

CNV-2017 Materials - Class Type 001

Status	Approved
Owner	HANCOCK-ext, John CLARKE-ext, Steve
Stakeholders	

Purpose

The purpose of this document is to define the conversion approach to upload Materials - Class Type 001 into S/4 HANA as part of the Material Data Migration.

Link to MDS: [DD-FUN-050 Master Data Standard_2017-Material master - Class Type 001](#)

Conversion Scope

The scope of this document covers the approach for converting active Class data linked to Class Type 001 from Legacy Source Systems into S/4HANA following the Material Master Data Design Standard. The Business and S2P Functional Team have decided not to use legacy Classes, but instead to create 4 new Classes linked to Class Type 001. (It is possible that this number may change in the future.)

The 4 new Classes are documented in the MDS on the "Governance" sheet in the "Field Governance Rules" section, in rule #1, Class, as part of the Rule Description.

Click [here to go to the Conversion Spec for 2019](#) to see the full set of relevancy rules for Materials.

List of source systems and approximate number of records

Source	Scope	Source Approx No. of Records	Target System	Target Approx No. of Records
PF2 & WP2	4 new To-Be Classes linked to Class Type 001 has been defined by the Business and the S2P Functional Team. The new Classes will be captured in a DCT. Service Master records that will become Materials in the target are out of scope. See the mail from Simran. Service Master Data Used in 2017 CLASS TYPE 001 in S4H.pdf	WP2: 22,838 (3,001 **) PF2: 5,167 (6 **) ** Linked to relevant materials for info purposes ** No Classes are linked to Service Materials	S4H	28,005 (3,007 **) ** Linked to relevant materials for info purposes ** No Classes are linked to Service Materials
DCT	Linking Classes to Characteristics (2018 Materials - Characteristics of Class Type 001)	Classes: 4 Characteristics: 43	S4H	53

Jira Task to track the Classes that will be added to CLASS TYPE 001:

 [PDM-770](#) - Jira project doesn't exist or you don't have permission to view it.

Profiling

Legacy System	Total Relevant Materials	Relevant Materials assigned to Classes
PF2	104,484	4,224
WP2	72,378	25,866

Top 30 Classes by Legacy system

Legacy System	CLASS	Material Count
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PF2	Z_MAT_PL_ARCH	3,202
	SPARE_PARTS_TC	989
	Z_ORTEMS	6
	DANGEROUS_GOOD	7
	Z_SAD_MM	7
	Z68-42169	1
WP2	Z_CM_MAT	6,043
	LIP0020148	3,447
	M001	2,898
	Z_MAT_PL_ARCH	2,088
	MATERIAL_SEGMENTS	935
	LIP0034040	842
	Z_MAT_ADDITIONAL	456
	Z_MAT_CRIT	418
	LIP0008485	343
	CRIT_IND	333
	LIP0007716	226
	LIP0031355	210
	LIP0032812	120
	LIP0034030	94
	LIP0032484	82
	LIP0008484	81
	LIP0032488	78
	LIP0031345	69
	LIP0034571	69
	LIP0008411	68
	LIP0034568	61
	LIP0008367	60
	LIP0034050	60
	M002_H_05_AH	57
	LIP0008258	54
	LIP0034000	54
	M002_A_08_AT	52
	LIP0031324	51
	LIP0020168	50
	LIP0008394	46

Predecessor Objects

Material (Characteristics of CLASS TYPE -001) (2018) **Material - Class Type 001 (2017).**

Additional Information

Multi-language Requirement

Multi language is supported for Materials - Class Type 001. Login via a different language will show the description displayed in the logon language if the language key is maintained.

The following languages are allowed:

- Core languages: EN - English, FR - French, IT - Italian and ZH - Mandarin.
- Additional languages: PT - Portuguese, DE - German and ES - Spanish.

It is now mandatory that a Description is required for each Core and Additional language.

Document Management

Not Applicable

Legal Requirement

Not Applicable

Special Requirements

Not Applicable

Target Design

The technical design of the target for this conversion approach.

