

# ***SAP MM***

***SAP Material***

***Management Practice***

***Book – 2***

***SAP Material Management  
Practice Book – II (2021)***

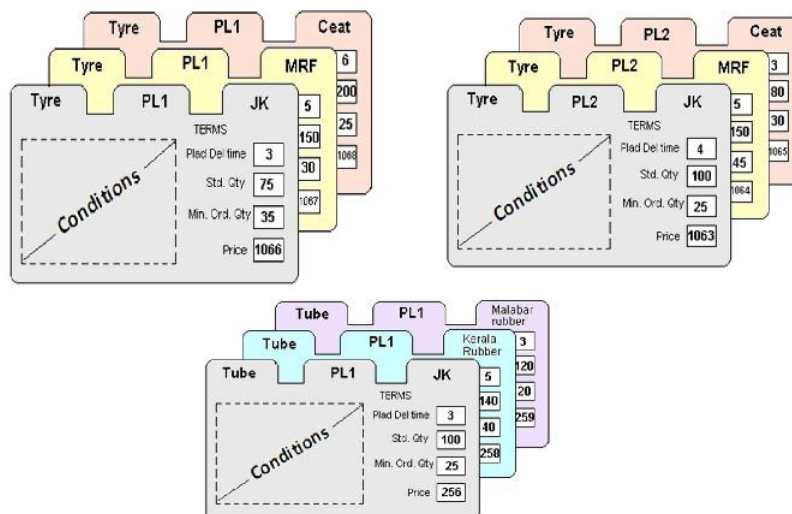
Shekar Mallipamula

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### 7. Purchasing Info Record (PIR)

- It is a master data
- It is a relation between a specific material supplying to a specific plant by a specific vendor along with his Price, terms and conditions
- PIR is a One - to - One relation
- Once you maintain PIR, system will suggest the Price, when you create a PO
- Through PIR you can
  - Maintain scales on different condition types
  - Pricing conditions for different validity periods
  - Free goods maintenance
- Example for PIR



#### IMG settings: PIR

##### 1. Define Number Ranges (OME0)

Path: SPRO → IMG → Materials Management → Purchasing → Purchasing Info Record → Define Number Ranges

Steps:

- Click Pencil marked group button or F6
- On Menu bar → Groups → insert or F6
- Text: Benz PIR No Range group
  - From XXXX
  - To XXXXX
- Press enter
- System will create a group with the above number range
- SAP Standard doc type for PIR is = IL
- Since there is no copy provision to copy the IL use IL and assign IL to your Number range group
- Select IL
- Double click it.
- IL colour will change into Blue
- check the check box of your BENZ PIR No range group

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- Click 'Element/group' button or F5 to assign
- Tcodes for PIR

Tcodes	Creation	Change	Display	List of PIR
for	ME11	ME12	ME13	ME1L – By Vendor wise
PIR				ME1M – By Mat. wise

PIR can be created

- Manually or W.r.t. Quotation.

### Creation of PIR - manually

- Use Tcode = ME11
- In initial screen
  - Vendor 400900
  - Material 300000800
  - Purchasing Org. VPO
  - Plant VPL1
  - Info Record Empty Press enter
- In General Data Screen
- Press enter to skip this screen
- In Purchasing data 1 screen
  - Pl. Deliv. Time 3 Days
  - Standard Qty. 100
  - Minimum Qty. 25
  - Net Price 1.063,00 Press enter
- In Purchasing data 2 screen
  - Press enter to skip this screen
- In Text Overview screen
  - Press enter to skip this screen
- Click Yes to save the PIR
- System will create a PIR by assigning a No from its Number range

### Creation of PIR - w.r.t. Quotation.

Pre-requisite

- You should have a Quotation
- Find out the Quotation / RFQ No XXX

Steps:

- Use Tcode = ME47
  - Enter RFQ = 1605
    - press enter
    - system displays the line items
  - Choose a line item for which, the price offered by the vendor is agreed by our company
    - click Item details or F2
    - System will display the Item details screen
    - Enter Info update as = A (with or without plant) Click save

