LafargeHolcim

Iventory Management User Manual

Obsolete Management

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Distribution List

Function / Role	Company

Table of Contents

1. Introduction

This is the document that provides all the necessary information to enable the End User to perform their activities of SAP and no SAP systems, related with Inventory Management, on the respective go-life date, in line with the following criteria:

- Speed of execution of tasks
- Quality of data entry
- Compliance with management rules
- Maximum user ease

Throughout this document explains in detail each of the activities necessary to carry out the processes in Inventory Management.

2. Glossary & Abbreviations

The table below lists all the abbreviations used in the document with their complete description.

Abbreviation	Description
CEM	Cement
AFR	Alternative Fuels and Raw Materials
RMX	Ready mix
MIC	Mineral components
EMEA	Europe, Middle East and Africa
EBM	European Business Model
LHARP	LafargeHolcim Accounting and Reporting Principles
ACS	Asset Codification System
TIS	Technical Information System
BOM	Bill of Material
MRP	Material Requirements Planning
CKD	Clinker Kiln Dust
MEC	Month End Closing
MM	Material Management
IM	Inventory Management

MOBISYS	Mobile application (Bar coding; Scanner)
PPI	Process Performance Indicator

3. Organizational Elements

3.1 Organizational Elements used in Inventory Management Processes

3.1.1 Plant

General Concept

The plant represents a physical location within LafargeHolcim where products are manufactured, received or distributed.
In EBM, a plant could be:

- **Manufacturing plant:** cement plant, grinding station, blending station, AFR unit, MIC plant, quarry, pit, RMX plant (fix/mobile), asphalt plant, etc.

- **Shipping point / terminal / storage location**: when it is not located in the same physical location as the production plant and transportation costs must be added to the cost of products.

- **Office / headquarters / trading plant**: when they are not located in a production plant
- Third parties (suppliers): O2C tech.& legal requirement to create them as virtual plants (just 1 per country).

- **Power generation plants**: just if it is not located next to a CEM plant. If the power generation plant is located next to the CEM plant, only 1 plant code will be created in SAP for both CEM and power plant.

- **Mixed plants**: LHARP rule 11.1 2.2.2.5 to be followed. If the secondary business is below 20% of cash cost and below 1 Mio. USD, only 1 plant is created, assigned to the main business segment and secondary business is treated as by-product. If the thresholds are achieved, 2 plants should be created and assets properly split.

The material stocks will be managed and valuated at plant level.

3.1.2 Storage Location

General Concept

Organizational unit that allows to differentiate between various types of stock within a plant.

- Storage locations are created at plant level.
- Inventory Management is carried out at storage location level (Goods movements).
- Stocks are managed only on a quantity basis and not on a value basis at storage location level.
- Simplification of goods movements (Receipts, issues, transfers,…) management .
- Physical inventories are carried out at storage location level.
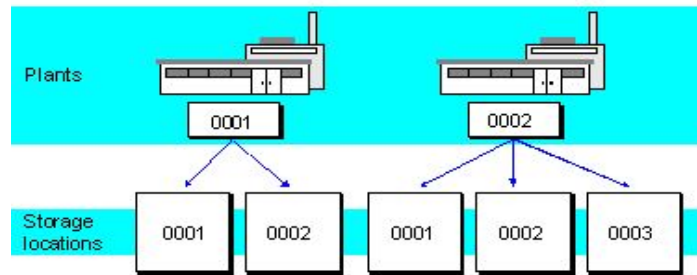
Coding

It has a 4 digit coding, "**XYYY**", where the first digit identifies the usage of the storage location and the remaining 3 are sequential numbers

