

SAP Batch Merge Guide for Consultants

Applies to: Materials Handling for ABAP Programmers.

Summary

The batch merge custom development was carried out in order to provide additional functionality for handling materials in bulk silos in SAP.

When the development is activated for a bulk silo bin in SAP, the addition of a new batch into that bin will merge the existing batch with the new batch, such that a single batch of material is created with the batch number of the newly introduced material.

The batch merge can be triggered by all or some of the following movements as defined in configuration, GR vs. purchase order, GR vs. process order, GR vs. process order for by-product and bin to bin transfer.

The batch merge takes place in the background only in bins which have been configured to provide this functionality. The batch merge transaction uses movement type ZY1 which ensures batch traceability of the merged batches.

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Created on: 28/10/2006

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Batch Merge Custom Development

Summary:

The batch merge custom development was carried out in order to provide additional functionality for handling materials in bulk silos in GLOBE SAP.

When the development is activated for a bulk silo bin in SAP, the addition of a new batch into that bin will merge the existing batch with the new batch, such that a single batch of material is created with the batch number of the newly introduced material.

The batch merge can be triggered by all or some of the following movements as defined in configuration, GR vs. purchase order, GR vs. process order, GR vs. process order for by-product and bin to bin transfer.

The batch merge takes place in the background only in bins which have been configured to provide this functionality. The batch merge transaction uses movement type ZY1 which ensures batch traceability of the merged batches.

Setting up the Batch Merge Process:

1. There are several steps that must be carried out on a SAP system before batch merge functionality can be activated for a particular warehouse. Please see appendix 1 for a description of these steps.
2. Bin configuration: Without configuration a bulk silo bin will not 'batch merge. To activate a bulk silo bin to batch merge when stock is moved into that bin it is necessary to maintain a customisable table, as follows:

Table /EUR/RGBT_WARSTO (this must be maintained by GC Configurators)

This attached document is an example configuration document for this table.



"GDEVWR0002047_E
Batch Merge Config D:

Display View "WareHouse Storage Locati

W...	Typ	Storage Bin	Mvt type	MTy
732	140	BINHALB	ZY1	101
732	140	BINHALB	ZY1	103
732	140	BINHALB	ZY1	521
732	140	BINHALB	ZY1	999
732	140	BINROH	ZY1	101
732	140	BINROH	ZY1	103
732	140	BINROH	ZY1	521
732	140	BINROH	ZY1	999

The batch merge configuration table contains the following elements...

Storage type in which the batch merge bin exists

Warehouse No. in which the batch merge bin exists.

IM batch merge movement type WM 'trigger' movement type

The IM batch merge movement type indicates the which movement type should be used in conjunction with transaction MB1B to merge the batches. Currently this should ALWAYS be ZY1. (The IM movement type is configurable to allow for future changes).

The WM movement type indicates which WM movement types will 'trigger' a batch merge event.

The options for this are:

WM Mvt Type	101	GR vs. purchase order
WM Mvt Type	103	GR vs. process order
WM Mvt Type	521	GR by-product vs. process order
WM Mvt Type	999	Bin to bin transfer

In the example above, an entry has been made for each bin with each WM trigger movement. If a particular WM movement would not occur in a particular bin or there is a requirement to exclude a particular movement type from triggering a batch merge event, then that WM movement type can be omitted from the table entry for the bin.

Using the Batch Merge Development:

Once the batch merge process has been activated for a bulk silo bin the process should occur in the background whenever a new batch of material is added to the bin which already contains a batch of the

same material, (there can be multiple materials in the bulk silo – only materials with the same material number are batch merged).

Certain criteria must be met before the batch merge event will take place. If these criteria are not met then the user carrying out the movement of stock into the bulk silo will receive an 'Express Update' message in their SAP inbox alerting them to the failure. The process for manually carrying out a batch merge is described below.

The criteria which must be met for a successful batch merge event are:

1. A residual batch of material exists in the bulk silo bin
2. The residual batch of material is in UNRESTRICTED status
3. There is only one batch of the residual material in the bulk silo

If any of these criteria are not met the batch merge will not take place. The user will be alerted to the failure via an 'Express Update' message. The reason for the failure must then be investigated, corrected and the batch merge carried out manually.