**Note:** A PIR with the above vendor, Mat and Plant combination will be created

### 8. Source List

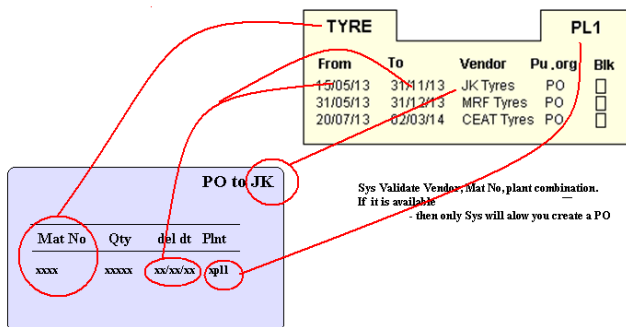
#### Source List

- It is a master data
- It is a relation between a material vs. Vendors along with their validity periods
- It is one-to-many relation
- There is no number range or Document type for Source List
- Material no itself is a source list no.
- One you are maintaining the source list
  - System will allow the list of vendors maintained in SL for creation of Purchasing documents
  - System will these vendors also on the specified period as per SL
  - You can block a vendor for a specific material
  - You can also fix a vendor for a specific vendor
- The structure of Source List is as under:

TYRE		PL1		
From	To	Vendor	Pu .org	Blk
15/05/13	31/11/13	JK Tyres	PO	<input type="checkbox"/>
31/05/13	31/12/13	MRF Tyres	PO	<input type="checkbox"/>
20/07/13	02/03/14	CEAT Tyres	PO	<input type="checkbox"/>

#### Why source List?

- To have an excellent control on Purchasing document creation SL will be Used



- You can block a vendor at material level
- You can fix a vendor for automatic PO

#### How to set Source List @ Material Level (For one material)

##### Steps:

- Go to change mode (MM02) of material master record of one material
- Select Purchasing view
- Check the check box of Source list
- Click save

**Note:** From now onwards system will allow you to create any PO or other documents for this material unless you maintain Source List

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## How to set Source List @ Plant Level (For all materials in Plant) (OME5)

SPRO → IMG → Material management → Purchasing → Source List → Define Source list requirement at plant level

Steps:

- System will display all plant entries
- Click Position and enter your plant = VP1
- Press enter

<u>Plant</u>	<u>Source List</u>
VPL1	<input checked="" type="checkbox"/>

- Click save

**Note: 1** now onwards system will allow you to create any PO or other purcha documents for this material unless you maintain Source List

### Notes: 2

- No IMG settings for Source List
- Except the SL maintenance at plant level
- No Number range for SL
- No document type

Tcodes for Source List

Tcodes	Creation	Change	Display	List of PIR
For Source List	ME01	ME02	ME03	ME0M – By Mat. wise

### Note: 3

- There are No Tcodes like ME02, ME0M
- Source List can be created  
Manually  
W.r.t PIR

### Creation of Source list - manually

Steps:

- Use Tcode = ME01
- In Initial screen
  - Material 300004102
  - Plant VPL1
  - Press enter
  - In Over view screen enter the following and click save

<u>From.</u>	<u>To.</u>	<u>Vendor No.</u>	<u>Pur. Org</u>	Fix	Block
Xx/xx/xx	xx/xx/xx	xxxx	VPO	<input type="checkbox"/>	<input type="checkbox"/>
Xx/xx/xx	xx/xx/xx	xxxx	VPO	<input type="checkbox"/>	<input type="checkbox"/>

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### Creation of Source list - w.r.t PIR

#### Pre-requisites

- You should have PIRs for a material
- To list out PIR use ME1L/ME1M

#### Steps:

- Use Tcode = ME01
- in initial screen
  - Enter the mat no                      xxxx.
  - Plant                                      xxxx.
- In second screen
  - Click 'generate Records' on application tool bar or Ctrl+F7 button
  - enter validity periods
    - From                      xxxxx
    - To                              xxxxx
  - Press enter
- System will fill all the vendors' info in Source list as per PIRs.
- click save



### 9. Out-Line Agreements

#### Out Line Agreement

- It is a long time Agreement

#### What is an Agreement?

- It is a common understanding between two parties to supply certain material on specific terms and conditions
- Normally this agreements are entered between Vendors and company on mutual benefit base

#### Why Agreement is needed?

- In general to keep the vendor to supply the material for a long term for a specific price companies will enter this type of Agreements
- In order to keep the vendor to bind for agreement companies will assure the vendor

#### Is this agreement can be entered for all materials?

- No.
- Generally out line agreements are for the high volume and Low value type materials like NUTs, Washers etc.

