MATERIALS COMPLIANCE MANAGEMENT

PROCESS OBJECTIVE
Materials Compliance Management enables companies to collect, track, analyze, and report a product’s environmental compliance to material regulations.
PROCESS OVERVIEW
Conforming to regional environmental compliance directives such as RoHS, REACH, ELV, GADSL, Battery, Packaging, and WEEE is a must for companies that operate globally. Using Materials Compliance Management, product materials compliance can be assessed during design through integration with Engineering BOM Management. Or, through integration with third party PLM and ERP systems, product materials compliance can be assessed at any phase of the development and delivery process.

Materials Compliance Management includes a well-defined process for requesting, receiving, reviewing, and approval compliance declarations from the supply chain for outsourced components. Declarations can be obtained using industry standards such as IMDS, IPC 1752, JAMP AIS, and JAMA JAPIA. Using robust reporting and validation tools, compliance engineers can assess and approve material declarations from their suppliers. This information is then rolled up through the product BOM to compute product compliance to material regulations.

Products can be then be analyzed to determine problem areas that need to be addressed for compliance. Product compliance can also be reported to customers using industry standard formats.

PROCESS HIGHLIGHTS
Materials Data Management
Companies can manage and maintain material composition for make and buy components without disruption to design or production schedules. The management and collection of material declarations helps companies assess their compliance against RoHS regulations in the European Union, China, California, and South Korea, joint Industry Guide (JIG) declarable substances, ELV, Global Automotive Declarable Substance List (GADSL) Prohibited and Declared, Packaging for EU and US, REACH, Battery, and Conflict Mineral initiatives to meet other emerging global regulations.

Materials Compliance Analysis
Engineers can generate product-level reports to determine compliance with customer or regional requirements. A few of the pre-packaged analytic reports include: Substance Threshold, Compliance Scorecard, Bill-of-Material Analysis, Recycled Content for Energy Using Products (EuP), Battery Content, WEEE content, and REACH SVHC Analysis, REACH Substance Registration, REACH Intentionally Used Substances, and RRR (Reusability, Recyclability and Recoverability). Engineers can also analyze a product’s compliance using what-if scenarios such as Make vs. Buy (internal vs. supply chain) using the Best/Worst-Case Compliance Report.

Security and Intellectual Property (IP) Protection
Critical IP is protected throughout the data collection and reporting process. All access to data, reports, and application functionality is role-based to provide organizations with the necessary security levels.

Key Benefits
- Manage material data to meet customer- and region-specific environmental compliance mandates.
- Analyze a product’s compliance and recycled content throughout the product development process.
- Maximize the reuse of compliant components.
- Rapidly assess product and supplier impact when new restricted substances are identified.
- Initiate supplier material declaration requests, monitor supplier progress and accept/reject declaration submissions.

Assess Impact of New Compliance Directives
Using compliance definitions, compliance engineers can represent industry, regional, or customer directives consisting of substance (or substance classification) thresholds and exemptions defined at the material or part level. These compliance definitions can be scoped by part application so that compliance is computed or displayed only for parts applicable to the directive.

As directives change or new directives emerge, compliance definitions can be updated or added so that engineers can assess the impact of these changes on the compliance of their products. Advanced “where-used” capabilities allow engineers to identify non-compliant components quickly within products. Engineers can then leverage extensive search capabilities to identify compliant alternatives.

Manage Supplier Material Declarations
Compliance engineers can initiate and send material declaration requests (with due dates and reporting instructions) to suppliers of outsourced components. Compliance engineers can monitor a supplier’s progress in reporting compliance and review, validate, and accept or reject received material declarations. Supplier representatives are notified automatically when a material declaration is accepted or rejected (including the reason for rejection).

Integrate the Supply Chain
With the optional Materials Compliance Declaration process, suppliers can view their assigned material declaration requests, download requested parts in a format compatible with industry standard reporting formats such as IPC 175x, JAMP AIS, JAMA/JAPIA. In addition, suppliers can review customer reporting deadlines, and upload completed material declarations in these industry reporting formats. This standalone web application, which can be deployed outside the firewall, communicates with Material Compliance Management through a web services interface that authenticates users as a licensed supplier representative before providing access to material declarations.
Supplier Data Collection
Compliance engineers can collect material composition and certifications from the supply chain using industry standard formats including IPC-175x (Version 1.1 and 2.0), JAMP AIS, JAMA/JAPIA, JGPSSI, and International Material Data System (IMDS). These files can be imported directly into Materials Compliance Management to create reported parts under material declarations. Once these received material declarations have been accepted, the reported part is copied directly to the manufacturer equivalent part to make it effective.

Determine Engineering BOM Compliance
Compliance engineers can associate material composition and compliance data directly with enterprise and manufacturer equivalent parts using Engineering BOM Management. Materials Compliance Management rolls up data automatically through the design BOMs to determine the compliance of product designs in Engineering BOM Management. Design engineers can view compliance information in Engineering BOM Management with a license to the optional Materials Compliance Analysis product.

