



Data Health Assessment

For

Organization

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About This Document

This document contains detailed information about the material master data of Organization. An analysis was done on the data obtained from Organization and the details of the analysis were compiled in this report.

This report contains the following information:

The Scope of Analysis
Methodology adapted
Current status of Organization data
The next course of Action
Suggestions and Recommendations



Acronyms and Definitions

Acronym	Definition	
ISO	International Organization for Standardization	
ERP	Enterprise Resource Planning	
FFT	Free Format Text	
IT	Information Technology	
MDM	Master Data Management	
MDRM	Master Data Record Manager	
MFR	Manufacturer	
ОЕМ	Original Equipment Manufacturer	
OTD	Open Technical Dictionary	
PPO	PiLog Preferred Ontology	
PPR	PiLog Preferred Records	
PTNO	Part Number	
SPL	Supplier	
DQH	Data Quality Hub	



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1. PREFACE:

Data is of high quality, if it fits for its intended uses in operations, decision-making, and planning.

Data quality refers to the state of qualitative and quantitative pieces of information. Data is that which provides information about other data.

A Data Health Assessment (DHA) profiles and analyzes the quality and integrity of your master data (e.g., Material, Vendor, Service, Asset, Customer, Business Partner, Equipment's, Location etc.,). A DHA visualizes,'AS-IS' state of your data quality, completeness, consistency, conformity to standards, and duplicates. The report then summarizes the impact that poor data has on your business and recommends the next steps to achieve measurable data and business metric optimization. The analysis process can be conducted across multiple domains that may involve datasets for customers, vendors, materials, and finance types of information

2. PROCESS & METHODOLOGY TO DELIVER SCOP

PiLog utilized proprietary automated processes to generate highly probable data points that indicate the data health and quality of the customer Data Set.

These data quality processes and methodologies have been developed and proven over several years and allow us to readily identify certain characteristics indicating problem areas in both data and systems within an organization

The approach is to determine records that are duplicated and unique, structured, standardized and rich in item property or characteristic values to give an overview of quality

To determine the scope of the underlying root causes and to plan the ways that tools can be used to address data quality issues, it is valuable to understand these common data quality dimensions:





A. Completeness of Master Data:

Data completeness refers to an indication of whether or not all the data necessary to meet the current and future business information demand are available in the data resource.

It deals with determining the data needed to meet the business information demand and ensuring those data are captured and maintained in the data resource so they are available when needed. Various processes include Data Extraction, Data Transformation, Data Loading, Security implementation & Job Control.

B. Redundancy of Master Data:

Data redundancy ensures that data is not duplicated un-necessarily across any part of the system



The online store may have a sales department and a complaints department. When a user buys a new product, this will be store as a transaction, but both the sales department and the complaints department may need this information at some point.

It would be possible for each department to have its own separate database and each time there is a transaction it gets put into each database. This solution is not ideal though, as having to input the same data into multiple places risks user entry errors leading to data consistency problems.

C. Compliance of Master Data:

Data compliance refers to a state of being in accordance with established guidelines or specifications.

The growing number of quality standards and regulations (industry specific or not) has also drawn attention to Master data management. In order to comply with these requirements, companies must meet certain criteria which are directly or indirectly impacted by the quality of data in the systems. There are many compliance risks that companies run from having bad Master data management:

- SOX risks occur in maintaining reporting structures and processing critical master data such as vendor bank accounts, fixed-asset data, contracts and contract conditions
- Petrochemical industry companies that are regulated by refining safety and
 operational standards and recommended practices may have significant exposure to
 legal risk and could even lose their operating licenses if their master records are
 incorrect with respect to product composition, storage locations, recording of
 ingredients, etc.
- Fiscal liabilities, such as VAT, produce risk. The VAT remittance may be incorrect if the relevant fields in the master data are not appropriately managed, possibly leading to inaccurate VAT percentages on intercompany sales

D. Consistency & Integrity of Master Data:

Data consistency refers to the transparency of the information, or the ability for other to see the changes and trends of data