#### Types of Outline Agreements

Based on the assurance of the company the agreements are two types

- Contracts
- Scheduling Agreements

#### Contracts

- It is a long term agreement
- It is an outgoing document
- It is a legal document
- Contract will between company and vendor
- In contract
  - Company assures certain Quantity of the material or value of the material,
  - Vendor will commit the price
- In Contract there is **no delivery date** column
- As and when company needs material from the vendor, It has to **create a separate PO w.r.t. to contract** for that qty along with delivery date
- System will validate
  - The vendor, Material, Plant and validity period and Targeted Qty or Values
  - Once PO is created, the contract will also be updated accordingly
- Note: The PO which is created w.r.t Contract can also be called as **Release order**

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## Types of contracts

Based on the assurance of the company the contracts are two types

- Qty contract
- Value contract

### Qty Contract

- o In Qty contract, company assures the vendor certain Qty of the material
- o Example : NUT with a Qty of 10,000
- o You can enter a contract to a vendor for various materials
- o The structure of the Qty Contract is as under

**Company** **Quantity contract** **Vendor**

Purch org   
Purch Grp

Doc. Dt.   
Doc. Type  Doc No

Stat Date

Mat No	Target Qty	Price	Plant	Str loc
Nut	10,000 Nos	0.20	PL1	S11
Washer	23,000 Nos	0.44	PL1	S11

**Note: No Delivery date column in contract**

End Date

- o As and when Company wants the material from this vendor, Company has to create a separate PO w.r.t this contract

**Company** **Quantity contract** **Vendor**

Purch org   
Purch Grp

Doc. Dt.   
Doc. Type  Doc No

Stat Date

Mat No	Target Qty	Price	Plant	Str loc
Nut	10,000 Nos	0.20	PL1	S11
Washer	23,000 Nos	0.44	PL1	S11

**Note: No Delivery date column in contract**

End Date

date

PO w.r.t Contract

Mat No	Qty	Date	Price	Plant	Str loc
NUT	8888	xxxxxx	0.20	PL1	S11
Washer	15555	xxxxxx	0.44	PL1	S11

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- Then system will validate the following parameter before creation of PO
  - Vendor No,
  - Required qty is below or equal to Target Qty
  - Delivery date in Po is between the Contract Period (starting and ending dates)
- After Validation only system will create a PO
- System will update the Contract target quantities also accordingly

### Value contract

- In Value contract, company assures the vendor certain value of the material
- Example : WASHERS worth of Rs 25,000/-
- You can enter a value contract to a vendor for various materials
- The structure of the Value Contract is as under

Company  Vendor

Purch org  Purch Grp

Doc. Dt.  Doc. Type  Doc No

Stat Date  Target Value **Rs: 1,00,000/-**

Mat No	Target Qty	Price	Plant	Str loc
Bolts	0.50	XPL1	\$21	
Nails	0.75	XPL2	\$22	
Rims	450.00	XPL2	\$21	

End Date

Note: No Delivery date column in contract

- As and when Company wants the material from this vendor, Company has to create a separate PO w.r.t this contract

Company  Vendor

Purch org  Purch Grp

Doc. Dt.  Doc. Type  Doc No

Stat Date  Target Value **Rs: 1,00,000/-**

**-13,975/-**

**86,025/-**

Mat No	Target Qty	Price	Plant	Str loc
Bolts	0.50	XPL1	\$21	
Nails	0.75	XPL2	\$22	
Rims	450.00	XPL2	\$21	

End Date

Note: No Delivery date column in contract

PO w.r.t Value contract

Mat No	Qty	Del dt	Price	Plant	Str loc
Bolts	200	xx/xx/xx	0.50	XPL2	\$21
Nails	500	yy/yy/yy	0.75	XPL2	\$22
Rims	30	zz/zz/zz	450.00	XPL2	\$21

