

EMIT Consortium

Restricted Substances Database - development plans;
Including E-S-02



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Outline

• Legislation & Content Plan

- ▶ Current Status
- ▶ Plan for next 6 months

• E-S-02 Overview of Project

- ▶ Current Status
- ▶ Demonstration of Data

Database Release Plan

Current Status

Release 1.006 (MIv5 Release)

Regulation No. 842/2006 on certain fluorinated greenhouse gases

Korean WEEE and RoHS Regulations

EU Directive 85/467/EEC Polychlorinated Biphenyls

TSCA Section 5(a) Significant New Use Rules (SNURs)

Various schema changes to accommodate the new MI5 functionality (E.g. Specifications Table; Fall Back Link to MU)



- 82 Legislations & Regulations
- 6625 Substances



Database Release Plan

Release 2.0

SIN List 2.0 added to Where Used Data (514 Substances)

Summary of Links made for SIN:

MU	▶ Restricted substances associated with this material (0)
	▶ Restricted substances that may be associated with this material (1736)
	▶ Restricted substances that may be used in the manufacture of this material (1751)
PU	▶ Restricted substances used in the manufacture of this material (286)
	▶ Restricted substances associated with this process (0)
	▶ Restricted substances that may be associated with this process (0)
COAT	▶ Restricted substances that may be associated with this coating (0)
	▶ Restricted substances associated with this coating (0)

Patch for UI to include SIN List in WUD searches

New RS reports to leverage SIN data



Database Release Plan

EMIT Vote Outcome – November 2011

Project Title	TOTAL	Rank
Generate REACH SVHC Prediction Indicator ('Cathy Phillips Indicator')	24	7
Generate a metric to indicate the overall risk that a substance or element poses to the organization	24	7
Generate Risk metric for undocumented reformulation by suppliers	19	6
Generate Risk metric for threat to source of supply	18	6
Generate a risk metric to quantify the lack of substitutes for an obsolete (or potentially obsolete) substance or element	18	6

Handling of NOCAS

Adding Substance Attribute Groups



Database Release Plan

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Release 2.1 (Spring)

Enhanced with CPI (Spring)

Beta Database for Testing (Summer)



Database Release Plan

Release v2.1

1. 'Cathy Phillips' Indicator

→ Identifies substances most likely to be fast tracked towards Authorisation

-ETUC List

-CMR on CLP

-SIN List 2.0

-Add attributes:

- Is it a high production volume (HPV) substance (from ESIS)?
- Is it wide dispersive use (ERC categories 8-11 of Registered substances from ECHA Website)?



Coatings Database

Coverage to be extended to Oil & Gas industry Coatings in Release 2.0

New coatings to added (e.g. Vacuum carburize, various polymer coatings, PECVD, diamond like carbon (DLC), weld overlay, plasma sprays)

Accessible in new RS Reports & within CAD

→ 143 Coatings



Coatings Database

The screenshot displays the Coatings Database interface. On the left, a search results tree shows various categories like 'Coatings [v1]', 'Anodize [v1]', 'Conversion [v1]', etc., with 'Paint [v1]' expanded to show 'Chemical agent resistant coating (CARC) [v6]'. The main panel shows the details for 'Topcoat, Chemical agent resistant coating (CARC) [v6]'. The 'General information' section includes: Coating (CARC (low VOC)), Coating chemistry (Aliphatic polyurethane), Deposition process (Paint), Degree of development (ML qualified), Coating density (0.0532 to 0.0683 lb/in³), and Typical coating thickness (1.8 to 2.3 mil). The 'Description' section notes that CARCs are highly durable camouflage topcoats for military equipment. The 'Environmental' section includes a note on coating constituents and a list of restricted substances.

Coating Substitution

E-S-02 Substance Substitution

'To suggest possible alternative substances for a given combination of substance + application'

Focus on substances in Coatings

Coating Substitution

Workflow from E-S-02:

- i. The user identifies a substance from the Restricted Substances Database (RSDB) – through searching, following a link, etc.
- ii. The user identifies the use of the substance from a list of available choices: eg the material in which it is used ('flame retardant in ABS') or the process in which it is used ('process working fluid in electro-discharge machining').
- iii. The software generates a list of possible alternative substances for this combination of substance and application, including any available supplemental notes on the particular substitution. The information can be output in a printed report or copied to Excel.
- iv. Where a substance has been officially approved (in-house) for substitution in-this application, this should be flagged.
- v. The user can click on one of the alternative substances and open its data sheet, see information about regulations governing its use, etc.



