

Open Source and Open Community for Environmental Compliance Management

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Aras Community Network

Spring 2007

Introductions



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Serves as a non-member expert on the EU - Regulation, Evaluation, Authorization, of Chemicals committee

Mike has spent his career with companies in the semiconductor, PCB and automotive industries.

Mike received his Engineering degree from Purdue University and his MBA from Indiana University.

Extended Producer Responsibility Initiatives



What About Companies Serving Multiple Markets?



- ❖ Each initiative has a different reporting need
- ❖ REACH will further complicate the issue
- ❖ Interfacing with IMDS, Rosetta.Net?
- ❖ AND THEY ARE ALL EVOLVING

Data Management is a “Growing” Problem



- ❖ EPR Initiatives have created a data reporting nightmare
- ❖ How can “Due Diligence” results be tracked?
- ❖ Each initiative is creating a different data reporting need
- ❖ New data requirements yet to be defined
 - ✓ REACh – being defined
(Registration, Evaluation and Authorization of Chemicals)
 - ✓ EuP – coming soon
(Energy using Product)
 - ✓ IPP – Integrating all of the above
(Integrated Product Policy)

❖ ELV

- ✓ IMDS for Automotive only, EDS proprietary database

❖ RoHS

- ✓ IPC 1752 hasn't been widely accepted for RoHS
 - Only about 100 companies using it
 - Being revised

❖ Large and costly PLM/ERP systems developing new modules at further cost to owners

❖ Spreadsheets may be most common tool used

❖ All require a lot of manual support

❖ Open Source Database

- ✓ Enter 100% of your product content
- ✓ Send only the portion of data required
- ✓ Post process to any reporting format or data standard
- ✓ Share industry experience

- ❖ Aras recognizes that this is an area that Innovator can help – flexibility, good reporting, evolving requirements etc.
- ❖ Initial “Environmental Compliance” solution package posted on the Aras project site for download

- ❖ Open framework, not just a static RoHS solution
- ❖ Simple data model:
 - ✓ Hazardous Substances
 - ✓ Regulation has cut-in dates and thresholds of Substances
 - ✓ Part Master with BOM
 - ✓ Part -> AML -> Manufacturer Provided Components
 - ✓ Components have a “BOM” of hazardous materials
- ❖ Reports to bounce product content against regulations

Regulation Definition



Innovator DEMO 8.0 - Microsoft Internet Explorer

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File Edit View Search Actions Reports Tools Help

Innovators

- Administration
- Change Management
- Dashboards
- Design
- Documents
- Library
- My Innovator
- Portfolio
- Process
- Quality
- Quality Defect Logs
- Skills Management
- Sourcing
 - Contacts
 - Environmental Compliance**
 - Manufacturer Parts
 - Manufacturers
 - MSDS
 - RFQ
 - Vendors
- Templates

Page Size: 25 Max Results: Latest As Of: Today

Regulation	Destination
RoHS	China
RoHS	Korea
RoHS	Japan Green
RoHS	CA Prop 20/50
RoHS	EU

Ready Innovator Admin demo ROHS Items 1-5 of 5. Page 1 of 1 aras INNOVATOR

Regulation Definition



Environmental Compliance - DDC92A2C843D496C9ECF5BE0BB499545 (read only) - Microsoft Internet Explorer

File Edit Views Actions Reports Tools Help

Regulation: RoHS Destination: CA Prop 20/50

Environmental Compliance

Materials

Actions: Pick Related

Material	Symbol	Threshold (PPM)	CAS #
Chromium	Cr	99	1333-82-0
Mercury	Hg	25	7439-97-6
Polybrominated Biphenyls	PBB	1000	59536-65-1
Polybrominated Diphenyl Ether	PBDE	1000	92-86-4

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Hazardous Substance Library



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 - Measurement Technique
 - MSDS Hazardous Ingr
 - Occurrences Catalog
 - Reaction Plans Catalog
 - Severities Catalog
- My Innovator
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- Process
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- Quality Defect Logs
- Skills Management
- Sourcing
- Templates

Material	Symbol	CAS #
Cadmium	Cd	7440-43-9
Chromium	Cr	1333-82-0
Lead	Pb	7439-92-1
Mercury	Hg	7439-97-6
Polybrominated Biphenyls	PBB	59536-65-1
Polybrominated Diphenyl Ether	PBDE	92-86-4
Polychlorinated Biphenyl	PCB	1336-36-3

