MATERIALS COMPLIANCE MANAGER

OBJECTIVE

Materials Compliance Manager enables companies to collect, track, analyze, and report a product's environmental compliance against chemical substance or material content regulations.

OVERVIEW

Conforming to regional environmental compliance directives such as RoHS, REACH, ELV, GADSL, Battery, Packaging, WEEE, and Dodd-Frank Conflict Minerals is a must for companies that operate globally. Using **Materials Compliance Manager**, product materials compliance can be assessed seamlessly during design when using other ENOVIA® applications, 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 Manager includes a well-defined process for requesting, receiving, reviewing, and approving materials compliance and conflict mineral declarations from the supply chain for outsourced components and/or materials. Declarations can be obtained using industry standards such as IMDS, IPC-1752, JAMP AIS, JAMA/JAPIA, CFSI CMRT, and IPC-1755. Using robust reporting and validation tools, compliance engineers can assess and approve declarations from their suppliers. This information is then rolled up through the product bill-of-material (BOM) to compute product compliance to material regulations or to assess overall conflict mineral reporting status.

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.

HIGHLIGHTS

Materials Compliance 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; the Joint Industry Guide (JIG) of declarable substances, IEC-62474 list of restricted substances, ELV, Global Automotive Declarable Substance List (GADSL) Prohibited and Declared, Packaging for EU and US, REACH, Battery, California Proposition 65, Conflict Mineral initiatives, and 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, 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.

Assess Impact of New Compliance Directives

Using compliance definitions, compliance engineers can represent industry, regional, or customer specific directives consisting of substance (or substance classification) thresholds and exemptions defined at the material, component, or part assembly 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.

Request, Collect, and Approve Supplier Material Declarations

Compliance engineers can initiate and send material declaration requests (with due dates and reporting instructions) to suppliers of outsourced components and/or materials. An option can also be enabled to automatically generate Material Declaration requests when manufacturing equivalent parts are created. Compliance engineers can monitor a supplier's progress in reporting compliance and review, validate, and accept or reject received material declarations. Supplier representatives can be notified automatically when a material declaration is accepted or rejected (including the reason for rejection).

Request, Collect and Approve Supplier Conflict Mineral Declarations

Compliance engineers can initiate and send conflict mineral declaration requests (with due dates and reporting instructions) to suppliers. Received conflict mineral declarations can then be imported. The validity and completeness of the declaration is immediately assessed and the declaration automatically promoted to Approved or Rejected based on this status. Compliance engineers can generate reports to assess the overall status of conflict mineral reporting, as well as automatically generate a rolled up list of smelters referenced by their supplier conflict mineral declarations. Suppliers are notified automatically whenever a conflict mineral declaration is promoted to a new state such as requested, approved, rejected, or canceled.

Integrate the Supply Chain

With **Supplier Materials Compliance Engineer**, 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, and 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 the **3D**EXPERIENCE® platform through a web services interface that authenticates users as a licensed supplier representative before providing access to material declarations only for their company.

Supplier Data Collection

Users can collect material composition and certifications from the supply chain using industry standard formats including IPC-175x (Version 1.1 and 2.0), Compliance Connect, JAMP AIS, JAMA/JAPIA, and International Material Data System (IMDS). Using IPC-175x, a supplier can provide a declaration of compliance (class A) along with the restricted substances (class C) or full material declarations (class D) that are used to calculate compliance. These files can be imported to create reported parts under material declarations. A compliance engineer can then review the details of these declarations (including comparing declared values of compliance with calculated values), to determine whether the material declaration should be accepted or rejected. If the material declaration is accepted, the manufacturer equivalent part is updated with the reported part information, making the declaration effective. If a material declaration is rejected, the manufacturer equivalent part is not updated and the supplier is notified of the reason for the rejection.

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 and conflict mineral declaration requests, monitor supplier progress and accept/reject declaration submissions.
- Integrate the supply chain for the successful collection of compliance certifications and material composition.
- Securely protect IP in the reporting process and enforce consistency.
- Integrate and analyze external BOM structures.
- Improve data quality by establishing a material declaration collection standard across the supply chain.
- Report product compliance to customers.

A similar process can be used to collect and import conflict mineral declarations from the supply chain using industry formats including CFSI Conflict Minerals Reporting Template (CMRT) and IPC-1755. For conflict mineral declarations, a set of configurable validation checks is used to automatically accept or reject the declaration. The validation checks determine if the supplier has provided sufficient and logical answers to the conflict mineral questions and smelter information.

Determine Engineering BOM Compliance

Users can associate material composition and compliance data directly with enterprise and/or manufacturer equivalent parts. This data rolls up automatically through the BOMs to determine the compliance of product designs. Design engineers can view compliance information and use it to make design decisions.

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]). Material composition data can then be associated with parts, analyzed for compliance, and reported to customers.

Export of Product Compliance to Customers

A comprehensive set of export functions allows compliance engineers to report product compliance 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

Through a tight integration with IMDS (the International Material Data System), automotive tier 1 suppliers can collect and import declarations sent by their suppliers through IMDS. They can then export and upload product BOM data back to IMDS to report to their customers (OEMs or other suppliers). The integration with IMDS includes all IMDS configuration data including Material Categories, Substances, Substance Applications, and Companies.

When a new Material Declaration is created, a corresponding IMDS request to the supplier can be automatically created in IMDS. The supplier can then create and submit a declaration through IMDS in response to this request. As the material declarations are updated, imported, approved, or rejected, the corresponding IMDS requests will be updated so that suppliers can be notified of the status.

When a supplier reports a declaration through IMDS, the daily module files can be imported to create or update parts and materials. The IMDS IDs will be associated with these parts and materials. When the compliance engineer is ready to report the product BOM to a customer through IMDS, the IMDS upload function will insure that any existing IMDS object for a part or material is properly referenced using the IMDS IDs.

BOMcheck Integration

High-Tech and Medical Device manufacturers that require their suppliers to report material declarations via the BOMcheck system can utilize an action to download supplier declarations directly from BOMcheck in the IPC-1752 XML format. These IPC-1752 XML files can then be imported to create reported 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 **Platform Contributor** user if they are also a licensed user of **Materials Compliance Manager** or **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. Any object lifecycle modifications can be formally approved using routes defined by end-users or from standard route templates.

Microsoft Integration

Users can create and access **3D**EXPERIENCE 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 the **3D**EXPERIENCE platform rather than on users' PCs, organizations are able to create, manage and review product content more securely.

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