- *F*: For finished/semi-finished products
- *G*: For general materials (maintenance materials, production materials – fuels, raw materials, packing,…)
- *V*: For virtual warehouse
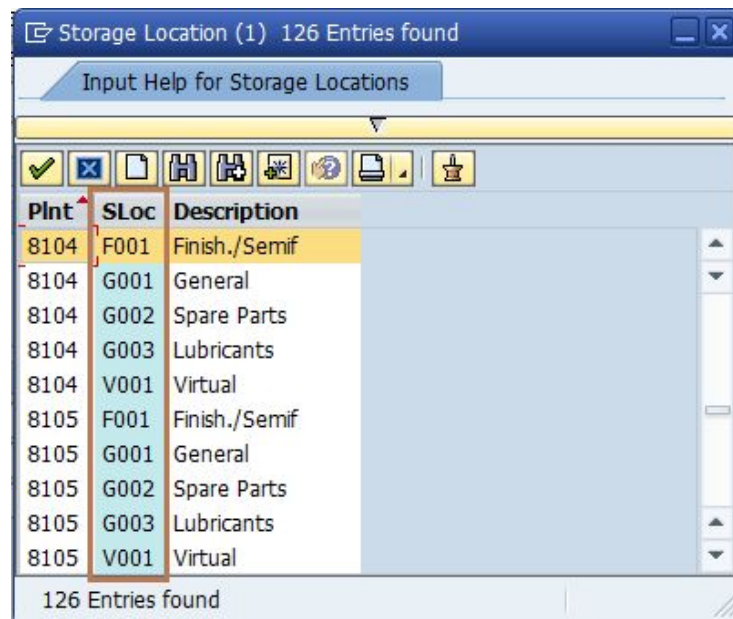
Storage Location for Finished and Semi-finished products

Follows the General EBM concept. A single storage location is created for each plant for finished/semi-finished products (Simplification)

It allows «negative stocks». Due to the fact that Process Order Confirmations are done on a weekly/monthly basis and outbound deliveries daily, it is necessary to allow the negative stocks during the month. As part of the Month End Closing the stocks are adjusted.

It is codified with a «*F*» letter as first digit:
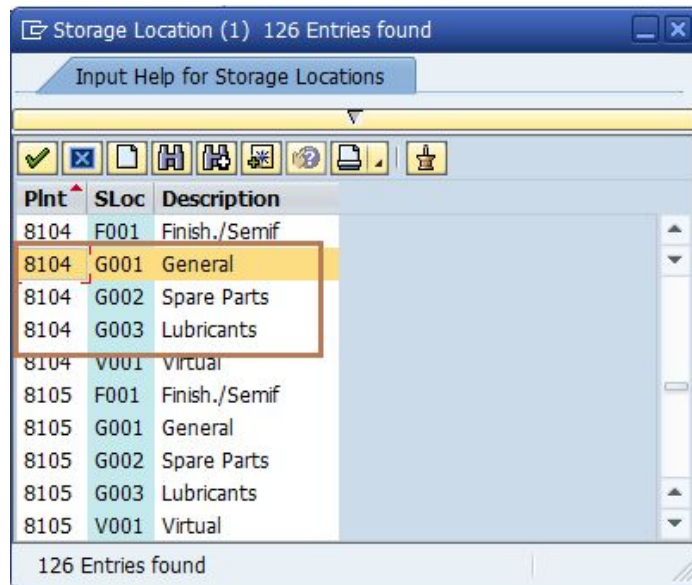
- **F001**: Finished/Semi-finished products

Storage Location for Production Materials

Follows the General EBM concept. A single storage location is created for each plant for production materials (Simplification).

It is codified with a «*G*» letter as first digit

- **G100**: General Storage for Production Materials
- **G200**: General Storage for Maintenance Materials

Detailed coding of storage location is described in Manufacturing Blueprint.

		Plant segment			
		CEM	**AGG**	**RMX**	**AFR**
Material types	Finish and semi-finish	F001 F900 *(stock in transit)* F002 *(quarry with internal transfer)* F00X *(ship / train loadings)*	F00X F900		F001
	Production and Raw	G100 G106 *(Intermediate stock)*	G1XX	G100	G100
	Maintenance	G200 G2XX *(special-legal storages)* G299 *(obsoletes)*	G200 G2XX G299	G200 G2XX G299	G200 G2XX G299
	Virtual	V200	V200		
	Packaged				G101 G161
	Handling				H101 H161

4. Obsolete management

4.1 Process Objectives

- Contribute to the quality and level of inventories in LafargeHolcim, having a direct impact on:
    - Net working capital levels: by contributing to define and maintain optimal inventory levels
    - Plant reliability: by having the right parts, in the right conditions, and at the right time to ensure the reliable operation of plant machinery and equipment
    - Financial Statements:
        - contributes to the reliable reporting of inventory balance
        - clear and proper segregation of duties
- Identification of obsolete items

4.2 Relevant Process Steps

- Identification of Obsoletes Items:

- Write-off and sale of obsolete items

- Disposal of obsolete items

4.3 Identification of Obsolete items

The following specific reports are required in order to effectively manage the Obsolete Management Process
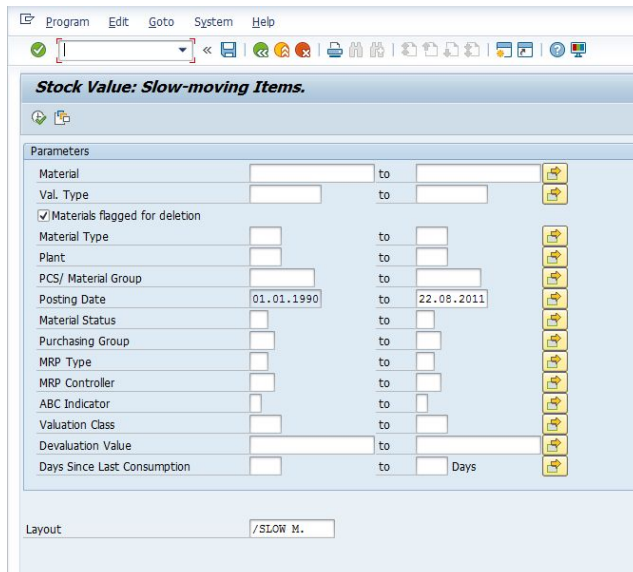
"ZMM004 – Slow movement items"
Report to list all the part sorted by last consumption date, in order to
- help to identify potential obsoletes
- help to calculate allowances for obsolescence
- Non-Stock materials excluded

Transaction:
ZMM004 - Stock Value: Slow-moving Items.

Enter your selection criterias and run the report with

Result: List of slow-moving items.

Movement types to be considered to calculate the last movement of the materials:

In the EBM system, the list of movement types part of the calculation of the last movement is standardized following below definition:

List of movement types part of the "Slow Moving Calculation"

Movement type	Movement type description
161/162	Returns for Purchase Order
201	Consumption to CC
221	Consumption to project
231	Consumption to sales
241	Consumption to asset
261	Consumption to order
601/602	Outbound delivery
701/702	Physical Inventory

ZMM003– Inventory Management Cockpit

Using the selection criteria field "Plant specific material status" it is possible to list all those materials classified as "Obsoletes".

Transaction:

ZMM003 - Inventory Management Cockpit

Enter your selection criterias and run the report with

Result: List of materials with status: OB - Obsolete

Identification of Obsoletes in the Material Master

The obsoletes items are categorized inside the Material Master with the field "Material Status" (MRP1 view)

Following picture shows the characteristics of the materials that are classified as "Obsoletes"

Cross-Plant Material Status	Description	Message if mat. is used in Purchasing	Message if mat. is used in BOM	Message if mat. is used in master recipe	Message if mat. is used in MRP	Message if mat. is used in Production Order	Message if mat. is used in PM	Message if mat. is used in Inventory Mgm.	Message if mat. is used in QM	Message if mat. is used in WM	Message if mat. is used in Costing
NS	Normal Stock										
BP	Blocked for Procurement	B			B						
BB	Blocked for Procure & Wareh	B			B			B			
BB	Blocked for BOM & recipes		B	B							
BT	Totally Blocked	B	B	B	B	B	B	B	B	B	B
CR	Critical (HARP)										
ST	Strategic										
OB	Obsolete	B	B	B	B	B	B	A	B	B	B
FD	Free Disposal	B	A	B	B	B	B		B	B	B
EX	To extinguish	B	A	A	B	A	A	A	B	B	A
OH	OH&S risk	A	A	A	A	A		A		A	A
SC	Inform to Security						A	A			

Short text legend: No message, A Warning, B Error message

4.4 Inventory Movements for sale/disposal of obsolete items:

Movement types for <u>disposal</u> of obsolete items
Transaction: MIGO (see description above)

MvT ▲	Movement Type Text
551	GI scrapping
552	RE scrapping
553	GI scrapping QI
554	RE scrapping QI
555	GI scrapping blocked
556	RE scrapping blocked

Movement types for <u>sale</u> of obsolete items:

MvT ▲	Movement Type Text
601	GD goods issue:delvy
602	RE goods deliv. rev.

