



MACS

CLOSING THE SUSTAINABILITY LOOP

Design, measure, and optimize material sustainability across your product lifecycle.

Are you considering improving your environment footprint by designing circular and greener products? Are you measuring and tracking your product's sustainability? By connecting IMDS and CDX data with product structures, MaCS provides full visibility into material composition, turning complex requirements into insights.

Key Advantages of using MaCS

Efficiency in Compliance

MaCS streamlines cross-industry compliance, leveraging existing IMDS / CDX data, saving time, reducing complexity, and enhancing accuracy.

Design your products for sustainability

Multiple BOMs configurations can be compared in MaCS to identify the most appropriate one to fully satisfy all the Regulations KPIs.

ESG Regulations automatic check

Through its deep integration with IMDS-PLUS & CDX, MaCS allows performing the automatic check of all materials compliance regulations (GADSL, ELV, SCiP, 3R, REACH, RoHS, PCF, Recirculate...) both at MDS and BOM level

Solid Data Model

The internal MaCS data model has been designed to enable performing large, multiple and flexible reports extractions, up to 1M excel rows, in minutes or less

If you are not circular you are not competitive.

A competitive global circular economy is crucial for achieving climate and environmental goals by 2030. Non-circular practices will render businesses uncompetitive and unable to comply with mandatory disclosure requirements related to CSRD. DXC's MaCS platform assists Durable-Goods makers in designing sustainable products, minimizing environmental impact at end-of-life. Leveraging data from DXC's IMDS and CDX platforms, MaCS provides detailed material insights, enabling adjustments to meet various sustainability metrics.

Enhanced Material Data Sheet analysis

Material Data Sheets can be easily downloaded from IMDS and/or CDX as soon as requested by the company. Through an automated batch or on-line process MDS's can then be approved or rejected to the suppliers, with an automatic email notification.

MDS's association to the BOM

MDS's are then associated with the BOMs to get the BoS (Bill of Substances). BOMs are extracted by the company's PLM or ERP system and streamlined in a CSV file to be uploaded to the MaCS data model. Many reports at MDS and BOM/BoS level can be quickly extracted without volume limitations, both in batch (asynchronous) or online (synchronous) way.

Why choosing MaCS?



Automated Regulatory Compliance

In a dynamic and constantly evolving regulatory landscape, MaCS will automatically run all the requested materials and substances compliance tests at the component and at the product level against any company-specific rules and all standard ESG Regulations through the native connection with IMDS-PLUS and CDX. In case of test failure, the MDS is automatically rejected, and the supplier is notified to resend.

Effortless IMDS and CDX Data Transfer

The MaCS data model combines both MDSs coming from IMDS and from CDX. With MaCS, MDSs can be easily imported and/or exported from/to IMDS and/or CDX. Then, for example suppliers using CDX can send MDSs also to IMDS-based customers and vice versa, enhancing and streamlining the overall compliance communication along the supply chain. For example, OEMs can manage in the same way the material's regulations for their own products and for the merchandised ones.

Automated SVHC Reporting

Due to its full material's composition visibility,

MaCS can automatically prepare its SCIP dossier for each product subject to homologation, by identifying all the "Substances of High Concern". The SCIP dossier is automatically transmitted to the public authority through the CDX interface until the positive acknowledgment is returned to MaCS.

3R/4R Reporting and ISO Certificates

MaCS allows Manufacturers to manage the Recyclability process in all phases by selecting all the recyclable components in the BOM to maximize the index of recyclability and recoverability. All the materials are reported in their specific ISO classes, and all ISO certificates printed out.

BOM editing

The BoS can be easily edited and reworked in MaCS, at the BOM or the subassembly level, without jumping back to the source systems. Different components combinations (i.e. by replacing some of the suppliers) can be checked for the same BOM, until the target KPIs are reached. In addition, new company-specific materials can be created in MaCS and added to the BOM