It is when you ensure that the same data that is being used in different parts of the system will always be the same. The data is consistent across the entire system

In many examples, you may find the same data in needed in more than one place. In the online store example, the users address may be part of their signup information, but it will also need to appear on delivery information. Having to input the data directly into every place that it is needed causes problems if that data needs to be changed

If the user moves home, then every place their address appears will need to be manually changed to ensure the data in consistent. If you do not do all of these updates, then you'll have a situation where the address in one part of the system will be different to the address in another part of the system. This is solved by centralizing the data so there is one place that the address is stored. Any part of the system that needs to have the address can then just reference back to that central address location and find to find the data. When you do this you only have the change the data once for that change to spread through the whole system, ensuring that data always remains consistent.

Data integrity refers to the accuracy and reliability of the data being collected

E. Accuracy of Master Data:

Data accuracy is one of the components of data quality. It refers to whether the data values stored for an object are the correct values. To be correct, a data values must be the right value and must be represented in a consistent and unambiguous form

For example, birth date is December 13, 1941. If a personnel database has a BIRTH_DATE data element that expects dates in USA format, a date of 12/13/1941 would be correct. A date of 12/14/1941 would be inaccurate because it is the wrong value. A date of 13/12/1941 would be wrong because it is a European representation instead of a USA representation

There are two characteristics of accuracy: form and content. Form is important because it eliminates ambiguities about the content. The birth date example is ambiguous because the reviewer would not know whether the date was invalid or just erroneously represented. In the case of a date such as 5 February, 1944, the USA representation is 02/05/1944, whereas the European representation is 05/02/1944. You cannot tell the representation from the



value and thus need discipline in creating the date values in order to be accurate. A value is not accurate if the user of the value cannot tell what it is

The concept of accuracy also applies above the data element level. Data elements are never recorded in isolation. They are value attributes of business objects such as personnel records, orders, invoices, payments, and inventory records. The business objects represent real-world objects or events, and each consists of one or more rows of one or more tables connected through keys. Object-level inaccuracies consist of objects that are missing, have missing parts, or that exist but should not

F. Provenance of Master Data:

Data provenance documents the inputs, entities, systems, and processes that influence data of interest, in effect providing a historical record of the data and its origins. The generated evidence supports essential forensic activities such as data-dependency analysis, error/compromise detection and recovery, and auditing and compliance analysis

The provenance of data which is generated by complex transformations such as workflows is of considerable value. From it, one can ascertain the quality of the data based on its ancestral data and derivations, track back sources of errors, allow automated re-enactment of derivations to update a data, and provide attribution of data sources. Provenance is also essential to the business domain where it can be used to drill down to the source of data in a data warehouse, track the creation of intellectual property, and provide an audit trail for regulatory purposes

The use of data provenance is proposed in distributed systems to trace records through a dataflow, replay the dataflow on a subset of its original inputs and debug data flows. To do so, one needs to keep track of the set of inputs to each operator, which were used to derive each of its outputs

G. Uniqueness or Duplication of Master Data:

Duplication of Master Data is a very common area of concern, normally resultant of systems that do not mitigate causes of bad data. Factors involved in capturing Master Data are derived from different procedures; multiple users, locations and languages; data degradation; multiple versions of master data; variation of standards/practices over time and human error



Hence, uniqueness of mater data items is the first check performed on a master data set to determine if processes and systems generate master data that is not duplicated. The lack of unique items or the presence of duplicated items implies that a Governance Structure including master data record management systems solution that forces end users to verify the nonexistence of the item before creation is not in place

Item uniqueness is examined across the following data elements:

- i. Material Numbers
- ii. Descriptions
- iii. Manufacturer Names / Supplier Names and Part Numbers

Uniqueness also helps determine the potential initial data set to be used for cataloguing. If material numbers are not determined to be unique, then descriptions will be used. If descriptions are not determined to be unique then a combination of descriptions and manufacturing names / supplier names and part numbers will be used

