A Step-by-Step Guide to Configure the Flexible Hazardous Substance Check

Applies to:
SAP ECC 6.0 EhP 3. For more information, visit the Enterprise Resource Planning homepage.

Summary
This document explains how to configure the flexible hazardous substance check for putaway processes in warehouse management. It includes the storage type search and the stock placement check for each storage type. The guide includes the required customizing steps, the master data, and a demonstration of a simple putaway process to determine the correct storage type.

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# Table of Contents

Introduction ........................................................................................................................................ 3  
Customizing Hazardous Substance Master ....................................................................................... 3  
Assign Countries and Regions to Warehouse Numbers ...................................................................... 5  
Maintain Hazardous Substance Master .............................................................................................. 5  
Update Material Master ...................................................................................................................... 6  
Activate Flexible Hazardous Substance Check ................................................................................... 6  
Determine Storage Type Search Sequence .......................................................................................... 6  
Activate Hazardous Material Management ...................................................................................... 7  
Configure and Assign Check Schemas ............................................................................................... 9  
Test Configuration ........................................................................................................................... 10  
Copyright ......................................................................................................................................... 13
**Introduction**

Since EC 6.0 EhP 3 it is possible to use the flexible hazardous substance check. The function is activated with the business function OPS_EHS_CI_1 Environment, Health and Safety.

The business function uses the hazardous substance master (TX: HSMD) instead of the hazardous material (TX: VM03) for warehouse processes.

Second, the new business function allows flexible checks for putaway processes in the warehouse management. As a new functionality it includes a new functionality to check for allowed mixed storage in the warehouse. The checks are configured via function modules. The function modules can be enhanced to customer needs.

The document shows the configuration of a simple putaway check for hazardous substances, including the storage type search sequences and the allowed storage types.

**Customizing Hazardous Substance Master**

First the storage hazards needs to be configured:

SAP Customizing Implementation Guide → Environment, Health & Safety → Hazardous Substance Master → Master Data → Specify Storage Hazards

In this IMG activity, you specify the types of storage hazards and the corresponding hazard ratings. The storage hazard types and the hazard ratings are then available in the hazardous substance master for the assignment of hazardous substances, so that you can specify for each hazardous substance which storage hazard it possess. Since the regulations for hazardous substances can be different from region to region, in this activity you can assign the storage hazard types to individual countries and regions.

First you need to configure 2 or more storage hazard types:

Note: In order to use that information for the storage type determination and the check for allowed storage types, you need to name them LGK for the storage class and WGK for the water pollution class.

For each storage hazard type you define one or more hazardous ratings.
While checking later on the allowed water pollution class for a storage types, SAP internally converts the hazardous ratings into the predefined water pollution classes 0,1,2,3 as they are used be the hazard material.

The next step is to assign a country and optional a region for the storage hazard type (SHT). For each hazard substance master valid for a country and a region, two storage hazard numbers can be assigned. This is the minimum requirement to configure the hazardous substance master.
Assign Countries and Regions to Warehouse Numbers

The hazardous substance master in the SAP Environment, Health and Safety (EH&S) component contains validity areas. These specify in which countries and regions or in which organizational units the data is valid. In this IMG activity, you specify in which countries and regions the hazardous substance warehouses are located.

The customizing path is:

SAP Customizing Implementation Guide → Environment, Health & Safety → Hazardous Substance Master → Flexible Hazardous Substance Check → Assign Countries and Regions to Warehouse Numbers

The regions do not necessarily need to be maintained.

Maintain Hazardous Substance Master

The next step is to manually create or update the hazardous substance master. If EH&S specifications are used, the hazardous substance master can also be filled from the specification.

The hazardous substance master is maintained in transaction HSMD.

