An innovative partnership between automakers, their suppliers and the US Environmental Protection Agency (EPA) to identify and implement creative projects and programs that will advance environmental sustainability while providing economic value to the automotive supply chain.
SP Focus Areas

Chemical Issues Management Work Group
Energy and Water Work Group
Materials Efficiency Work Group
North American Work Group
Renewable Energy Work Group
Technology and Networking Work Group
SP Work Group Formed in 2006

- Follow emerging chemical regulations
- Develop strategic technical solutions
- Share best practices

Material Assessment Strategy (MAS) Program

- Initiated in 2007
- Goal: develop common health and environmental hazard, exposure and risk screening processes for chemicals in vehicle parts/processes
- Contracted Science Strategies to develop process: Tom Osimitz, President

Work Group Chaired by David Woodyard, Global Manager, Sustainability, The Goodyear Tire & Rubber Company
Drivers: Current and Emerging Regulatory Action

REACH (EU Chemicals Directive)

- Requires companies to process risk assessments on many more of their products, including articles
- Other REACH-like regulations emerging globally

California Safer Consumer Products Draft Regulation and Other State Product Chemicals Regulations (US)

- Requires flexible and efficient systems to respond to a range of stakeholders reporting requirements

Toxic Substance Control Act (US)

- Bills for reauthorization in continuing discussion
Drivers

- **Regulations**
  - UNEP/CEPA/REACH/RoHS/TSCA/States
  - Regulatory pressures toward chemical risk assessment as part of product development

- **Competition**
  - Stewardship, efficiency, innovation, “green” products
  - Competitive response requires a unified framework for efficiency

- **Customers/Investors**
  - Concerns about chemicals in products
  - Customer demand for clearer hazard/risk information is driving product liability concerns

- **Globalization**
  - Distributed supplier networks
    - Complex ingredient info
  - Urgent need for robust chemical tracking while protecting suppliers’ proprietary information

- **Public/NGOs**
  - Advocacy groups, community groups, etc.
  - Advocates are driving public concern over chemicals in products
Challenges

Assessment of articles* represents a new paradigm for most companies in the auto sector and elsewhere.

- Manufacturers of articles are not chemical companies
- Limited or no toxicological expertise
- They are used to considering chemicals in formulations, but not articles

*US OSHA and US EPA define “articles” as an object that during production is given a special shape, surface or design which determines its function to a greater degree than its chemical composition.
Importance of MAS Process

- Address emerging chemical regulations and consumer concerns
  - Need for common process to address requirements for chemicals in articles

- Reduce business risk and cost
  - Add value to existing chemical information on parts
  - Common, shared process across OEMs and suppliers

- Process for addressing chemicals within Sustainability programs
MAS Operating Principles

- Engage and Challenge Participants
- Level the Playing Field
- Practice Constant Improvement
- Pursue Leadership
- Be Flexible and Open to Change
MAS Assessment Principles

- Embrace Spirit of Constant Improvement
- Consider Hazard and Risk
- Think about Full Life Cycle
- Use Chemical Lists as a Starting Point
The SP Materials Assessment Strategy (MAS) Project is structured into 4 Phases:

**Phase 1** – Developed MAS Principles and framework

**Phase 2** – Developed common risk assessment parameters and identified appropriate tools for human exposure in vehicle interiors

**Phase 3** – Built upon Phase 2 to include environmental risks from vehicle wear debris (brakes, tires) or other exterior materials

**Phase 4** – Building upon Phase 3 to include health and environmental risks from vehicle end-of-life activities
Guidelines

The SP Material Assessment Process is not:

• A comprehensive hazard assessment, dose response, exposure assessment, and risk characterization procedure that fully describes both the science and art associated with these elements of risk assessment;

• A procedure intended to guide refined complex assessments of potential exposures.
Guidelines

The SP Material Assessment Process is:

• An entry point for companies not previously engaged in a systematic, but limited, review of hazard and risk of chemicals associated with vehicle parts/processes;
• A way to screen chemicals for a limited, but important group of hazards of highest concern to stakeholders;
• A means of providing for prioritization of concern for chemicals based on both hazard and exposure-driven risk.

A successful MAS will:

• Enable better design of products by optimizing chemical selection
• Minimize issues associated with ELV processing
Guidelines

• Use of Outputs
  – Design stage and retrospective analysis
    • Ingredient and material optimization

• Addressing Issues Identified
  – Considerations
    • Are acceptable alternatives available?
      – Cost, function, supply
  – Options include
    • Reduction in concentration of chemicals of concern
    • Modifications to reduce availability of chemical
    • Substitutions
    • No action
The projected result of MAS Phase 4 will be a set of assessment parameters and procedures for End of Life Vehicle (ELV) materials, including:

1) Exposure Assessment, Scenarios and Guidelines
   a) Procedures for determining exposure scenarios based on use and conditions of the chemical/article
   b) Pilot exposure algorithm for automotive ELV materials

2) Corresponding Algorithm for Human Health and Environmental Risk Assessment

3) Output structure based on Hazard, Exposure and Risk characteristics to enable cross-article comparative assessment
Current Status

MAS Program Guidelines Complete for Phase 2 – Interior
- Hazard & Dose Response Assessment Guideline
- Exposure Assessment Guideline
- Risk Assessment Guideline
- Business Process Management Guideline

MAS Program Guidelines Complete for Phase 3 – Wear Debris
- Hazard & Dose Response Assessment Guideline
- Exposure Assessment Guideline
- Risk Assessment Guideline

MAS Phase 4 In Development – Next Steps
- Refining Detailed Hazard Evaluation Framework for ELV
- Specification of Exposure Scenarios

Implementation
- Voluntary - company-specific approach
For More Information on SP

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