5. Process Performance Indicators

For the PPI indicator point of view the indicator that are more affected are the ones highlight in green of the following lilist of Inventory management indicators

PPI notation	Functional definition	Priority	UoM	Business objective
Non-standard material movements [count]	Number of non-standard material movements The categorization of the goods movement is completed and delivered as per the attached document. This is a combination of the input from the workstreams, a precaution principle was applied and the highest criticality was allocated in case of conflict. It includes as well the movements not identified by the workstreams but existing in the system in configuration and/or used in the movement extraction from 2012 available (to which the highest criticality was applied). Some arbitrage were done after review with the various team members in accordance with the best practices.	1	#	Inventory management exceptions (inventory differences, scrapping, reversals, transfers) should be minimized

Note:
- *The Standard movement types (regular business process) are as following :*
  101, 102, 161, 162, 201, 202, 221, 222, 231, 241, 242, 251, 252, 261, 262, 291, 292, 301, 302, 303, 304, 305, 306, 309, 310, 311, 312, 313, 314, 315, 316, 321, 322, 323, 324, 325, 326, 341, 342, 343, 344, 351, 352, 411, 412, 541, 542, 543, 544, 601, 602, 631, 632, 633, 634, 641, 642, 643, 644, 647,648, 653, 654, 655, 656, 703, 704, Z01, Z02
- *The Critical movement types (foreseen but monitoring required) are as following :*
  103, 105, 122, 511, 512, 531, 532, 551, 552, 553, 554, 555, 556, 701, 702
- *The Exeptional movement types (not foreseen but configured and not blocked by the system and/or used despite not foreseen) are as following :*
  141, 142, 232, 281, 282, 317, 318, 319, 320, 331, 332, 333, 334, 335, 336, 340, 349, 350, 413, 414, 415, 416, 441, 442, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 501, 502, 503, 504, 505, 506, 521, 522, 523, 524, 525, 526, 557, 558, 561, 562, 563, 564, 565, 566, 571, 572, 573, 574, 575, 576, 581, 582, 603, 604, 606, 621, 622, 646, 651, 661, 662, 671, 672, 6A5, 6A6, 6B5, 6B6, 6W5, 6W6, 707, 708, 711, 712, 713, 714, 715, 716, 717, 718, 721, 722, 731, 732

PPI notation	Functional definition	Priority	UoM	Business objective
Slow moving stock (no consumption within last 365 days) [value ratio]	Materials for which no goods movements were posted within the period of analysis This analysis is based on quantity managed material master records that have a positive stock quantity at the moment of analysis and no client or plant deletion indicator set. Slow or non moving stock is defined as materials for which no goods movements were posted within the period of analysis or the latest goods movement is more than 365 days ago.	1	%	Slow / non moving inventory PPI will help identifying inadequate inventory management / materials planning procedures. (eg: materials used in a maintenance process but not decreased from inventory in connection to a work order, materials stored but never used in any process). Slow / non moving inventory may result in write-offs and as a result, capital loss (not driven by the PPI but by LHARP process). Therefore, due to the impact on costs, un necessary funds immobilization, slow moving stock should be limited as much as possible.
MRP usage	Nr of PCS03 &PCS04 in MRP vs total number of PCS03 & PCS04 It measures the ratio of purchase requisitions created through the MRP to the total of created purchase requisitions (for the PCS 03* and 04*) .	2	%	
Use of bar coding system	Nr of WH activities w/ bar coding vs total material documents This measures the usage of the Bar Coding system: Goods Issue , Goods Receipt and physical inventory(for the PCS 03* and 04*)	2	%	Optimice the GI posting by using the tool and saving time avoiding manual tasks
Reversal material movements	Number of reversed material documents In a good process there should not be reversals of goods movements	2	%	Material movement reversals should be minimized
Material inactive with pending open items (Count)	Volume of material flagged for deletion or inactive with existing inventory To be detailed : Materials can be flagged for deletion but having existing stock registered and valuated. The stock level is not allowed for transfer, sell, usage in production hence should be disposed.	tbd	#	To be detailed : The aim is to avoid managing inventory level of items that cannot be used for any business purpose and still need to be inventoried, physically handled on a regular basis.

6. Annexes

6.1 Transaction List

Transaction	Description

Physical Inventory	
ZMM004	Slow Movement Management
Stock levels	
MMBE	Stock Overview
MB51	List of Material Documents
MB52	Display Stock List
MB5T	Display Stock in Transit
MB5B	Display Stocks for Posting Date
MB54	Display Consignment Stocks
MD04	Display Stock/ Requirement Situation

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