Ready Innovator Admin demo ROHS Items 1-7 of 7. Page 1 of 1 **aras INNOVATOR®**

Part Master with BOM



Part - OR901001 (read only) - Microsoft Internet Explorer

File Edit Views Actions Reports Tools Help

Part

Created By: **Innovator Admin**
Created On: **05/31/2006**
Modified By: **Innovator Admin**
Modified On: **02/27/2007**
Locked By:
Generation: 3
Release Date:

Part Number: OR901001 Revision: A State: Preliminary Assigned Creator:
Name: Top Level Assy Designated User:
Type: Unit: EA Make / Buy: Make Exemption Type: Telecom
Long Description: Top level salable part item
Effective Date:

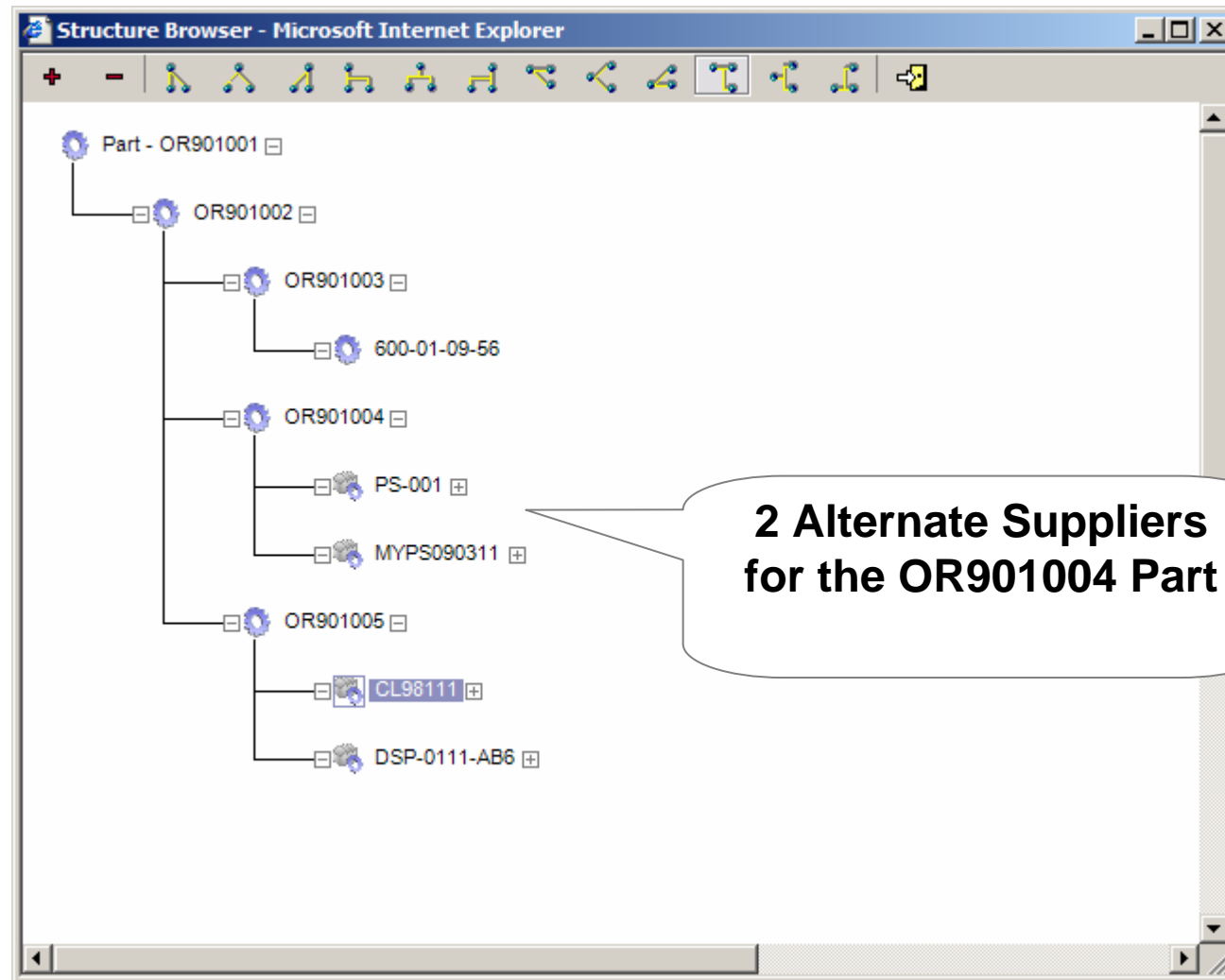
BOM Alternates AML Documents Characteristic Goals Changes Quality Planning Documents Part Submission Warrants Issue