H. Structure of Master Data:

Un-Structured data is data that has no relevance. Structuring begins with the development of data requirements for a business function and its related objectives. Master data usage and relevance is reliant upon master data having structure to ensure consistent classification and identification of data to continually eliminate data reconciliation issues. Further, structuring data, complimented with a record Management tool, will contribute to the elimination of item duplication

Lack of structure implies that the business functions within the organization are underperforming in relation to their objectives. Master Data must have uniform structure to ensure the elimination of duplicates or uniqueness, accuracy and relevance. Hence, PiLog will analyze the current data structure used to determine if a deliberate data structure is used to support business objectives

I. Standardization of Master Data:

Standardized data is reliable and has consistency across multiple items. Data Standards, complemented with Data Structure and uniqueness, provide assurance that data viewed



and used is all the data that exists within the master data set, therefore giving the business functions assurance that their business decisions are based on accurate information There are a number of industry standards, such as ISO 8000 that can govern master data and the use of a dataset. This analysis will identify the use of consistent standard rules. Standardization also contributes to elimination of item duplication

I. Data Richness:

Beyond uniqueness, structure and standard, there is a remaining data principal that indicates the overall quality of master data, Data Richness. Data Richness is the amount of properties available to describe an item and its' related relevance. Relevant properties ensure that master data is traceable, verifiable and complete as it is used by the organization. These relevant properties are described as Mandatory Property Values, which ensure the uniqueness and correct usage of that item, in particular to the purchasing of the item

Often organizational data does not contain all the necessary Mandatory Property Values and this leads to the existence of multiple versions or item duplication. By enriching Master Data property values, especially for critical items, duplications are further reduced; uniqueness is improved; and relevance and completeness of items are increased for the purchasing and inventory management cycles

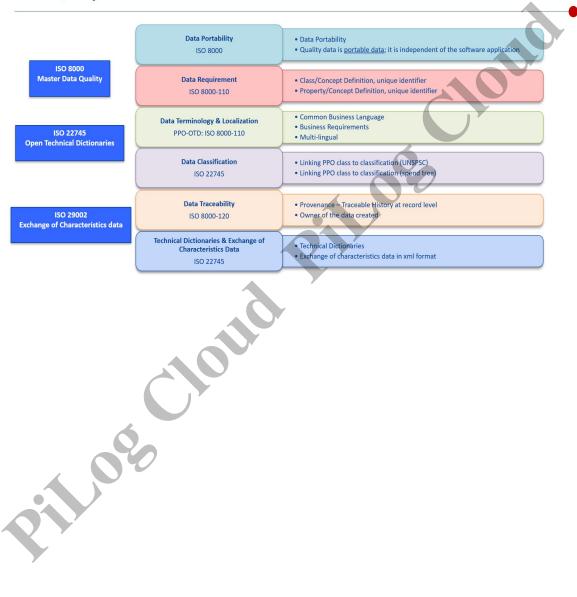
Our Data Assessment is a services engagement backed by our proprietary algorithms that delivers report findings identifying specific data challenges that may be hindering your operational efficiency and ability to achieve successful business outcomes based on the health of your data.

The ISO 8000 standards are high level requirements that do not prescribe any specific syntax or semantics. On the other hand, the ISO 22745 standards are for a specific implementation of the ISO 8000 standards in extensible mark-up language (XML) and are aimed primarily at parts cataloguing and industrial suppliers

Data Harmonization processes & methodologies complies to ISO 8000 & ISO 22745 standards



Data Quality Standards





3.CONSIDERATIONS ON DATA ANALYSIS:

3.1 Consideration on Data Analysis for DHA:

The following considerations or highlights considered for analyzing the Data Health Assessment:

. 1	0.11%	
serial_no	Guidelines	
1	As some of the material numbers are repeated, the uniqueness of the materials is based on unique descriptions and Record number	
2	Description length is analyzed based on number of characters in each Descriptions	
3	Same or Duplicate short Descriptions with different material number are found by sorting all the Short descriptions with respect to Material Numbers	
4	Same or Duplicate Long Descriptions are found by sorting all the Long descriptions with respect to Material Numbers	
5	Inconsistencies in the given data is detected by analyzing the data like Part Number is in different formats as "P/N", "PN" etc.	
6	Material of construction for the spare are not given in standardized way, it is given in full form (like Stainless Steel) and also in short form (like SS)	
7	The data was analyzed specifically to find out the inconsistencies in Unit of Measure. Itis also in different formats like "Watt, W" etc.	
8	Data richness on Reference Data Availability (Part Number, Reference Number, Model Number etc.) is	



	Analyzed and counts are given
9	Duplication of Master Data w.r.t to Manufacturer Reference numbers like Part number or Model Numbers are analyzed based on genuineness of Part number with Same Manufacturer etc.
10	Duplicate Part Number with different Part Type, In this criteria Same part number is provided with different flag type (Suppl P/N, OEM Part No, Mnfr Part No).
11	Analysis on Top 10 Commodities and Top 10 UOM are performed by analyzing the Descriptions

A good measure of the quality of Master Data is a Median Grade; when 80% of all the Master Data per Characteristic are equal or above the grade B-



4.DATA HEALTH AND QUALITY ANALYSIS RESULTS

4.1 Detailed Data Analysis on Data Uniqueness

4.1.1 Analysis on Material Records

Report on Total Material Records uniqueness

Criteria	Count
Total Number of Records	145
Unique Material Records	145
Duplicate Material Records	0

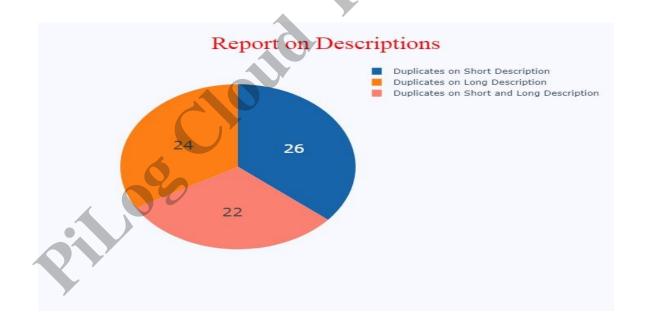




4.1.2 Analysis on Descriptions/Texts

Report on Material Descriptions Uniqueness is as below

Criteria	Count	Percentage
Duplicates on Short Description	26	17.93
Duplicates on Long Description	24	16.55
Duplicates on Short and Long Description	22	15.17

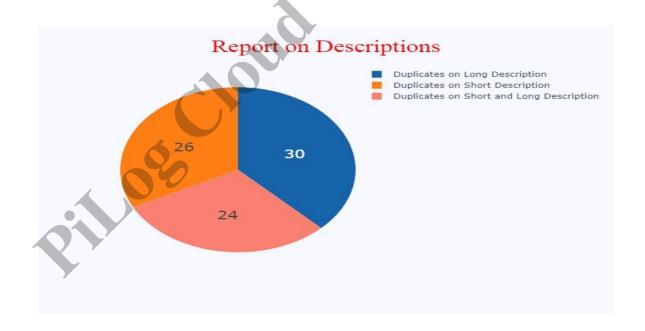




4.1.3 Advanced Analysis on Descriptions/Texts

Below is the report generated after exclusion of unwanted text in the source description (E.g.: Special characters, Prefixes)

Criteria	Count	Percentage
Duplicates on Short Description	26	17.93
Duplicates on Long Description	30	20.69
Duplicates on Short and Long Description	24	16.55