Integrate and Analyze External BOM Structures
Rule-based import capabilities allow compliance engineers to load product BOM structures and Approved Manufacturer List (AML) data from external systems (e.g. Enterprise Resource Planning [ERP]) into Materials Compliance Management. Material composition data can then be associated with parts, analyzed for compliance, and reported to customers.

Export of Product Compliance to Customers
The comprehensive export function of Materials Compliance Management allows compliance engineers to report compliance of products to customers using industry standard formats such as the International Material Data System (IMDS), IPC 175x, JGPSSI, JAMP AIS, and the generic Material Composition report (HTML or XML). Proprietary product information is protected in exports through automatic suppression of supplier identifying information (supplier names and part numbers), automatic roll up of compliance data by BOM level or selected leaf parts, suppression of trade name and manufacturer in materials, and substance filtering. Customer data such as the customer part number can be included in exports for selected customer programs.

IMDS Integration
Automotive companies that must report part compliance to Original Equipment Manufacturers (OEMs) using the International Material Data System (IMDS) can utilize Materials Compliance Management in all facets of the reporting process. Materials Compliance Management is integrated completely with the IMDS Advanced Interface (AI). Materials Compliance Management can download and import all IMDS configuration data such as Material Categories, Substances, Substance Applications, and Company IDs, and will associate this data to its corresponding objects.

Material Declarations created in Materials Compliance Management will trigger the automatic creation of IMDS Requests in IMDS, and any changes made to the Material Declarations will immediately trigger updates to the corresponding IMDS Requests. The Materials Compliance Management importer will recognize and import reported parts from suppliers that are contained in the IMDS daily download files. Finally, companies can use Materials Compliance Management to report compliance data to OEMs using its automatic BOM data upload capability to IMDS. It can even direct IMDS to send the data to the OEM. Materials Compliance Management will track the IDs of all objects created in IMDS so they can be referenced in future uploads.

BOMcheck Integration
High-tech manufacturers that require that their suppliers to report material declarations via the BOMcheck system can access a download action in Materials Compliance Management to download supplier submissions directly from BOMcheck for specific suppliers or date ranges. These files are downloaded in IPC 1752 2.0 format, which can then be imported into Materials Compliance Management to create material declarations for manufacturer equivalent parts.

Review Materials Compliancy Status with BI Essentials
The BI Essentials app can be configured with a compass quadrant devoted to materials compliance. The user can select the value of compliance (compliance definition) to be displayed and the representation of the part will be colored to reflect the compliance value. The hover capability can be used to view additional information regarding compliance, including the exemption information if the part is compliant with exemptions. This capability is only available to the Collaborative Sharing user if they are also a licensed user of Materials Compliance Management, Materials Compliance Analysis.

Collaboration and Approvals
Users can benefit from a wide range of capabilities for global enterprise collaboration. Those capabilities include the ability to manage and organize shared documents and structured product data, they also enable the creation of digital workspaces for virtual teams to work together. Users can easily raise issues, organize meetings and track decisions while any object lifecycle modifications can be formally approved using routes defined by end-users or, to simplify and facilitate a repeatable approval process, standard route templates.

Microsoft Integration
Users can create and access 3DEXPERIENCE® data from the most popular Microsoft applications: Word®, Excel®, PowerPoint®, Outlook®, Windows Explorer, and Windows Desktop Search. This capability enables enterprise-level collaboration while not disrupting the established productivity of end-users. With product content being managed in 3DEXPERIENCE rather than on users’ PCs, organizations are able to create, manage and review product content more securely.
ENOVIA and the 3DEXPERIENCE Platform

ENOVIA® offers a rich portfolio of collaborative enterprise business process solutions, which run on a web-based infrastructure and is available On-Premise and On-Cloud. Processes are organized to address six key business themes:

- Product Planning and Programs
- Strategic Customer Relationships
- Global Product Development
- Strategic Supplier Relationships
- Quality and Compliance
- IP Classification and Security

ENOVIA processes on top of the 3DEXPERIENCE platform facilitate business processes interoperability in context of various information and data authoring processes, such as CATIA®, DELMIA®, SIMULIA® and other DS solutions. ENOVIA processes are an integrated part of Industry Solution Experiences and Industry Process Experiences. ENOVIA also includes an online solution for companies to foster social innovation. It enables people and businesses of any size to create their own on-the-cloud communities to facilitate instant collaboration, connecting ideas, knowledge and experiences.

Our 3DEXPERIENCE platform powers our brand applications, serving 12 industries, and provides a rich portfolio of industry solution experiences.

Dassault Systèmes, the 3DEXPERIENCE Company, provides business and people with virtual universes to imagine sustainable innovations. Its world-leading solutions transform the way products are designed, produced, and supported. Dassault Systèmes’ collaborative solutions foster social innovation, expanding possibilities for the virtual world to improve the real world. The group brings value to over 170,000 customers of all sizes in all industries in more than 140 countries. For more information, visit www.3ds.com.