

Chemical Inventory: Knowing Chemicals in Products & Supply Chains

Clinton S. Boyd, PhD

Principal Scientist – Green Chemistry &
Sustainability

The logo for Steelcase Inc, featuring the word "steelcase" in a bold, lowercase, sans-serif font, followed by "inc" in a smaller, lowercase, sans-serif font. The logo is set against a white rectangular background.

December 9, 2015

JFK Presidential Library and Museum, Boston, Massachusetts, USA

steelcase inc

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Influencers

Regulations



Customer Needs

Cost

Disclosures

Labels

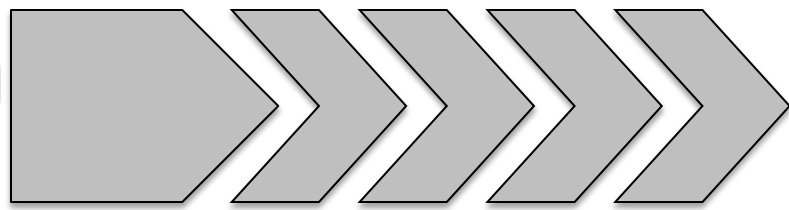
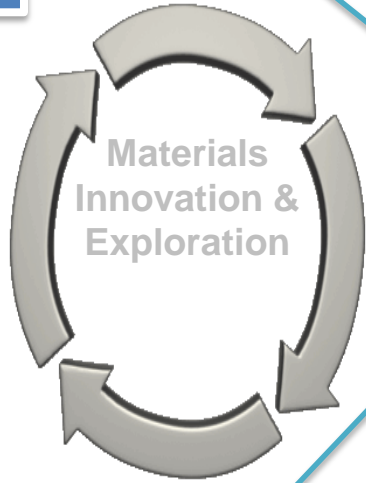
Product Environmental Profiles

Certifications

LCA

EPD

Product Development



Toolbox

Design for Environment

Life Cycle Assessment

Material Chemistry

End of Life Management

Supplier Engagement

Green Chemistry

Performance

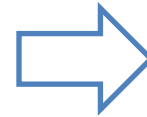
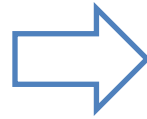
Supply Chain



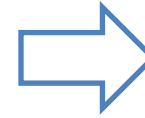
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Product Hierarchy: Material Chemistry begins with **Homogeneous Materials**

Homogeneous material



Part and/or assembly



Product



Target Material(s):

- Product-specific
- Supplier-specific
- Strategic Materials



Goal of Material Chemistry: **Chemical Data Set** for Homogeneous Materials

Target Material



Chemical Data Set
“Chemical Signature”



Scope:

- All constituents vs. COC
- Initial vs. Final
- Intentional
- Residual
- Impurities

Identity:

- CAS Registry Number(s)
- Chemical Class
- Functional Class
- Concern Rating

Amount:

- Concentration, % w/w
- Range
- Threshold
- Presence / Absence

chemical identity



amount



Establishing a Strategy for Data Gathering, Assessment and Verification

Drivers

- Regulations
- Certifications
- Internal Mandates
- Marketing Claims
- Customer Requests
- Bid Proposals
- Emerging Issues

One or more, set goals and strategy for material selection, data set requirements and data gathering approach

As a whole, set framework for prioritizing chemicals of concern

Prioritization of Chemicals

- "List of Lists"
- Reportable Substances List(s)
- Priority Chemicals- and Materials-of-Concern

Informs scope of chemicals to be identified

Target Material(s)

Data Gathering

Chemical Data Set(s)

Data Gathering, Assessment and Verification

What

- Engineering drawings & specifications
- Safety Data Sheets
- Technical Data Sheets
- Mill certificates
- Disclosures*
 - Full Material Disclosures
 - List-based Disclosures
- Declarations*
 - Chemical-specific declarations
 - Category-based declarations
- Certifications
- Analytical Testing
 - XRF
 - Indoor Air Quality
 - Other
- Material databases & literature
- Subject Matter Expertise

**With or without non-disclosure agreements (NDA)*

** NDAs may be 2-way or multi-party*

Data Gathering, Assessment and Verification

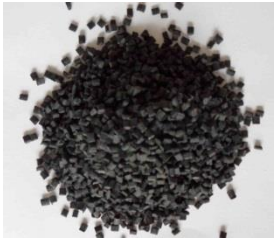
Who

- Internal teams
- Supply Chain
 - Tier 1
 - Multiple Tiers
- Third-parties
 - Certifiers
 - Assessors
 - Other Services

When

- Materials Innovation & Exploration
- New Product Development
- Life Cycle Management

Rolling up to the Product-Level



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Slides are for illustrative purposes only

Thank you.

Clinton S. Boyd, PhD
Principal Scientist- Green Chemistry & Sustainability
Legal Strategies | Global Sustainability Initiatives
Steelcase, Inc.
616.954.1002
cboyd6@steelcase.com

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