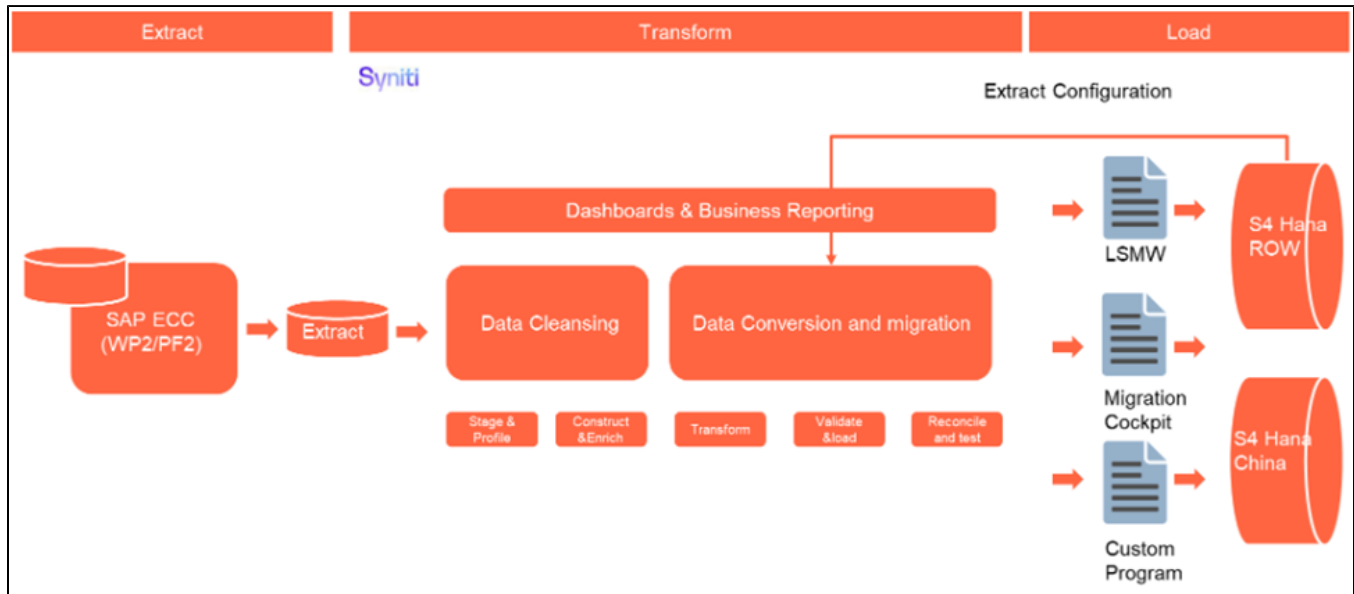
Table	Field	Field Description	Data Type	Length	Requirement
KLAH	CLINT	Internal Class Number	NUMC	10	Required
KLAH	KLART	Class Type	CHAR	3	Required
KLAH	CLASS	Class	CHAR	18	Required
KLAH	STATU	Status	CHAR	1	System
KLAH	LOCLA	Local class	CHAR	1	Not Required
KLAH	VONDT	Valid from	DATS	8	System
KLAH	BISDT	Valid to	DATS	8	System
KLAH	PRAUS	Same classification	CHAR	1	System
KLAH	ANAME	Created By	CHAR	12	System
KLAH	ADATU	Created On	DATS	8	System
KLAH	ANZUO	No of Assignments	CHAR	1	System
SWOR	CLINT	Internal Class Number	NUMC	10	Required
SWOR	SPRAS	Language Key	LANG	1	Required
SWOR	KLPOS	Item Number	NUMC	2	Required
SWOR	KSCHL	Class Description	CHAR	40	Required
SWOR	KSCHG	Keyword (Upper Case for Matchcode)	CHAR	40	Required
Table	Field	Field Description	Data Type	Length	Requirement
KSML	CLINT	Internal Class Number	NUMC	10	Required
KSML	POSNR	Item Number	NUMC	3	Required
KSML	IMERK	Internal Characteristic	NUMC	10	Required
KSML	KLART	Class Type	CHAR	3	Required

Data Cleansing

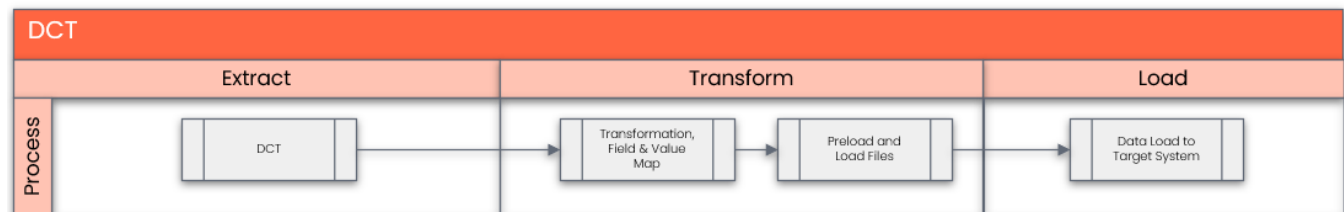
ID	Criticality	Error Message/Report Description	Rule	Output	Source System	Syniti Report Required
		Not Applicable				