It is possible to move a 'new' batch of material into the bulk silo bin which is in QI status but the residual batch must be in unrestricted status in all situations:

New batch in U status + residual batch in U status = batch merge OK

New batch in Q status + residual batch in U status = batch merge OK

New batch in U status + residual batch in Q status = batch merge FAIL

New batch in Q status + residual batch in Q status = batch merge FAIL

In the scenario where a Q status batch is added to a U status batch the following stock situation will occur:

500 KG new batch no. X in Q status + 100 KG residual batch no. Y in U status

=

500 KG batch X in Q status

100 KG batch X in U status

The inspection lot for the 500 KG of batch X in Q status must be carried out, the stock situation will then be:

600 KG batch X in U status

Troubleshooting:

The most likely cause of a batch merge failure is that the residual batch is still in Q status when the new batch is added to the bulk silo bin.

To check this use transaction LX02 to determine which batches of stock are in the bulk silo bin and what their quality status is.

All outstanding inspection lots for the batches should be carried out after which the stock status should be unrestricted for all batches of material in the bin.

Use transaction MB1B (Stock Transfer Posting) to manually batch merge the batches in the bulk silo bin. Enter movement type ZY1, plant and storage location in the initial transfer posting screen.

Enter Transfer Posting: Initial

Print

The New Items screen is displayed....

Enter Transfer Posting: New Items

Movement type **ZY1** TF PTmat->mat Unr

Recipient

Receiving plant **0931** Recv. SLoc **0001** Receiving mat. **43000550**

Item	Material	Quantity	UnE	SLoc	Batch	Re	Plnt
1	43000550	100		0001	0931000020		0931
2				0001			0931
3				0001			0931

Enter the quantity and batch number of the residual, (i.e. initial batch which was in the bulk silo bin before the batch merge failure), into the initial transfer posting screen.

The next screen will appear as follows:

Enter Transfer Posting: New Item 0001

Movement Type **ZY1** TF PTmat->mat Unr

Material **43000550** Chow Dual Chicken

Quantity in

Unit of Entry **100** **KG** Plant **0931** Stor. Loc. **0001**

Batch **0931000020**

Account Assignment

Goods Recipient

Receiving mat. **43000550** Receiving plant **0931** Recv. SLoc **0001**

Receiving batch **0931000024**

Amt (Loc. Crcy)

No. Containers

Text

The 'Receiving Batch' MUST be changed to the batch number of the 'new' batch, (i.e the batch number of the material added during the transaction in which the batch merge failed).

Save/Post the transaction.

Nb. If the residual batch in the manual batch merge process was the only quant of that material/batch in the warehouse then the posting change in WM will occur automatically. However, if more than one quant of the

residual material/batch existed (e.g. in another WM bin) then it will be necessary to use transaction LU04 to complete the posting change.

This can be checked by using transaction LX02 to look at the bulk silo bin following the manual batch merge process. If the batches have merged successfully then there will be a single quant with the new batch number. If not then use transaction LU04 to pick the correct quant of the residual batch to merge with the new batch.

Appendix 1

In order to use batch merge on a particular client and in a particular warehouse on that client several initial set up tasks need to be performed.

1. 'One off' tasks per client

For batch merge to be used on a SAP client a number of tasks must be performed. These tasks only need to be carried out once per client, therefore, if another market is already using batch merge and also using the same client as a new market, these tasks will not need to be repeated.

Task 1 Create User Event Z_BATCHMERGE (transaction SM62)

Task 2 Background job ZUGB152_BATCH_MERGE needs to be created in the system -the job should be triggered after the above event and should execute ABAP program /EUR/UGBPTR_BATCH_MERGE.

2. Activate batch merge per warehouse

User exit table /GLB/RGTUSEREXIT needs to be maintained for the required

warehouse as market identifier using transaction SM30. This is a customisable table and will need a configuration work request submitted to GC Configuration for creation and transport of new entries.

The table should be populated as per this example (warehouse no. 732 used in this example):

EXIT_ID	SYSTEM_TYPE	MARKET_ID	F_TYPE	F_NAME
S_ZXLTOU01_01	U	732	AF	/EUR/RGB_S_ZXLTOU02_01_AF
S_ZXLTOU02_02	U	732	AF	/EUR/RGB_S_ZXLTOU02_01_AF

3. Activate storage bins in table /EUR/RGBT_WARSTO as described above in the section on 'Setting up the Batch Merge Process'

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