Document ISO

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Brand Name		test		Vehicle mass, mv		1972.2921 kg		
Model (type/variant)		model test						
Material breakdown	Metals	Polymers	Elastomers	Glass	Fluids	M.o.s.	Other	
	1245.6046	406.7110	78.3292	53.7466	108.2331	14.2854	65.3923	
Pretreatment (mP)					Mass (kg)			
					0.00			
					108.2331			
					0.00			
					0.00			
					0.00			
					0.00			
					0.00			
					0.00			
					mP total (sum mP1 to mP7) = 108.2331			
Dismantling (mD)								
Part Number	Name	Mass (kg)	Part Number	Name	Mass (kg)	Part Number	Name	Mass (kg)
987521	CAMBIO GTC 498 MOTORE ANT.	145.4807 700	74322844	SEDILO SX SWP CPL	61.39450 00	55002686	BASSAMENTO MOTORE	26.8900
786845	COFANO ANTERIORE CS. AV.	18.95730 0	941832	CERCHIO POST FUSO 11.55X17"SH	34.30020 0	950244	TESTA CILINDRI DX	15.91400
777524	TRALICCIO RADIATORE DX CPL AV.	0.96300	778894	TRALICCIO RADIATORE SX CPL AV.	0.96300	782363	PASSARUOTA ANTERIORE DX CPL	0.91700
						Total mass (kg) 293.9784		
						Mass (kg)		
Metal separation (mM)						mM 987.8453		
Remaining vehicle metallic content:								
Recyclable materials (mM)								
Technology no.				Name				Mass (kg)
						Total sum mass (kg)		
Non-metallic residue treatment (mTr and mTr)						0.0000		
Energy recoverable materials						Mass (kg)		
Remaining quantity of organic materials (polymers, elastomers, MOH etc.)						0.0000		
Recyclability rate		Rcyc =	$\frac{mP + mD + mM + mTr}{mV} \times 100$		70.4793 %			
Recoverability rate		Rcov =	$\frac{mP + mD + mM + mTr + mTr}{mV} \times 100$		70.4793 %			
Notes								

Compliance by using MaCS



MDS production and upload

As soon as the BOM has been validated and officially approved, it can be automatically transformed into Material Data Sheet and uploaded to IMDS, to make it available for the customer

PCF and Recirculate calculation

With MaCS all the PCF and Recirculate information included in the MDS can be checked, aggregated and reported at the BOM level. Additional AI-based MaCS modules allow estimating the PCF breakdown from standard Emission Factors Data Bases and the recirculate potential through the CTI Framework analysis.

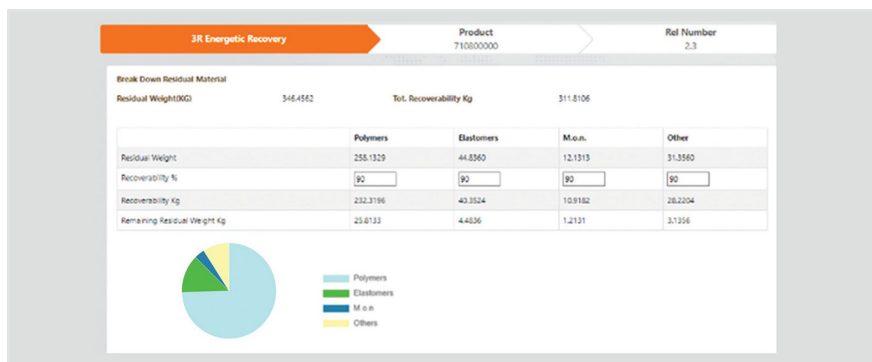
Modern Cloud-based platform

The MaCS instance is setup in SaaS mode, to minimize the customer engagement. The standard MaCS setup includes the connection with the Active Directory and the interfaces with the BOM source systems and the other relevant master data.

Transparent Pricing

MaCS provides straightforward and budget-friendly pricing through a single annual fee, eliminating the hassle of estimating costs. A multi-tiered license model allows you to sponsor requests for your entire supply chain. IMDS / CDX enables your suppliers to request data from their downstream supply chain without incurring extra costs. It streamlines reporting and encourages supplier engagement by allowing them to collect data using IMDS or CDX for free.

Don't let sustainability compliance burden your manufacturing business. Join the growing community benefiting from IMDS / CDX / MaCS's advantages and elevate your supply chain collaboration to new heights.



Visit our website to start the conversation

<https://public.mdsystem.com/en/web/imds-public-pages/macs>

About DXC

DXC Technology (NYSE: DXC) is a leading enterprise technology and innovation partner delivering software, services, and solutions to global enterprises and public sector organizations - helping them harness AI to drive outcomes at a time of exponential change with speed. With deep expertise in Managed Infrastructure Services, Application Modernization, and Industry-Specific Software Solutions, DXC modernizes, secures, and operates some of the world's most complex technology estates. Learn more on dxc.com.