Conversion Process

The high-level process for Classes that will be migrated are represented by the diagram below:



The high level process for Classes that will be captured in a DCT are represented by the diagram below:



Field Governance Rules					
These governance rules apply to the individual fields within the data record.					
Rule #	Field Label	Rule Description	Validation Method	Conditional Logic	Cleansing Rule (Also see Data Cleansing section above)
1	KLAH-KLART	Only records with CLASS TYPE 001 are being migrated.	Upfront Automated	KLART = '001'	
3	SWOR-SPRAS	The following language are allowed: DE, EN, ES, FR, IT, PT, ZH.	Upfront Automated		No Class Description in Allowed Languages

Data Privacy and Sensitivity

Not Applicable

Extraction

Class data for CLASS TYPE 001 that are identified by data entered into a DCT and marked in the DCT for migration. (The DCT also contains data for new Classes that don't exist in the Source Systems.) No data for Service Master records that will become Materials in the target will be extracted.

Extraction Run Sheet

Req #	Requirement Description	Team Responsible
1	Extract data from source system based on records in the DCT that are marked for migration.	Syniti

Selection Screen

Selection Ref Screen	Parameter Name	Selection Type	Requirement	Value to be entered/set
Not Applicable				

Data Collection Template (DCT)

DCT Rules for Class:

Field	Field Description	Rule
KLART	Class Type	Read-only field. Default to '001'.
CLASS	Class	
STATU	Status	Default to '1'.
LOCLA	Local class	Default to Blank. MDS changed after CS completed. No longer required.
VONDT	Valid from	Default to Today.
BISDT	Valid to	Default to '99991231'.
PRAUS	Same classification	Default to Blank.
SPRAS	Language Key	Default to 'EN'. All Classes must have a description in at least 'EN'. Allow the Description to be captured in multiple languages, with the following languages allowed: DE, EN, ES, FR, IT, PT, ZH. Convert to internal code.
KLPOS	Item Number	Read only field. Counter. Logic moved to Transformation Rules.
KSCHL	Class Description	• Ensure no duplicate (With other Classes within Class Type 001) and language key. • Ensure populated with Description as per specified Language. • Approach if the description is more than 40 characters: Abbreviate to required length (40 Chars). • Ensure that it does not include any of the below characters: ; Semi-colon : Colon :: Double Colon ? Question Mark / Forward Slash @ At sign & Ampersand = Equal Sign + Plus Sign \$ Dollar Sign % Percent Vertical Bar [] Left or Right Square Bracket " Double Quotes
KSCHG	Keyword (Upper Case for Matchcode)	Read only field. Upper case version of KSCHL. Logic moved to Transformation Rules.

DCT Rules for linking Classes to Characteristics (DCT.KSML)**:

Field	Field Description	Rule	Tool Tip	zComment	zDelete
CLASS	Class Name	Mandatory. Use drop-down based on S4H. KLAH-CLASS.	Name used to uniquely identify a class within a class type.		
ATNAM	Characteristic Name	Mandatory. Use drop-down based on S4H. CABN-ATNAM.	Unique technical name identifying the characteristic (e.g. LENGTH, COLOR).		

** Load File: [2023-Class to Characteristic Load File.xlsx](#)

Extraction Dependencies

Item #	Step Description	Team Responsible
1	The list of Classes will be provided by the Functional Team in the Configuration Document based on the To-Be design.	S2P Functional Team

Transformation

The Target fields are mapped to the applicable Legacy field that will be its source, this is a 3-way activity involving the Business, Functional team and Data team. This identifies the transformation activity required to allow Syniti Migrate to make the data Target ready:

1. Prepare target-ready data in the structure and format that is required for loading via prescribed Load Tool. This step also produces the load data ready for business to perform Pre-load Data Validation

Transformation Run Sheet

Item #	Step Description	Team Responsible
1	Verify that data is extracted from the DCT.	Syniti / S2P Data Team
2	Verify that data is extracted from both source systems.	Syniti / S2P Data Team
3	Transformation jobs are ready for execution.	Syniti
4	Review and Validate Error and Preload Reports	Syniti
5	Generate Load Files	Syniti

Transformation Rules

Transformation Rules for Classes:

Rule #	Source system	Source Table	Source Field	Source Description	Target System	Target Table	Target Field	Target Description	Transformation Logic
1	DCT	KLAH	CLINT	Internal Class Number	S4H	KLAH	CLINT	Internal Class Number	System generated
2	DCT	KLAH	KLART	Class Type	S4H	KLAH	KLART	Class Type	Copy As-Is (will always be '001')
3	DCT	KLAH	CLASS	Class	S4H	KLAH	CLASS	Class	Copy As-Is
4	DCT	KLAH	STATU	Status	S4H	KLAH	STATU	Status	Copy As-Is
5	DCT	KLAH	LOCLA	Local class	S4H	KLAH	LOCLA	Local class	Copy As-Is. MDS changed after CS completed. No longer required.
6	DCT	KLAH	VONDT	Valid from	S4H	KLAH	VONDT	Valid from	Copy As-Is
7	DCT	KLAH	BISDT	Valid to	S4H	KLAH	BISDT	Valid to	Copy As-Is
8	DCT	KLAH	PRAUS	Same classification	S4H	KLAH	PRAUS	Same classification	Copy As-Is
9	DCT	KLAH	ANAME	Created By	S4H	KLAH	ANAME	Created By	System generated
10	DCT	KLAH	ADATU	Created On	S4H	KLAH	ADATU	Created On	System generated
11	DCT	KLAH	ANZUO	No of Assignments	S4H	KLAH	ANZUO	No of Assignments	System generated

12	DCT	SWOR	CLINT	Internal Class Number	S4H	SWOR	CLINT	Internal Class Number	Copy from target KLAH-CLINT that was generated in Rule 1
13	DCT	SWOR	SPRAS	Language Key	S4H	SWOR	SPRAS	Language Key	Copy As-Is. There must be a description for each of the Core and Additional languages. If a language is missing take it from English.
14					S4H	SWOR	KLPOS	Item Number	This is a counter and it increments by 1 for each Description in a different language for the same S4H. KLAH-CLINT.
15	DCT	SWOR	KSCHL	Class Description	S4H	SWOR	KSCHL	Class Description	Copy As-Is. There must be a description for each of the Core and Additional languages. If a language is missing take it from English.
16					S4H	SWOR	KSCHG	Keyword (Upper Case for Matchcode)	Upper case version of DCT.SWOR-KSCHL

Transformation Rules for linking Classes to Characteristics:

Rule #	Source system	Source Table	Source Field	Source Description	Target System	Target Table	Target Field	Target Description	Transformation Logic
1	DCT	KSML	CLASS	Class Name	S4H	KSML	CLINT	Internal Class Number	Copy S4H.KLAH-CLINT WHERE DCT.KSML-CLASS = S4H.KLAH-CLASS
2					S4H	KSML	POSNR	Item Number	Integer counter starting at 1 and incrementing by 1 for each CLINT. When CLINT changes it starts from 1 again.
3	DCT	KSML	ATNAM	Characteristic Name	S4H	KSML	IMERK	Internal Characteristic	Copy S4H.CABN-ATINN WHERE DCT.KSML-ATNAM = S4H.CABN-ATNAM
4					S4H	KSML	KLART	Class Type	Default to "001"

Transformation Mapping

Mapping Table Name	Mapping Table Description	Link
Not Applicable		

Transformation Dependencies

List the steps that need to occur before transformation can commence

Item #	Step Description	Team Responsible
1	Data has been extracted from sources systems	Syniti
2	Configuration should be completed - (Config documents should be complete)	S2P Functional Team
3	Value mapping and XREF tables are ready	Syniti & S2P Data Team
4	Characteristics for Class Type 001 have been loaded into S4H	Syniti

Pre-Load Validation

Project Team

Completeness

Task	Action
Verify Record Count	The number of records presented after relevancy checks and validation needs to be correct between the DCT and the preload tables in Syniti Migrate.
Completeness check	All fields required as per mapping template rules must be completed. Syniti Migrate standard validity reports checking each field must be built.

Accuracy

Task	Action
Conversion Accuracy	Verify that the data staged in the preload tables are correct in terms of the mapping rules. This will be done via Syniti Migrate standard reports.

Business

Completeness

Task	Action
Count and Completeness check	All fields required as per mapping template rules must be completed. Syniti Migrate standard validity reports checking each field must be built.

Accuracy

Task	Action
Conversion Accuracy	Business team to verify that the data staged in the preload tables are correct in terms of the mapping rules. This will be done via Syniti Migrate reports/SAP reports.