The path is:

Logistics → Environment, Health & Safety → Hazardous Substance Management → Hazardous Substance Master → Edit Hazardous Substance Master

All other data are not relevant for the putaway process or additional checks. Based on the country and region, the hazardous substance master is valid for the specific warehouse number.
Update Material Master

To activate the hazardous substance checks you have to flag the material master as relevant for Hazardous Substance. The setting can be found on the tab WM Execution.

Activate Flexible Hazardous Substance Check

The new check methods need to be activated first.

SAP Customizing Implementation Guide → Environment, Health & Safety → Hazardous Substance Master → Flexible Hazardous Substance Check → Activate Flexible Hazardous Substance Check

In this IMG activity, you activate the flexible hazardous substance check. When hazardous substances are put away, the system uses the EH&S Hazardous Substance Master and not the Hazardous Material (Transaction VM03, Table MGEF)

Determine Storage Type Search Sequence

The system must know into which storage type the material should be placed. The table "Storage type search", which you are setting here, provides this information. In this table, you store the preferred sequence of storage types to be searched for the material for putaways.

SAP Customizing Implementation Guide → Logistics Execution → Warehouse Management → Strategies → Activate Storage Type Search
Materials with putaway indicator 006, Storage Class 3A or 3B and Water Pollution Class 2 are putaway in storage type 006, materials without storage class and water pollution class are putaway in storage type 001.

**Note:** Similar Settings exists for the storage sections

In order to maintain the storage class here, you have to maintain them first in customizing.

SAP Customizing Implementation Guide → Logistics Execution → Warehouse Management → Hazardous Materials → Master Data → Define Storage Class

The storage class classifies hazardous materials according to their storage conditions. You have the possibility of grouping together hazardous materials with the same or similar hazardous features. In the SAP standard system, warehouse classes 1 through 13, which are frequently used in practice, are preset.

The storage classes maintained here are equivalent with the storage class you have defined for the hazardous substance master. Hence they should be keyed in the same. Maintaining the storage classes here again is only necessary in order to customize the storage type and storage section placement, which reference to that table.

With this configuration, the SAP system searches for the right sequence of storage types and storage sections for putaway.

**Activate Hazardous Material Management**

In order to allow hazardous substances to be placed in certain storage type, you have to configure the hazardous material management. The configuration is the same whether you are using the Hazardous Material (as in transaction VM03 and table MGEF) or the EH&S Hazardous Substance Master (as in transaction HSMD). So don’t get confused by the names and the different areas of configuration in the implementation guide.
The customizing path is:

**Stock Placement of Hazardous Materials**

Process the objects in the specified sequence

<table>
<thead>
<tr>
<th>Haz. material check</th>
<th>Activate</th>
</tr>
</thead>
</table>

**Assignments**

<table>
<thead>
<tr>
<th>Region Codes</th>
<th>Warehouse number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Storage Classes Allowed</td>
<td>Stor. type</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Stor. ty. search</th>
<th>Determine search sequence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stor. section search</td>
<td>Determine search sequence</td>
</tr>
</tbody>
</table>

First you activate the storage check for each single storage type. The activation is done for the storage type and the storage section separately.

In addition, you defined the allowed water pollution class. This classification is hierarchical, that is, everything that is allowed for water pollution class (WPC) 3 is also allowed for WPCs 0 through 2.

**Change View "Storage section check and haz. material mgmt per storage type"**

<table>
<thead>
<tr>
<th>Storage Section Checking and Haz. Mtrl Mgmt per Stor. Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>WNo</td>
</tr>
<tr>
<td>-----</td>
</tr>
<tr>
<td>089</td>
</tr>
</tbody>
</table>

The region code for the warehouse does not need to be assigned. The assignment of warehouse number to country and region, which is relevant for the hazardous substance master is already assigned in the EH&S configuration shown above.

The next step is to define the allowed storage class per storage type.