Bolts 200 X 0.50 = 100.00

Nails 500 X 0.75 = 375.00

Rims 30 X 450 = 13,500.00

**13975.00**

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## IMG settings: Contracts

### 1. Define Number Ranges (OMH6)

SPRO → IMG → Materials Management → Purchasing → Contract → Define Number Ranges

Steps:

- Click Pencil marked interval button
- Click + marked interval button
- Insert two intervals

GRPNo		From	To	Current No
G1	xxx	xxx	0	
G2	xxx	xxx	0	

- Click save

### 2. Define Document Types (OMEF)

SPRO → IMG → Materials Management → Purchasing → Contract → Define Document Types

Steps:

- SAP std. doc type for Qty. contract is = MK
- Select MK and click copy as
- GMK - GM Qty. Contract
- Then assign No range (G1) to this GMK doc type
- SAP std. doc type for Value contract is = WK
- Select WK and click copy as
- GWK - GM Value Contract
- Then assign No range (G2) to this GWK doc type

### Tcodes for Contracts

Tcodes	Creation	Change	Display	List of Contracts
for	ME31K	ME32K	ME33K	ME3L – By Vendor wise
Contract				ME3M – By Mat. wise

### Creation of Qty. Contract

Steps:

- Use Tcode = ME31K
- In initial screen

Vendor	XXXX
Agreement Type	GMK (Qty. contract doc type)
Agreement Date	30.08.2013
Agreement	Empty
Purch. Organization	GPO
Purchasing Group	GPG
- Press enter
- In header data

Validity Start	30.08.2013
Validity End	31.12.2013

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- Press enter
- In Item overview screen
- | <u>Mat No</u> | <u>Target. Qty.</u> | <u>Price</u> | <u>Plant</u> | <u>Str. loc.</u> |
|---------------|---------------------|--------------|--------------|------------------|
| PINS          | 10000               | 0,09         | GPL1         | S11              |
| Washers       | 7777                | 0,08         | GPL1         | S11              |
- Press enter
- Click save
- Sys will create a qty. contract by assigning a no range from its internal no range grp.

### Creation of Value Contract

Steps:

- Use Tcode = ME31K
- In initial screen
  - Vendor XXXXX
  - Agreement Type GWK (Value contract doc type)
  - Agreement Date 30.08.2013
  - Agreement Empty
  - Purch.. Organization GPO
  - Purchasing Group GPG
- Press enter
- In Header data
  - Validity Start 30.08.2013
  - Validity End 31.03.2014
  - Target Val. 100000      INR
- Press enter
- In Item overview

<u>Mat No</u>	<u>Qty.</u>	<u>Price</u>	<u>Plant</u>	<u>Str. Loc.</u>
xxx	---	xxx	gpl1	s11
xxx	---	xxx	gpl1	s11
- Click save and Sys will create a value contract with internal no assignment

### Scheduling agreement

- It is a long term agreement
- It is an outgoing document
- It is a legal document
- Scheduling agreement will between company and vendor
- In Scheduling agreement
  - No assurance from company either on quantity of the material or value of the material,
  - Vendor will commit the price
  - In Scheduling Agreement there is no delivery date column
  - No Separate PO will be sent to the Vendor
- After creation of Scheduling agreement, by using a separate Tcode we enter the delivery schedules with quantities

The screenshot shows the SAP Scheduling Agreement form. Annotations include:

- A line from "Company" points to the "Purch org" and "Purch Grp" fields.
- A line from "Vendor" points to the "Vendor" field.
- A line from "Stat Date" points to the "Stat Date" field.
- A line from "End Date" points to the "End Date" field.
- A red arrow points from the "Washer" line item in the table to a pop-up window.

