

**Proposed
Amendments to the Tables of Maximum
Incremental Reactivity (MIR) Values**

**Public Hearing
December 3, 2003
Sacramento, California**

California Environmental Protection Agency
 **Air Resources Board**

Agenda

- **Background**
- **Development Process**
- **Proposed Amendments**
- **Impacts**
- **Summary**
- **Recommendation**

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Background

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Aerosol Coating Products Regulation

- Board Approved Amendments to the Aerosol Coating Products Regulation on June 22, 2000
 - Also Approved New Subchapter Containing Maximum Incremental Reactivity (MIR) Values
- Legally Effective on July 18, 2001
- Established Reactivity Limits for 36 Coating Categories Based on MIR Scale

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Board Directive to Executive Officer

- Review MIR Values 18 Months after Effective Date of Amendments
 - And Every 18 Months Thereafter
 - Make Revisions If Necessary
- Directed Amendments to Update the Tables of MIR Values to Be Conducted through An Executive Officer Public Hearing

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Using the MIR Values

- MIR Values dated July 18, 2001 Used to Calculate Product-Weighted MIR (PWMIR) Values for Aerosol Coatings
- MIR Values for Aerosol Coatings Unchanged Until June 1, 2007
- Only the MIR Values for New Compounds Added to the Existing Tables Can Be Used in Aerosol Coatings Prior to June 1, 2007

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Current Tables of MIR Values

- Based on the Work of Dr. Carter at the University of California, Riverside (UCR)
 - Section 94700: MIR Values for 685 Individual VOCs or Mixtures
 - Section 94701: MIR Values for 24 Classes of Hydrocarbon Solvents

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Why Propose to Amend MIR Values?

- Board Resolution Directs Us to Review the Tables Every 18 Months.
- Initial Assessment Indicates Some of MIR Values Have Changed Non-Negligibly.
- Over 100 VOCs Have Been Added to the SAPRC Mechanism as well as the MIR Tabulation.
- Ensure Continuous Use of “Best Science” in Regulations.
- Staff Determined That the Update Is Appropriate.

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Development Process

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Process for Developing Proposal

- Review of MIR Values by Dr. Carter
 - October, 2002 and February, 2003
- Reactivity Research Advisory Committee Meeting
 - December 4, 2002
- Public workshop
 - April 23, 2003
- Reactivity Scientific Advisory Committee Review
 - June and July, 2003
- Stakeholder Discussions
 - June and July, 2003

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Scientific Basis for the Proposal

- The Existing MIR Values Reviewed by Dr. Carter
 - No Major Revisions on the Chemical Mechanism (SAPRC99) and the Reactivity Calculation Scenarios or Procedures
 - Slight Corrections or Modifications to Some Mechanisms, Emissions Assignments, and Files and Software Programs

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Scientific Basis for the Proposal

(Continued)

- Over 100 New Compounds or Mixtures Added
- Among 685 VOCs or mixtures, MIR Values Changed:
 - > 5% for 23 Compounds
 - > 1% for 305 Compounds
 - < 1% for the Remaining Compounds

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Scientific Peer Review

- Required by Health and Safety Code
 - Section 57004
- Reactivity Scientific Advisory Committee
- The Committee Reviewed and Approved of the Scientific Basis for the Proposal

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Proposed Amendments

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Section 94700

- Add 102 New Compounds or Mixtures
 - A Total of 787 VOCs or Mixtures
- Amend only the MIR Values that Have Changed by at Least 5 Percent
 - A Total of 14 VOCs
- Continued Use of Upper Limit Estimates Recommended
- Add a New Column (New MIR Value [Effective Date])

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Section 94701

- Staff Reviewed the Bin Values and Found That No Changes to the Bin Values for the Hydrocarbon Solvents Are Necessary.
 - No New Solvents Were Added to the List
 - Impacts on the Bin System Are Negligible

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Impacts

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Impact Assessment (Survey)

- A list of VOCs Proposed for Addition Sent to the Aerosol Coating Industry
- Six VOCs Identified as Appropriate for Potential Future Use in Aerosol Coatings
 - n-Propoxypropanol
 - Isoamyl Acetate
 - 2-Methyl-1-Butyl Acetate
 - Methyl Amyl Acetate
 - Methoxypropanol Acetate
 - Methyl Isopropyl Ketone

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Environmental Impacts

- California Environmental Quality Act
 - Neutral or Slightly Positive Impacts
- Slight Reduction in Tropospheric Ozone Concentrations
- No Significant Negative Impacts on
 - Particulate Matter (PM)
 - Global Warming
 - Stratospheric Ozone Depletion
 - Water Quality and Landfill Loading
 - Increased Use of Toxics

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Economic and Other Impacts

- Minimal or No Economic Impacts
- Existing Products
- Other Reactivity-Based Regulations
 - Low-Emission Vehicle/Clean Fuel Regulation
 - Future Reactivity-Based Regulations for Other Source Categories
- Environmental Justice

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Summary

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Summary

- The Proposal Would Help ARB Ensure That the ARB's Reactivity-Based Regulations Are Based on the Most Up-to-Date Science.
- The Proposal Would Provide More Flexibility to the Aerosol Coating Manufacturers.

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Recommendation

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Recommendation

- Staff Recommends That the Executive Officer Adopt the Proposed Amendments to the Tables of MIR Values.

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**Comments or
Questions**

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