**Change View "Storage Classes Allowed per Storage Type": Overview**

<table>
<thead>
<tr>
<th>Stor. Classes Allowed per Stor. Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>WNo</td>
</tr>
<tr>
<td>-----</td>
</tr>
<tr>
<td>089</td>
</tr>
</tbody>
</table>
The priority is not important here. The block is only of a temporary nature, that is, this storage class is really allowed in this storage type, but at the moment no stock placements are possible. Confirm stock placement means that although the transfer order is generally processed in the background, with the stock placement of this storage class into this storage type processing is always displayed in the foreground. The system issues an appropriate message.

The storage type search and storage section search is the same configuration as already shown and discussed above.

Configure and Assign Check Schemas

Up to now, the flexible hazardous substance check has been activated and the allowed storage classes and water pollution class for the storage types has been assigned.

Now the check schemas need to be configured and assigned to the single storage types.

The customizing path is:

SAP Customizing Implementation Guide → Environment, Health & Safety → Hazardous Substance Master → Flexible Hazardous Substance Check → Define Check Schema and Methods

In this IMG activity, you create check schemas and check methods, and assign the check methods to the check schemas.

Each check method has a function module assigned. In standard, SAP believes 3 function modules for hazardous substances checks.

FM HSM301_CHECK_LGKMX checks the allowed mixed storage
FM HSM301_CHECK_LGK checks the allowed storage class
FM HSM301_CHECK_WGK checks the allowed water pollution class

The function modules can be replaced by customer specified function module in order to conduct specific checks.

In our example we want to check correct the storage class and the water pollution class for the destination storage type.

Therefore we create a Hazardous Substance Check schema HSM01
The schema consists of two methods; the check for the storage class and for the water pollution class.

### Change View "Check Schema/Method Assignment": Overview

<table>
<thead>
<tr>
<th>Check Method</th>
<th>Check Method Desc.</th>
<th>RespType</th>
<th>Sequence</th>
</tr>
</thead>
<tbody>
<tr>
<td>STL0K</td>
<td>Standard Storage Class</td>
<td>Defined by Check Moda...</td>
<td>1</td>
</tr>
<tr>
<td>STW0K</td>
<td>Standard Water Pollution Class</td>
<td>Defined by Check Moda...</td>
<td>2</td>
</tr>
</tbody>
</table>

The last step is to assign the hazardous substance check to a warehouse number, storage type, and storage section.

SAP Customizing Implementation Guide ➔ Environment, Health & Safety ➔ Hazardous Substance Master ➔ Flexible Hazardous Substance Check ➔ Assign Check Schemas in Warehouse Management

In this IMG activity, you assign the check schemas in Warehouse Management.

### Change View "Check Schema/WM Objects Assignment": Overview

<table>
<thead>
<tr>
<th>W...</th>
<th>Typ</th>
<th>Sec</th>
<th>HSM Chk Schema</th>
</tr>
</thead>
<tbody>
<tr>
<td>089</td>
<td>006</td>
<td></td>
<td>HSM01</td>
</tr>
</tbody>
</table>

In our example the newly created check schema HSM01 is assigned to the warehouse number 089 and storage type 006.

### Test Configuration

In order to test the configuration, a goods receipt with automated transfer order creation for the material LES-HAZMAT is posted.

### Enter Other Goods Receipts: Collective Processing

<table>
<thead>
<tr>
<th>Movement Type</th>
<th>GI receipt w/o PO</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recipient</td>
<td>Test01</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Item</th>
<th>Material</th>
<th>Quantity</th>
<th>Unit</th>
<th>SElOC</th>
<th>Batch</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>LES-HAZMAT</td>
<td>10</td>
<td>EA</td>
<td>0089</td>
<td></td>
<td>3000</td>
</tr>
</tbody>
</table>

The transfer order is created for the destination storage type 006.
Now the hazardous substance master is changed to storage class 3A.

The storage type search still determines the destination storage type 006. But in storage type 006, only storage class 3B is allowed.

Hence the transfer order creation fails. The storage bin search log shows the following:
The same would apply for the water pollution class check.