Coating Substitution

How this applies to Coatings:

- i. Coatings impacted by REACH (or any other regulation) can be found using Tabular links
- ii. Use is in Coatings *but* context is missing. Linking Coating to Spec provides that context. (e.g. Surface treatments for landing gear applications on Al substrates).
- iii. 'Substitute for' attribute can be used to find alternatives for specific coatings *but* coatings do not tend to have one to one replacements – requires context – provided by Spec.
- iv. Approval of coating generally provided by internal specification – Technical Readiness Level a useful guide in that decision making process (often supplemented by internal testing / validation)
- v. Legislative impact on Coating can be viewed in Tabular attribute. Impact on linked Specification records can be rolled up from Coating record



Coating Substitution

Proposed new Attributes in Coatings Table:

Provide TRLs for substitutes of Coatings for core uses of that coating:

Coating to be Substituted	Candidate Substitute	Applications, TRL of substitute	Electrical	
			Connectors	Steel Components
Cadmium Plate		Fasteners		
	Polymer-ceramic, Epoxy-ceramic, Non-chrome	0	0	8
	Electro/electroless plate, Al electroplate	9	9	9
	Electro/electroless plate, Zn-Ni electroplate (acid)	8	8	8
	Electro/electroless plate, Al-Mn electroplate	0	0	4
	IVD Al	9	0	9
	Metallic-ceramic, Al-ceramic, Non-chrome	0	0	5
	Electro/electroless plate, Sn-Zn electroplate (tank, brush)	0	4	4
	Thermal spray, Flame spray, Al	0	0	9
	Electro/electroless plate, Zn-Ni electroplate (LHE)	8	3	8
	Metallic-ceramic, Al-ceramic, High Cr	0	0	9
	Metallic-ceramic, Al-ceramic, Low Cr	0	0	5
	Weld, Laser cladding	0	0	5
	CVD, MOCVD, Al (Aluminum)	4	0	3
	Metal-flake, Metal-flake chrome	9	0	0
	Metal-flake, Metal-flake non-chrome	9	0	0
Electro/electroless plate, Zn electroplate	9	0	9	

→ Facilitate identification of suitable alternatives for targeted coatings

Coating Substitution

Proposed new Attributes in Specifications Table:

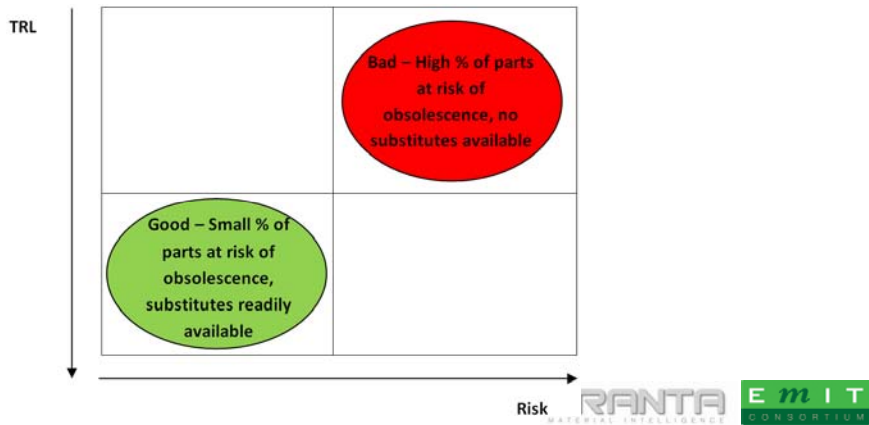
Provide container for tracking & managing substitution work

- Targeted for Phase Out? Y/N
- Retired? (Y/N)
- Substitute Spec(s)
- TRL of Specs(s)
- Approved alternative

Coating Substitution

Proposed new reporting capability:

Report based on TRLs of replacement specs could be used as basis of a risk dashboard for a BoM / across all specs.



Coating Substitution

Overall Workflow:

Find impacted Specifications

Find alternative Coatings using Coatings TRL data to support decision making

Create new Specification record(s) and link affected Spec to this

Assign TRL to replacement Spec

Edit over time as testing / validation progresses

Run periodic reports on BoMs / all specs to assess overall business risk to support resource targeting

Retire obsolete specs, ban from new product design

Questions

Have we got the right applications for replacement coatings?

Have we got the right list of Coatings requiring replacement?

Is the schema right for tracking and managing Specification substitution work?

Is the risk dashboard desirable? If so, where does it live?

Is the overall workflow correct?

Title

First level bullet

- Second level bullet
 - ▶ You might get to third level
 - ▶ And another
- Back to second

Back to first

And another

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What was planned outside of voting:

Revised folder structure in Legislation

Handling of NOCAS

Adding Substance Attribute Groups

Planned for
Summer



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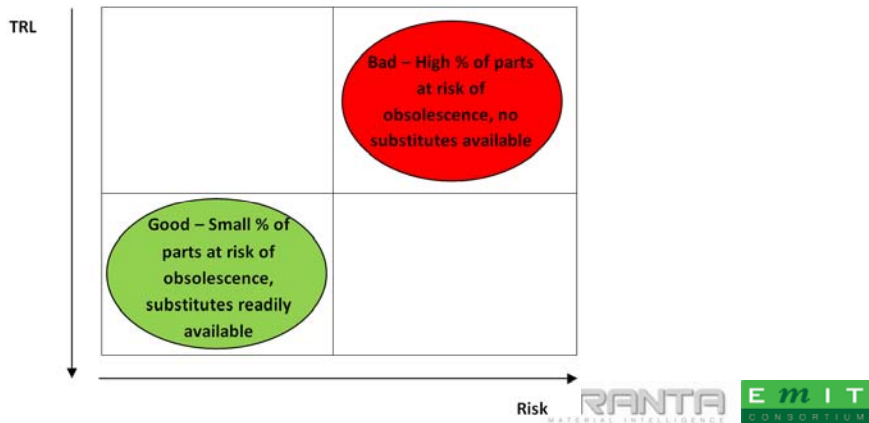
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