**Scheduling Agreement**

Doc. Dt.  Doc. Type  Doc No

Mat No Target Qty Price Plant Str loc

Nut	10,000 Nos	0.20	PL1	S11
Washer	23,000 Nos	0.44	PL1	S11

Note: No delivery date column in Sch. Agmt

Separate Delivery Schedules for each line items

Item : Washer

Del date	Qty
xx/xx/xx	XX
xx/xx/xx	XX
xx/xx/xx	XX
xx/xx/xx	XX

Item : NUT

Del date	Qty
xx/xx/xx	XX
xx/xx/xx	XX
xx/xx/xx	XX
xx/xx/xx	XX

- System will treat the Sch. Agreement itself as PO
- As and when company does not want the material further, it can ask the vendor to **stop** supplying

### Similarities of Contracts and Scheduling agreements

- Both are long term agreements
- Both are out line agreements
- Both are legal documents
- Both documents does not have delivery date column

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## Differences of contracts and Scheduling agreements

Contract	Scheduling Agreement
Company assures certain Quantity of the material or value of the material,	No assurance from company either on quantity of the material or value of the material
As and when company needs material from the vendor,	No Separate PO will be sent to the Vendor
It has to create a separate PO w.r.t. to contract	Using a separate Tcode we enter the delivery schedules with quantities
	System will treat the Sch. Agreement itself as PO

## IMG settings: Scheduling Agreement

### 1. Define Number Ranges (OMH6)

Path: SPRO→IMG→Materials Management →Purchasing →Scheduling Agreement →Define Number Ranges

### 2. Define Document Types (OMED)

Path: SPRO→IMG→Materials Management →Purchasing →Scheduling Agreement →Define Document Types

Steps:

- SAP standard Doc type for Scheduling Agreement = LP
- Select LP and Copy as
  - VLP – Volvo Scheduling Agreement
- Then assign Number range group (VS) to the VSLP doc type

## Creation of Scheduling Agreement

Steps:

- Use Tcode = ME31L
- In initial screen
  - Vendor SIRI
  - Agreement Type VLP
  - Agreement Date 28.02.2013
  - Agreement Empty
  - Purchase Organization VPO
  - Purchasing Group VSP
- Press enter
- In item Header data screen
  - Validity Start 28.02.2013
  - Validity End 31.12.2013
- Press enter
- In Item Overview screen
  - Mat No
  - Target Qty.
  - Net price

- Use Tcode = ME38
- In initial screen
  - Enter Agreement      600
  - Press enter
- In item overview
  - Select line item,
  - Then On menu bar-->Item-->Delivery schedules  
or
  - Click F2  
or
  - double click line item
- system will display the delivery schedule screen
- Enter


Del dates	Qty.
xxxx	xxx
xxxx	xxx

- click save

- Use Tcode = ME38
- In initial screen
  - Enter Agreement 600
  - Press enter
- In item overview
  - Select line item,
  - Then On menu bar-->Item-->Delivery schedules  
or
  - Click F2  
or
  - double click line item
- system will display the delivery schedule screen
- Enter Del dates Qty.
 

xxxx	xxx
xxxx	xxx
- click save

Steps:

- Use Tcode = ME38
- In initial screen
  - Enter Agreement 600
  - Press enter
- In item overview
  - Select line item,
  - Then On menu bar-->Item-->Delivery schedules  
or
  - Click F2  
or
  - double click line item
- system will display the delivery schedule screen
- Enter Del dates Qty.
 

xxxx	xxx
xxxx	xxx
- click save



### 10. Purchase order

- It is legal document
- It is an outgoing document
- It will be printed on the company's letter head and signed by concerned authority
- It is a commitment from company
- It can also be called an ultimate document because of its features
  - Last minute changes of Price, quantities and delivery dates can be possible
  - Scales can be maintained
  - Free goods can be maintained

#### IMG settings: Purchase order

##### 1. Define Number Ranges (OMH6)

SPRO → IMG → Materials Management → Purchasing → Purchase Order → Define Number Ranges

##### 2. Define Document Types (O MEC)

SPRO → IMG → Materials Management → Purchasing → Purchase Order → Define Document Types

- SAP doc type for PO are:
    - FO - Framework Orders (for Service Material)
    - EC - Electronic Commerce (For SRM application)
    - IC - Internet Communication
    - NB - Standard PO
    - UB - Stock Transport Order
- Steps:
- SAP standard Doc type for Po is = NB
  - Select NB and copy as
    - VNB - Volvo PO
  - Then assign Number range group name (VP) to Doc type VNB