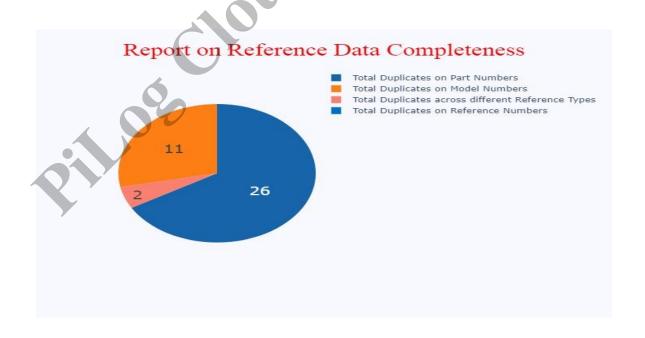


4.1.4 Analysis on Reference Details

Report on Reference Data Uniqueness is as below

Criteria	Count	Percentage
Total Duplicates on Part Numbers	26	17.93
Total Duplicates on Model Numbers	11	7.59
Total Duplicates on Reference Numbers	0	0.0
Total Duplicates across different Reference Types	2	1.38

To download complete Reference Details Data click here



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4.1.5 Potential Duplicates w.r.t Reference Number

MATERIAL	LONG_DESCRIPTION	Reference_Number

4.2 Detailed Data Analysis on Data Completeness

4.2.1 Analysis on Description Length

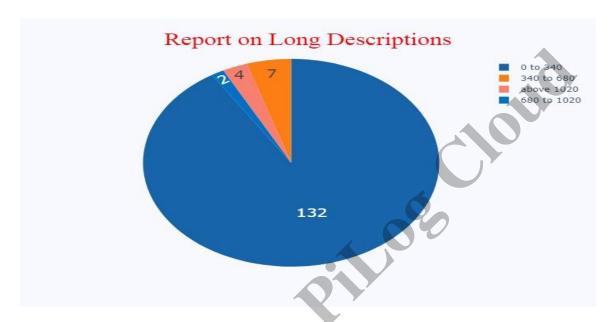
Below is the Analysis on description lengths of short descriptions

No data available

Below is the Analysis on description lengths of long descriptions

Criteria	Count
Long Descriptions with character length ranges between 0 and 340	132
Long Descriptions with character length ranges between 340 and 680	7
Long Descriptions with character length ranges between 680 and 1020	2
Long Descriptions with character length ranges above 1020	4

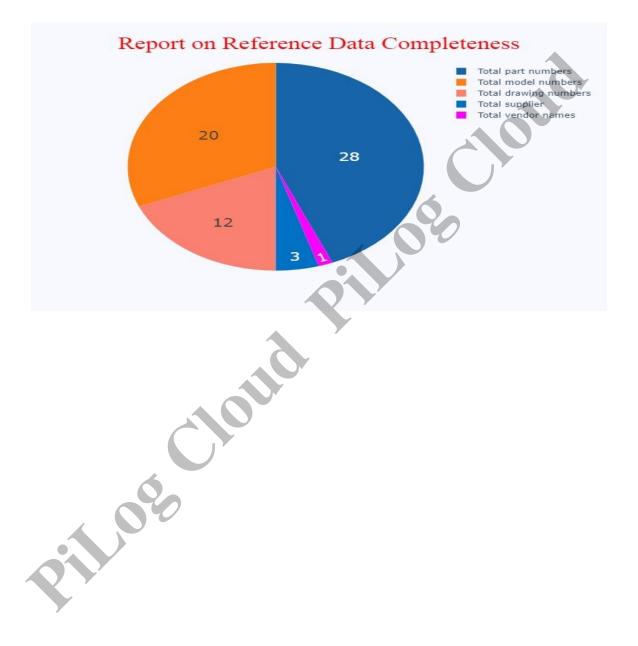




4.2.2 Report on Reference Data Completeness

Criteria	Total Number of Records	Percentage
Total part numbers	28	19.31
Total model numbers	20	13.79
Total drawing numbers	12	8.28
Total vendor names	1	0.69
Total supplier	3	2.07