Actions: Pick Related

Sequence	Part Number	Revision	Name	Type	Quantity	State	Unit	Refer
1	OR901002	A	Orange System Unit	/Part/Assembly	1	Preliminary	EA	

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Multi-Level BOM Query to AML Components



Supplier Components with Substance Content



Manufacturer Part - CL98111 (read only) - Microsoft Internet Explorer

File Edit Views Actions Reports Tools Help

Part Number
CL98111

Name
DSP Module

Description

Manufacturer
[Critical Link](#)

MSDS Sheets Data Sheets Approved Vendor List Where Used **Material**

Actions Pick Related

Material	Symbol	CAS #	Weight	Weight Units	PPM	Description
Cadmium	Cd	7440-43-9			300	
Chromium	Cr	1333-82-0			234	
Lead	Pb	7439-92-1			46	
Mercury	Hg	7439-97-6			63456	
Polybrominated Biphenyls	PBB	59536-65-1			456	
Polybrominated Diphenyl Ether	PBDE	92-86-4			43	
Polychlorinated Biphenyl	PCB	1336-36-3			0	

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Environmental Compliance Report



Report: Compliance Report - Microsoft Internet Explorer

Compliance Report

Part Number: OR901001
Part Name: Top Level Assy
Description: Top level salable part item

BOM	Supplier Part	Name	Vendor	RoHS for China	RoHS for Korea	RoHS for Japan Green	RoHS for CA Prop 20/50	RoHS for EU
OR901004	PS-001	12v Power Supply	Kingston Technology Company	OK	Fail	OK	OK	OK
	MYP5090311	12v supply module	All Electronics Corp.	Fail	OK	OK	OK	OK
600-01-09-56	NO SUPPLIERS IN DATABASE			N/A	N/A	N/A	N/A	N/A
OR901005	CL98111	DSP Module	Critical Link	Fail	Fail	OK	Fail	Fail
	DSP-0111-AB6	DSP Packaged Unit	Kustom Code Limited	No Data	No Data	OK	No Data	No Data

Done

Trusted sites

**BOM exploded to "Buy" Parts,
and through AML to a list of all
approved suppliers.
Supplier Substance data is
compared to Regulations.**

MSDS Sheets



MSDS - BB2A56C35FA0468793DFB99E57C9AC8D (read only) - Microsoft Internet Explorer

File Edit Views Actions Reports Tools Help

MSDS Material Safety Data Sheet

Created By: **Innovator Admin**
Created On: **07/06/2006**
Modified By: **Innovator Admin**
Modified On: **10/22/2006**
Locked By:
Generation: **4**
Release Date:

Product Identification

Trade Name: Emergency Phone:
Manufacturer: [Henkel Loctite](#) Info Phone:
Chemical Name:

MSDS Data Sheet: [Loctite Professional Epoxy.pdf](#)

Physical Data

Boiling Point: Deg
Evaporation Rate:
Vapor Density (Air=1):
Vapor Pressure: +/- PSI @ Deg
Solubility In Water:
Appearance:
Specific Gravity (H2O=1): @ Deg
Odor:
Percent Volatile(Volume): %
VOC: (%)

Fire And Explosion

Flash Point: Deg Notes:
Flammable Limits: Lel: % Uel: % Notes:
Extinguishing Media:

Hazardous Ingredients

Flammability:
Health:
Reactive:
Specific:

Chemical Name	CAS Number	Weight %	ACGIH TWA	Units	ACGIH STEL	Units	OSHA PEL	Units	OHA
Epoxy Resin	25068-38-6	60-100							
Polymercaptan Hardener	Proprietary	60-100							
N- (2-Aminoethyl) piperazine	140-31-8	5-10							
Phenol, 2,4,6-tris[(dimethylamino)m	90-72-2	5-10							
Triethylenetetramine	112-24-3	5-10							
Aminoethylethanolamine	111-41-1	1-5							

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Environmental Compliance Community



- ❖ Common data model
- ❖ Common reporting framework
- ❖ Shared Compliance report layouts
- ❖ Shared compliance rule definition loading
- ❖ Open Source / Open Community database of Substances (like IMDS)
- ❖ Shared development of RosettaNet and IPC data exchange formats
- ❖ Alliances with test instrument suppliers and consultants