##### 3. Set tolerance limits for price variance

SPRO → IMG → Materials Management → Purchasing → Purchase Order → Set tolerance limits for price variance

**Tolerance Limits:** Acceptable, allowable, permissible limits can be called as tolerance limits

SAP defines the following two types of tolerance limits for every company code

- PE – Price variance (purchasing)
- SE – Max. Cash discount variance

Steps:

- System displays tolerance limits PE and SE for all company codes in a table
- Click position
- Enter your co\_cd = VMOT
- Press enter
- In case if your company code (VMOT) have the PE and SE keys
  - Select PE and click details
    - You can set tolerance limits as Percentage or Absolute value

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- Now define upper and lower limits as per your business process
  - You can set for SE also
- In case if your Company code (VMOT) does not have the PE and SE keys
  - You cannot create a PO
  - So copy any standard co\_cd PE and SE keys as your Company code
- Click save

Tcodes	Creation	Change	Display	List of POs
For	ME21N	ME22N	ME23N	ME2L – By vendor wise
Purchase Order				ME2M- By Mat. wise

- Purchase Order can be created
  - Manually
  - W.r.t Value Contracts
  - W.r.t Qty. Contracts
  - Automatic creation of Purchase Order w.r.t PRs

### Creation of PO - Manually

- Use Tcode = ME21N (N Joy transaction)
- In initial screen
- Select Doc type = VNB - Volvo PO
- In Header data - Org data - TAB
  - Purchase Org. VPO Volvo Purchase Org
  - Purchase. Group VPG Volvo Purchase Group
  - Company Code VMOT Volvo Motors Limited
    - Enter Vendor No xxxxx
  - Press enter
- In Item Over view
  - Mat No XXXX
  - Qty. XX
  - Delivery date XXX
  - Plant XXX
  - Str. Loc. XXX (optional)
- Press enter
- System fill the other columns by relevant information from Master data files
- In case If you are having PIR,
  - System pull the PIR price in to the PO
- In case if we don't have PIR,
  - System suggests you to enter the Price.
- On application tool bar Click Check button
- system will validate all the entries
- click save
- system will create a PO

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## Creation of PO w.r.t Qty. Contract

Pre-requisite:

- You should have a Qty. Contract
- List out Qty. Contracts by
  - using Tcode = ME3L
  - Doc type = VMK (Volvo Qty. Contract)
- Then note down the contract No and its details

Steps:

- Use Tcode = ME21N
- Select Doc type : VNB - Volvo PO
- In Item overview, Enter at respective column
  - Contract No and Item No
- System automatically fills the relevant data in Header and Item overview Columns from contract
- System request you to enter Order Qty. and delivery date
- System validates the Qty. and delivery dates w.r.t contract
  - if it is below or equal to target qty. and date between contract period then only system will create a PO
- Click Check button
- Click save
- System immediately updates the contract open target qty. accordingly

## How to create a PO w.r.t Value contract

Pre-requisite:

- You should have a Value contract
- By using Tcode = ME3L and Doc type = VWK (Volvo Value Contract)
- List out all value contract and note down the details of these contracts

Steps:

- Use Tcode = ME21N
- Select Doc type = VNB - Volvo PO
- In Item over view
  - Rest of the steps are same as Qty. Contract

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### Automatic creation of PO w.r.t. PR

- In General, Automatic PO Process will be adopted only for specific materials which are supplying by limited vendors.
- It is recommended to adopt this automatic PO only for the high volume and low value materials.

#### Steps:

- Create/change the Mat. Master(MM01/MM02)
  - Select Purchasing View
  - Set check box ☒ Automatic PO
- Create/change the Vendor master(Xk01/Xk02)
  - Select Purchasing Data Screen
  - Set check box ☒ Automatic PO
- Create a Purchasing Info Record (PIR) (ME11) for the above material and above Vendor
- Create a source List for the above material
- Create a Purchasing Requisition (PR) (ME51N) for the above material
- Set the check box ☒ source determination
- Execute the Tcode: ME59N
- Run it on Test mode first
- Then execute directly