

## UPDATED INFORMATIVE DIGEST

### ADOPTION OF AMENDMENTS TO THE TABLES OF MAXIMUM INCREMENTAL REACTIVITY (MIR) VALUES

**Sections Affected:** Adoption of amendments to section 94700, title 17, California Code of Regulations (CCR).

#### Background

At its June 22, 2000, public hearing, the Air Resources Board (ARB or Board) approved amendments to the Regulation for Reducing the Ozone Formed from Aerosol Coating Products (the "Aerosol Coating Products Regulation;" sections 94520–94528, title 17, CCR), and proposed Tables of Maximum Incremental Reactivity (MIR) Values (new subchapter 8.6, section 94700 and 94701). The main component of the rulemaking was to establish reactivity limits for 36 aerosol coating categories based on the MIR scale. The amendments became legally effective on July 18, 2001.

In Resolution 00-22, which approved the rulemaking action, the Board directed the Executive Officer to review the MIR values 18 months after the effective date of amendments and every 18 months thereafter to determine if modifications to the MIR values are warranted. This is because the chemical mechanism used to calculate the MIR values is evolving and improving as new chemical information becomes available. Since any changes to the MIR values would be technical in nature, the Board also delegated to the Executive Officer the authority to adopt regulatory amendments to the Tables of MIR Values, and to conduct public hearings and take other appropriate actions to make such amendments. This delegation of authority allows the Executive Officer (or her delegate) to conduct these activities on behalf of the multi-member Board, as provided in Health and Safety Code sections 39515 and 39516.

The existing Tables of MIR Values are based on the work of Dr. William Carter at the University of California, Riverside. The Tables of MIR Values are contained in two sections of title 17, CCR. Section 94700 contains the MIR values for individual reactive organic compounds. Section 94701 contains the MIR values for 24 different hydrocarbon solvents.

#### Description of the Adopted Regulatory Action

The ARB adopted amendments to the existing provisions contained in section 94700, title 17, CCR (section 94700). This section sets forth the MIR values used to calculate whether an aerosol coating product meets the reactivity limits (i.e., the Product-Weighted MIR (PWMIR) limits) specified in the aerosol coatings regulation. The amendments to section 94700 are based on updated MIR values

provided by Dr. Carter, which were peer reviewed and approved by the ARB's Reactivity Scientific Advisory Committee (RSAC). The amendments are intended to provide aerosol coating manufacturers with more options in their reformulation processes, while supporting the use of up-to-date reactivity science.

The amendments adopted by the ARB add 102 new compounds with their associated MIR values to section 94700. Most of the new compounds are those Dr. Carter added into his tabulation of MIR values while making assignments for the SAPRC99 mechanism for various emissions inventories. Several chemicals not currently listed were also added at the request of stakeholders.

Manufacturers can use the MIR values for all of these new compounds after the amendments become legally effective. The amendments also remove 1,3-diethyl-5-pentyl cyclohexane from section 94700 since it was inadvertently listed in the existing Tables of MIR Values.

The amendments adopted by the ARB also update the MIR values for 14 compounds that are currently listed in section 94700. The updated MIR values are also based on research conducted by Dr. Carter. A new column labeled "New MIR Value [Effective Date]" was added to section 94700 to display the updated MIR values for the 14 currently listed compounds, as well as the MIR values for the newly added 102 compounds.

Although the amendments update the MIR values for 14 currently listed compounds, it should be noted that the currently specified MIR values for these 14 compounds must continue to be used to calculate the PWMIR of aerosol coating products until June 1, 2007. In other words, the MIR values for all compounds currently listed in section 94700 will remain unchanged, for calculation purposes, until June 1, 2007. This existing provision is set forth in the aerosol coatings regulation, section 94522(h)(2)(A), title 17, CCR, and is designed to ensure needed stability for coatings formulations. The currently specified MIR values can be found in section 94700 in the column labeled "MIR Value (July 18, 2001)." July 18, 2001, is the date that the Table of MIR Values became legally effective, and section 94522(h)(2)(A), title 17, CCR, states:

"The MIR values dated July 18, 2001 shall be used to calculate the PWMIR for aerosol coating products, and these MIR values shall not be changed until June 1, 2007."

However, all of the 102 new compounds added to the Tables of MIR Values can be used in aerosol coatings immediately after the adopted amendments become legally effective, as specified in the aerosol coatings regulation, section 94522(h)(2)(B), title 17, CCR, which states:

“If a new ROC is added to section 94700 or 94701, then the new ROC may be used in aerosol coating products, and the MIR value for the new ROC shall be used to calculate the PWMIR after the effective date of the MIR value.”

This provision allows formulation flexibility for aerosol coating manufacturers. To implement this provision and also be consistent with section 94522(h)(2)(A), title 17, CCR, the amendments add the MIR values for the 102 new compounds to the column in section 94700 labeled “MIR Value (July 18, 2001).” Since the aerosol coatings regulation specifies that the MIR values set forth in this column shall be used to calculate the PWMIR for aerosol coatings, placing the MIR values for the 102 new compounds in this column will avoid the confusion of multiple columns in section 94700. After the amendments become legally effective, manufacturers can simply look in one column—the column labeled “MIR Value (July 18, 2001)” —to determine which MIR values must currently be used to calculate the PWMIR for aerosol coatings products. The amendments adopted by the ARB also list the MIR values for all of the compounds that can be used in aerosol coating products (i.e., the 102 new compounds, the 14 compounds with updated MIR values, and all of the currently listed compounds whose MIR values remain unchanged) in the new column labeled “New MIR Value [Effective Date].” This new column allows the reader to view in one place the most recent, up-to-date MIR values for all the compounds. The MIR values listed in this column would only be used prior to June 1, 2007, if any reactivity-based rulemakings for other source categories were proposed in the future.

No change was adopted to the MIR values for the 24 different hydrocarbon solvents contained in section 94701, title 17, CCR.

There are no federal regulations that are comparable to the adopted regulations.