4.3 Detailed Data Analysis on Data Consistency

Standard Format	Variant Format	Number of Materials Linked
MANUFACTURER PART NO	DESIGNATION	1
DRAWING	DRAWING NO	5
DRAWING	DRAWING NUMBER	1
DRAWING	DWG	1
MODEL/MACHINE NO	MODEL	4
MODEL/MACHINE NO	MODEL NO	6
MODEL/MACHINE NO	MODEL NUMBER	4
MANUFACTURER PART NO	P/N	1
MANUFACTURER PART NO		1
	P/NO	
MANUFACTURER PART NO	PART NO	7
MANUFACTURER PART NO	PART NO.	1
MANUFACTURER PART NO	PART NUMBER	7
MANUFACTURER PART NO	PN	3
MANUFACTURER PART NO	PNO	1

To download complete Inconsistencies Prefixes Data click here

4.3.1 Detailed Data Analysis on Data Consistency

Standard UOM	Variant UOM	Number of Materials Linked



Current	A	13
Current	A	15
Current	AMP	1
Voltage	V	15
Voltage	VOLT	J13
Voltage	VOLT	1
Voltage	VOLT	15

To download complete UOM Prefixes Data click here

4.3.2 Inconsistencies in the Description:

MATERIAL	LONG_DESCRIPTION	Remarks
MAIERIAL	LUNG_DESCRIPTION	Remarks
240001862	BRICK HF	The format of
	INSU,SA,SHAPE:230X114X75/65MM,TYPE:HOT	DRAWING is not
	FACE INSULATION, MARK: SA, CLASSIFICATION	standardized.
	TEMPERATURE(MAXIMUM):1430	
	DEG/CELSIUS,AL2O3 (,MINIMUM):58.0	
	PERCENT,SIO2(MAXIMUM):39.1	
	PERCENT,FE2O3(MAXIMUM):0.7	
	PERCENT,TIO2(MAXIMUM):0.1	
	PERCENT,CAO(MAXIMUM):0.1	
	PERCENT,MGO(M,AXIMUM):0.2	
	PERCENT,NA2O+K2O(MAXIMUM)1.7	
	PERCENT,BULK DENSITY(MAXIMUM):0.80	
	GM/CC,COLD CRUSHING STRENGTH	
	(MINIMUM):1.6 MPA,PERMANENT, LINEAR	
	CHANGE AFTER 24 HOURS SOAKING AT	
	TEMPERATURE 1400 DEG/CELSIUS:0.2	
	PERCENT (NEGATIVE),REVERSIBLE LINEAR	
	THERMAL EXPANSION(MAX,IMUM):0.7	
	PERCENT,THERMAL CONDUCTIVITY AT MEAN	



	TEMPERATURE OF(MAXIMUM) 400	
	DEG/CELSIUS:0.25 W/M.K,AT 600	
	DEG/CELSIUS:0.27 W/M.K,AT 8,00	
	DEG/CELSIUS:0.30 W/M.K,AT 1000	
	DEG/CELSIUS:0.33 W/M.K,AT 1200	
	DEG/CELSIUS:0.35 W/M.K,APPLICATION	
	AREA:1ST AND 2ND INTERMEDIATE LI,NING	
	OF STOVE WALL,1ST INTERMEDIATE LINING	
	OF STOVE DOME AND HOT BLAST	
	CONNECTION, DIMENSIONAL AND PHYSICAL	
	DEFECTS TOLERANCE:AS PER,ATTACHED	
	FILE, DRAWING NO :RD/SGL/HBS/18-	
	19/007,INSPECTION	
	CERTIFICATE:REQUIRED,INSPECTION PLAN	
	AND QAP:AS PER ATTACHED FILE.	
	THE QUILLE I BETT MIGHED FIELD	
240001882	CONNECTING LINK, PUSHER BLADE CHAIN	The format of
210001002	END,AS PER DWG:14000377	DRAWING is not
	ENDATE EN DWG . P1000377	standardized.
		Staridar dizea.
240001885	REFRACTORY BRICK, TYPE: 55D, SHAPE: 84, RAW	The format of
210001003	MATERIAL BASE: AND ALUSITE AND FUSED	DRAWING is not
	ALUMINA FOR GRAINS, REFRACTORINESS	standardized.
	UNDER LOAD:MIN 1600 DEGR,EE/CELSIUS AT	Standar dized.
	2 KG/SQCM,PYROMETRIC CONE	
	EQUIVALENT:36 MIN,COLD CRUSHING	
	STRENGTH:600 KG/SQCM MIN,APPARENT	
	POROSITY:16 PERCENT MAX,BU,LK	
	DENSITY:2.5 GM/CC MIN,CHEMICAL	
	ANALYSIS:AL203 PERCENT:55 MIN,FE203	
	· · · · · · · · · · · · · · · · · · ·	
	PERCENT:1 MAX,ALKALIES PERCENT 0.6	
	MAX,DIMENSIOANL TOLERANCES:,(+/-)1.5	
	PERCENT (+/-)2 SQMM,PERMANENT LINEAR	
7	CHANGE:(+/-) 0.5 PERCENT1500	
	DEGREE/CELSIUS 2HRS MAX,CREEP:0.20	
	PERCENT 1500 DEGREE/CE,LSIUS 20 TO 50	
	HRS MAX,HOT MODULAR OF RUPTURE AT	
	1000 DEGREE/CELSIUS,8 MPA,THERMAL	
	CONDUCTIVITY: 1.70 TO 1.75 W/MK AS PER	
	THE DRAWING, NUMBER:4.03 2	