Load

The load process includes:

1. Execute the automated data load into target system using the appropriate load tool.
2. Once the data is loaded to the target system, it will be extracted and prepared for Post Load Data Validation.

Load Run Sheet

Item #	Step Description	Team Responsible
1	Verify data extracted	Data Specialist/Functional - S2P
2	Verify data combined from both source systems	Data Specialist/Functional - S2P
3	Stage data for transformations	Syniti
4	Run transforms	Syniti
5	Execute pre-load report	Syniti
6	Validate preload report - release	Data Specialist/Functional - S2P
7	Prepare and simulate	Syniti
8	Pre-load verification and approval to load	Functional/Data Owner - S2P
9	Load to S4	Syniti
10	Complete Jira steps, Volumes and Timings	All - where applicable
11	Execute post-load report	Syniti
12	Post-load report verification/validation	Data Specialist/Functional/Data Owner - S2P
13	Object load completion approval	Data Owner - S2P

Load Phase and Dependencies

Configuration

Item #	Configuration Item
1	TCLA-Class Types
2	TCLG-Class Groups
3	TCLU-Class Status

Conversion Objects

Object #	Preceding Object Conversion Approach
1	Material (Characteristics of CLASS TYPE -001) (2018)

Error Handling

Error Type	Error Description	Action Taken
Data	Incorrect Language	Fix incorrect data
Data	Duplicates	Fix incorrect data
Load	Authorization errors	Apply for the applicable authorization permission and retry
Load	Technical load failures - If using MC - Simulation errors, etc	Investigate error and rectify. Retry simulation and/or load

Post-Load Validation

Project Team

Post-Load Steps

Step Description	Team Responsible
Execute post-load report	Syniti
Post-load report verification/validation	Data Specialist/Functional/Data Owner - S2P
Object load completion approval	Data Owner - S2P

Completeness

Task	Action
Verify count	The number of records presented in the post-load needs to be compared to the preload – Syniti report
Field by field check	Compare source data staged in the preload tables to target data in the load tables.

Accuracy

Task	Action
Verify Logs	Check if there is data that failed to load and perform the necessary actions (e.g. register as post load issue or attempt to load the record again, etc.).

Business

Completeness

Task	Action
Verify Count	The number of records presented in the preload needs to be compared to the post-load Syniti report.
Missing data	Check missing data which was supposed to be loaded.
Reconciliation	Participate in Post-load walkthroughs.

Accuracy

Task	Action
Conversion Accuracy	Verify that the data in S/4 HANA was loaded correctly via Syniti Migrate post-load reports.

Key Assumptions

- Master Data Standard is up to date as on the date of documenting this conversion approach and data load.
- Materials - Class Type 001 is in scope based on data design.

See also

Change log

Version	Published	Changed By	Comment
CURRENT (v. 47)	Dec 01, 2025 17:36	CLARKE-ext, Steve	
v. 46	Dec 01, 2025 16:35	CLARKE-ext, Steve	
v. 45	Dec 01, 2025 16:15	CLARKE-ext, Steve	
v. 44	Dec 01, 2025 16:01	CLARKE-ext, Steve	
v. 43	Dec 01, 2025 15:53	CLARKE-ext, Steve	
v. 42	Dec 01, 2025 15:51	CLARKE-ext, Steve	Added DCT and Transform Rules for KSML
v. 41	Nov 17, 2025 10:32	CLARKE-ext, Steve	
v. 40	Nov 17, 2025 10:11	CLARKE-ext, Steve	
v. 39	Nov 13, 2025 13:59	CLARKE-ext, Steve	
v. 38	Oct 28, 2025 15:35	CLARKE-ext, Steve	

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Workflow history

Title	Last Updated By	Updated	Status
There are no pages at the moment.			

Workflow history

This view shows the 5 most recent entries. The complete workflow log is available from the 'Document Activity' menu item.

Dec 03, 2025	Actor	Type	Activity	Version
Approved	 JAIN-ext, Gaurav	State	changed state to Approved at 8:15 am	v47
Edited following Approval	 JAIN-ext, Gaurav	State	gave <i>Minor change</i> approval at 8:15 am	
Dec 01, 2025				
	 CLARKE-ext, Steve	Edit	updated the page at 3:51 pm	
	 CLARKE-ext, Steve	State	changed state to Edited following Approval at 2:51 pm	v42
Nov 17, 2025				
Approved	 JAIN-ext, Gaurav	State	changed state to Approved at 11:55 am	v41