

RoHS
2002/95/EC

Green-ES™ Software as a Service Solution

REACH
2006/121/EC



**Green-ES™
SaaS**

Is your company seeking to comply with global chemical and substance legislation? Are you capable of satisfying all of your customers' audit, substance disclosure and reporting demands? The GoodBye Chain Group's (GCG) Green-ES Software as a Service (Green-ES SaaS) solution allows all types of manufacturing companies to rapidly and cost effectively satisfy the ongoing customer audit and reporting requirements for REACH, RoHS and all other global product environmental compliance and toxicity legislation.

GCG offers comprehensive product toxicity, waste stream management, climate, and energy analysis services in tandem with its Green-ES™ software and solutions portfolio. GCG helps companies to improve profitability through improved corporate brand equity, reduced life cycle toxicity costs and increased energy utilization efficiencies.

"Green-ES software provided us with a low cost solution that has greatly simplified our substance declaration management process. We can now rapidly respond to our customers' material declaration requirements and demands"

*-Cynthia Ong
Mindspeed*



Green-ES SaaS BENEFITS

- Installed in hours - not months
- Easy integration with Agile, SAP, Oracle or any other PLM/ERP system
- Ease of use, advanced analytics, data cleansing and management reporting
- Lowest cost, highest value
- Meets REACH and RoHS compliance needs while providing a foundation for other chemical legislation
- Reduces legal, financial and competitive risks
- Establishes accountability and compliance system audit trail
- Import/Export Adapter support for CSV, EXCEL and XML formats
- Perfect solution for SME's as well as larger corporations
- Mature, "award winning" product available today
- Internationally recognized GoodBye Chain Group domain expertise

THE ERA OF FULL-DISCLOSURE PRODUCT COMPOSITION DATA IS HERE

With more than 100,000 chemicals on the market, it is no surprise that the chemical and substance legislation continues to expand. CA, China, EU, Japan and Korea RoHS; mercury bans in US states; hazmat legislation in Australia, Canada and South America; and now the most far-reaching Directive to ever impact manufacturers, importers and downstream users: the EU's Registration, Evaluation and Authorization of Chemicals, REACH. Additionally, many more companies are going well beyond the six RoHS substances by requiring full disclosure information on dozens, if not hundreds, of chemicals and substances.

A GROWING NUMBER OF MATERIAL AND SUBSTANCE RELATED RISKS ARE ALSO HERE

Sony's cadmium-related loss of 110M Euros is legendary. Less well-known are other financial losses e.g.: Dupont's settlement of more than \$100M for PFOA releases; the 22% drop in Sherwin Williams' stock following a jury verdict regarding lead in paint. Understandably, toxicity-related shareholder resolutions are rising sharply.

WHAT'S NEEDED? A SOFTWARE AS A SERVICE SOLUTION FOR SUBSTANCE MANAGEMENT

The Green-ES SaaS solution allows companies to cost effectively implement a complete substance management solution. Secure access is provided to Green-ES compliance software over a secure internet link while eliminating the requirement for on site implementation and administration of dedicated servers and their associated energy costs and carbon footprints.

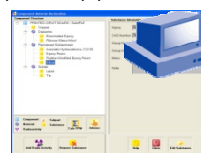
At the heart of this solution is MDW-ES™ software, recipient of SMT's 2007 & 2008 Vision Award. Green-ES™ SaaS is based on MDW-ES technology and allows companies of all sizes to collect, analyze, cleanse, roll-up, manage and report both internal and supplier chemical data. Companies can establish bullet proof audit trails and generate standardized and custom reports for EU RoHS, China RoHS and REACH Article reporting. REACH capabilities include managing REACH compliant Safety Data Sheets (SDS).

The Green-ES solution implements a simple 3-step process.

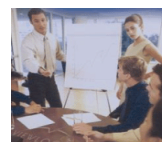
- **Collect** material, substance and chemical data from suppliers and customers.
- **Manage** legislative business rules, substance analytics, data accuracy.
- **Report** and send custom reports or certified Material Declarations to customers via email, fax or mail.