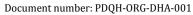
	144,REFRACTORY BRICK,TYPE:55 D,SHAPE:STANDARD,RAW MATERIAL BASE:ANDALUSITE AND FUSED ALUMINA FOR GRAINS,REFRACTORINES,S UNDER LOAD:MIN 1600 DEGREE/CELSIUS AT 2 KG/SQCM,PYROMETRIC CONE EQUIVALENT:36 MIN,COLD CRUSHING STRENGTH:600KG/SQCM MIN,APPARENT P,OROSITY:16 PERCENT MAX,BULK DENSITY:2.5GM/CC MIN,CHEMICAL ANALYSIS:AL2O3 PERCENT:55 MIN,FE2O3 PERCENT:1.0MAX,ALKALIES PERCENT0.6 MAX,,DIMENSIOANL TOLERANCES:(+/-)1.5 PERCENT (+/-)2 SQMM,PERMANENT LINEAR CHANGE:(+/-) 0.5 PERCENT 1500 DEGREE/CELSIUS 2HRS MAX,CREEP:0.,20 PERCENT 1500 DEGREE/CELSIUS20 TO 50 HRS MAX,HOT MODULAR OF RUPTURE AT 1000 DEGREE/CELSIUS,8 MPA,THERMAL CONDUCTIVITY:1.70 TO 1.75,W/MK AS PER THE DRAWING NUMBER:4.03 2 179	
240001856	14843910KL VALVE KIT, PN :14843910,FOR DUMPER,MAKE:VOLVO,MODEL:FM400	The format of MANUFACTURER PART NO is not standardized.
240001859	14843910KL VALVE KIT, P/N :14843910,FOR DUMPER,MAKE:VOLVO,MODEL NO:FM400	The format of MANUFACTURER PART NO is not standardized.
240001860	16"AIR CLEANER PRIMARY ELEMT HSN/SAC: 84213100 PART NO.: F6.729.03.0.00 FOR KIRLOSKER 250 KVA DG; DG INSTANCE ID: 559404, APP CODE:,F6.3806 SERIAL NO: 0600024	The format of MANUFACTURER PART NO is not standardized.



