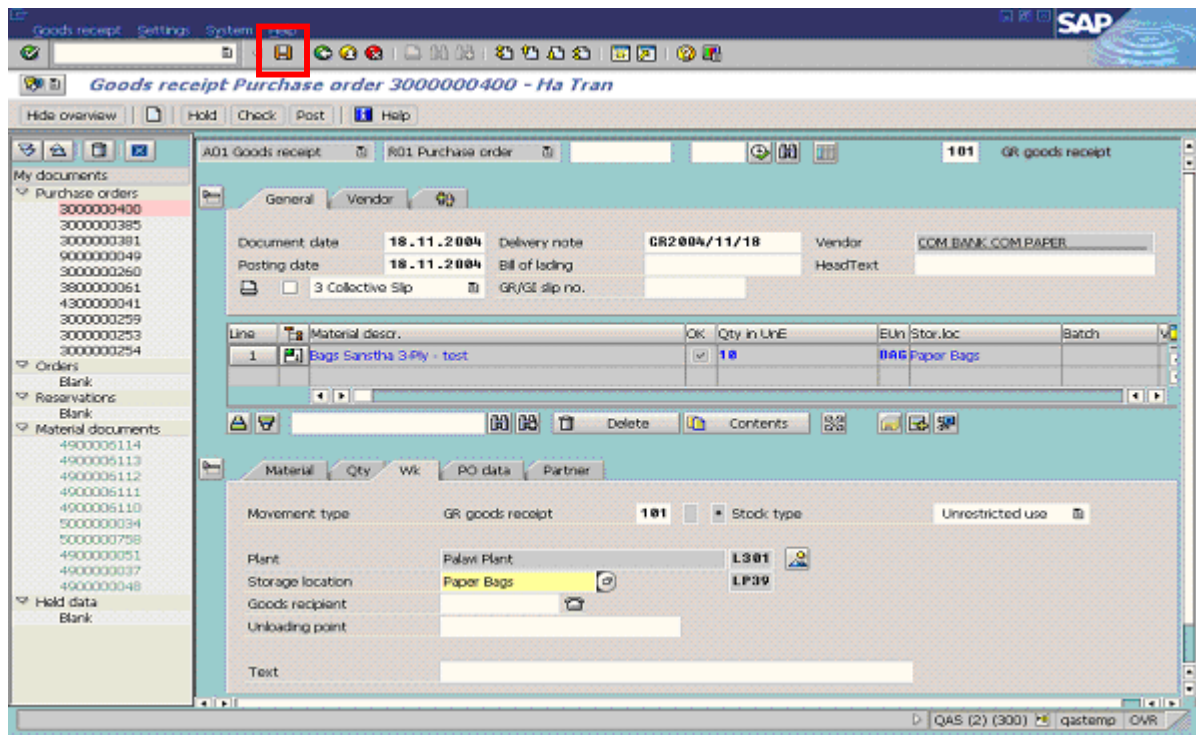



Fig-32

Field Name	Description	R/O/C/D	User Action and Values
Delivery note	Number of the document issued by the vendor or by production containing information on the delivered goods	R	Enter the delivery note
Storage location	Number of storage location at which the material is stored	R	Enter the storage location number
Purchasing document number	Alphanumeric key uniquely identifying purchasing document	O	Enter the purchasing document number
			Click on  icon to post the stock transfer document

Legend: R = Required, O = Optional, C = Conditional, D = Display