With Green-ES's flexible import and reporting capabilities, information flows easily and securely up and down your supply chain. Once in place, the item library can be leveraged for new product design and lifecycle analysis.

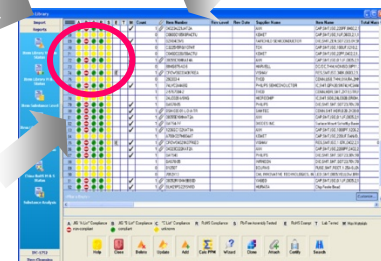
Data Collection and
Project Management
Services



Material and Substance
Management Software



Environmental Compliance
Managed Services Outsourcing



from liability ...to compliance...to competitive advantage™

THE GOODBYE CHAIN GROUP – MATERIAL AND SUBSTANCE MANAGEMENT SOLUTIONS



Green-ES FEATURES

- Secure multi-user access over secure internet connections
- Supports IPC 1752 data model and formats
- REACH, RoHS and Custom Substance Libraries
- Legislative Business Rules
- Legally-binding audit trail
- Downloadable .NET client software
- Customizable user permissions
- PDF based 1752 Declaration Class 1-6 status reports that can be published directly to a website

SYSTEM REQUIREMENTS

- 1 GHz or faster processor
- 1024 x 768 or greater color display
- CD Rom drive
- Minimum 1 Gigabyte of RAM, 2 Gb or more recommended
- Minimum 800 Mbytes of free hard disc space
- Microsoft Windows XP Professional or Vista Business
- Microsoft .NET Framework version 2.0

Green-ES SOLUTION PACKAGES & SERVICES

- **Quick Start Substance Management Package A:** Green-ES solution, User Training
- **Quick Start Substance Management Package B:** Green-ES solution, User Training, Full Disclosure Data Collection and a Client Specific Project Plan
- **Quick Start Substance Management Package C:** All items included in Package B plus Complete Outsourced Managed Services from GCG
- Risk and Opportunity Assessments
- RoHS, REACH & WEEE Compliance Roadmaps
- RoHS & REACH Compliance Implementation Programs
- WEEE Compliance Implementation Programs
- Supplier compliance follow-up
- Supplier Audits
- Chemical lab testing & analysis
- Alternative Part Assessments
- Data Collection Outsourcing

A QUICK, EASY-TO-USE 3-STEP PROCESS USING Green-ES

#1 COLLECT SUBSTANCE DATA

- Import AVL files using Import Wizard (Excel, CSV or XML data formats)
- Import Materials & Substances
- Determine Yes/No or Full Disclosure status of all parts immediately

#2 MANAGE YOUR PRODUCT DECLARATION PROCESS

- Create RoHS & REACH Audit Records
- Data Cleansing & PPM Analytics
- Substance Analysis & Product Roll Up

#3 PROVIDE CERTIFICATES & COMPLIANCE REPORTS

- Generate Compliance Certificates
- Output in Excel, PDF or XML format
- Generate REACH Article 33 Communication Documents
- Establish the "Reasonable Steps" audit trail

The screenshots illustrate the software's capabilities. The top screenshot shows a 'Substance Library' table with columns for Item Number, Rev Level, Rev Date, Supplier Name, Item Name, and Total Mass. The middle screenshot shows a 'Substance Analysis' window with a tree view of materials and their compliance status (A, B, C, R, E, M). The bottom screenshot shows a 'REACH SVHC (CANDIDATE LIST) NOTIFICATION/COMMUNICATION REPORT' with fields for Date/Time, Importer/Producer, Units, Article Item Number, Article Weight (g), Substance Name, CAS-Number, Mass (g), PPM, and Total Tonnes IP. A digital signature from EVP, Operations is visible at the bottom right of the report.

FOR MORE INFORMATION

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ABOUT THE GOODBYE CHAIN GROUP

For electronics companies who need to comply with RoHS, WEEE, REACH and other global legislation, are looking to create a corporate "GREEN" strategy, and need to implement a comprehensive chemical and substance-level data management program...

The GoodBye Chain Group offers a portfolio of software and program consulting services to reduce risks and costs, while increasing revenues and competitive advantage.



from liability ...to compliance...to competitive advantage™