240001863	CABLE GLAND, TYPE	The format of
	COMPRESSION:SINGLE,MATERIAL	MANUFACTURER
	GLAND:BRASS,INGRESS,PROTECTION:IP	PART NO is not
	68,SIZE:THREAD:PG 9X16MM,ADDITIONAL	standardized.
	INFORMATION:ALONG WITH,BRASS LOCK	
	NUT OF SIZE:PG 9, PART NO:BSL-02	
240001864	CABLE GLAND, TYPE	The format of
	COMPRESSION:SINGLE,MATERIAL	MANUFACTURER
	GLAND:BRASS,INGRESS,PROTECTION:IP	PART NO is not
	68,SIZE:THREAD:PG 9X16MM,ADDITIONAL	standardized.
	INFORMATION:ALONG WITH,BRASS LOCK	
	NUT OF SIZE:PG 9, PART NUMBER :BSL-02	
240001883	HOSE,METALLIC,TYPE: FLEXIBLE	The format of
	CORRUGATED, MATERIAL: STAINLESS	MANUFACTURER
	STEEL,,MATERIAL CONSTUCTION:AISI	PART NO is not
	316,LENGTH:300MM,PRESSURE	standardized.
	DESIGNATION:,14KG/CM2, DIMENSION:DN	
	32, WITH FLANGED END CONNECTION;	
	FLANGE DIMENSIONS, AS PER TABLE F; ONE	
	END OF THE FLANGE SHALL BE FIXED AND	
	OTHER SHALL BE,SWIVELLING; WITH ONE	
	LAYER OF SS WIRE BRAID (AISI-304).	
240001887	BEARING CONE, PNO:30H22,FOR CONE	The format of
	CRUSHER,MAKE:TELSMITH,MODEL NO:44SBS	MANUFACTURER
		PART NO is not
		standardized.
240001888	BEARING CONE, P/NO:30H22,FOR CONE	The format of
	CRUSHER,MAKE:TELSMITH,MODEL NO:44SBS	MANUFACTURER
	, , , , , , , , , , , , , , , , , , , ,	PART NO is not
		standardized.
240001857	14843910KL VALVE KIT,PN:14843910,FOR	The format of
	DUMPER,MAKE:VOLVO, MODEL:FM400	MODEL/MACHINE
	,	NO is not
		standardized.
		3,001,001,012,001
		1



240001858	14843910KL VALVE KIT,P/N:14843910,FOR DUMPER,MAKE:VOLVO, MODEL NO:FM400	The format of MODEL/MACHINE NO is not standardized.
240001865	CAMSHAFT, P.NO. 11705995,823019470 FOR VOLVO EXCAVATOR. MODEL NUMBER : EC700 BLC	The format of MODEL/MACHINE NO is not standardized.
To download comp	plete Inconsistencies Data click here	





4.3.3 Non-standardized UOMs in Description

MATERIAL	LONG_DESCRIPTION	Remarks
240001892	CHAIN LINK,MATERIAL:MILD STEEL,TYPE:MASTER LINK WITH,LOCK,PITCH:1IN,STRAND	UOM's Captured in
	CHAIN:SIMPLEX,ADDITIONAL INFORMATION:MATERIAL,STANDARD:GRADE EN8	Different Format
240001916	FLIGHT - B (8 MM THICK) F/CLASSIFIER 66 INCH X37 FT.9 INCH	UOM's Captured in
		Different Format

To download complete Non-Standardized UOMs Data click here



4.4 Analysis on Top 10 UOMs

UOMs are listed below:

UOM	Top10 Count
EA	145



5. Key Recommendations

- Establish a Master Data vision that recognizes Master Data as an asset that reduces cost, risk and exposure through efficient use of unique and reliable master data within the organization, related to external partners and customers
- The organization should convene a working group (e.g., data stewards) representing all relevant stakeholders to determine targets, set thresholds, and define the quality dimensions that are most important



- Periodic assessments should be conducted to determine if acceptable thresholds and targets are being met, and metrics should be updated accordingly
- Implement data standards to drive standard data in accordance with data requirements
- Implement data workflows to manage data approval criteria where the engineers review the data quality
- Implement advanced Master Data governance tools to control the implementation of data standards, work flows, enrichment of data, data lifecycle and uniqueness of data
- Set up analytics for contracting and spend analysis

- Establish Business Rules to align the organization on Cataloguing Standards such as language, measurements, units of measure, presentation of data, etc. using ISO 8000 standards
- Create standardized Short and Long Descriptions for all items to ensure purchasing accuracy
- Harmonize data with a final potential duplicate resolution process across and languages to ensure excess stock is used and not reordered or duplicated between the sites