

Adopt title XXX, CCR section xxxx to read as follows:

**§xxxx. Cool Car Standards and Test Procedures – 2012 and Subsequent Model-Year Passenger Cars, Light-Duty Trucks, and Medium-Duty Vehicles.**

§ *Purpose.* This Article on xx contains the California “Cool Cars” standards for 2012 and subsequent model-year passenger cars, light-duty trucks, and medium-duty vehicles  $\leq$  10,000 pounds to reduce motor vehicle greenhouse gas emissions.

§ *Applicability.* The standards in this Article apply to manufacturers of 2012 and subsequent model-year passenger cars, light-duty trucks, and medium-duty vehicles  $\leq$  10,000 pounds, and to collision repair facilities.

§ *Automotive Coating Reflectivity Standards*

(a) “Cool Cars” Coating Reflectivity.

(1) Paints and coatings utilized on the opaque surfaces of new 2012 and subsequent model-year passenger cars, light-duty trucks, and MDVs  $\leq$  10,000 pounds must reflect at least 65 percent (65%) of the impinging infrared solar energy.

(2) The reflectance shall be determined using ASTM E903, 1918-06 or ASTM 1549-04 or by a alternate method approved in advance by ARB under Section XXXX (a)(1) {next section #}.

(3) The solar reflective paints and coatings shall contain no greater levels of toxic materials than would be allowed in new 2012 and subsequent model-year passenger cars, light-duty trucks, and MDVs  $\leq$  10,000 pounds absent this regulation, and shall comply with all toxicity standards and requirements affecting automotive paints and coatings.

(4) Exceptions:

(A) Bumpers, side view mirrors, and optional cosmetic details such as spoilers need not utilize solar reflective paints and coatings.

(B) For non-refrigerated pick-up trucks, manufacturers may opt to use solar reflective paints and coatings on only the cab area.

(C) MDVs  $>$  10,000 pounds and heavy duty vehicles shall consider the use of these paints and coatings in the cab area or other areas that share air space with the cab area, or that are otherwise environmentally controlled.

§ *Requirements*

(a) OEM Requirements.

(1) The OEM must submit to ARB the infrared reflectance characteristics of each color option proposed for the 2012 model-year, as part of the initial certification application.

(2) Records Retention.

(A) For each model year, the OEMs must maintain records of the infrared reflectance characteristics for each color option offered for five years after the end of that model year.

(B) Such records must be provided within 30 days of request by ARB.

(C) The records shall include the following information: model-year, identifying color, infrared reflectance, total solar reflectance, total solar transmittance, and a graph showing the reflectance over the total solar spectrum.

(b) Repainting requirements.

(1) Paints and coatings applied in collision repair of model-year 2012 and newer vehicles must meet the standard in section xxx paragraph (a).

(2) Paints and coatings utilized in vehicular re-coating operations of model-year 2012 and newer vehicles should comply with section xxx paragraph (a) to maintain designed occupant thermal comfort.

## § *Window Glazing Reflectivity*

(a) Window Glazing Reflectivity Standards.

(1) New 2012 and subsequent model-year passenger cars, light-duty trucks, and MDVs  $\leq$  10,000 pounds must have solar reflective window glazing on all glass or other transparent or translucent portions of the body of the vehicle, including the windshield, sidelites, backlite, and any roof component that transmits light, as follows:

(A) The glazing must retain at least the minimum visible light transmittance of 70 percent (70%) required by Federal Motor Vehicle Safety Standards No. 205 (FMVSS 205) or any transmittance greater than that required by a change to this federal requirement.

(B) The glazing must have a total solar transmittance of  $\leq$  40% (40 percent) over the total solar spectrum.

(C) The characteristics in (A) and (B) shall be measured using ISO Standard 13837 Road Vehicles – Safety Glazing Materials – Method for the Determination of Solar Transmittance, or an alternate methodology approved by ARB.

## § *Requirements*

(a) OEM Requirements.

(1) The OEM must submit to ARB the characteristics of the solar reflective glazing utilized in each vehicle model for the upcoming model-year as part of the initial certification application.

(2) The submittal must include total solar reflectance and its components (UV reflectance, visible light reflectance, infrared reflectance), total solar absorption and its components (UV absorption, visible light absorption,

infrared absorption), and total solar transmission and its components (UV transmission, visible light transmission, infrared transmission).

(b) Window Replacement Requirements.

(1) All glass or other transparent or translucent portions of the body of the vehicle replaced on model-year 2012 and newer vehicles must comply with the standard in {xxx} and should comply with the specifications supplied in the original certification application.

§ *Enforcement and Penalties*

(a) A manufacturer failing to submit the required documentation by the specified date in {XXXXX} or failing to comply with the standard in {XXXX} is subject to penalties for each vehicle manufactured for sale in California for that model year.

(b) A collision repair facility that fails to comply with the requirements .....

§ *Abbreviations and Definitions.* The following abbreviations and definitions are used in this section xxxx:

(a) Abbreviations.

“ARB” means California Air Resources Board

“ASTM” means American Society of Testing and Materials.

“MDVs” means medium duty vehicles

“IR” means infrared and near-infrared wavelengths, 780-2100 nanometers

“ISO” means International Standards Organization

“OEM” means Original Equipment Manufacturers, i.e., the vehicle manufacturers

“UV” means ultraviolet wavelengths, 300-380 nanometers

(b) Definitions.

“Backlite” means the rear window of the vehicle, whether composed of glass or some other transparent or translucent material.

“collision repair facility” means any licensed business involved in the repair or restoration of damaged vehicles, including repainting of portions of the vehicular body and replacement of transparent or translucent components.

“Infrared Reflectance” means the ratio of infrared solar energy which is reflected outward by the paint or glazing system to the amount of total infrared solar energy falling on the paint or glazing system. Value is usually expressed as a percent.

“Sidelites” means all windows, whether fixed or not, on the sides of the vehicle, composed of glass or any other transparent or translucent material.

“Total Solar Absorption” means the ratio of the amount of total solar energy absorbed by the paint or glazing system to the amount of total solar energy impinging on the paint or glazing system. Solar absorption is that portion of total solar energy neither transmitted nor reflected. Value is usually expressed as a percent.

“Total Solar Energy Rejected” is the percent of incident solar energy rejected by a paint or glazing system, and is equal to the solar reflectance plus the part of solar absorption which is reradiated outward.

“Total Solar Reflectance” means the ratio of total solar energy which is reflected outward by the paint or glazing system to the amount of total solar energy falling on the paint or glazing system. Value is usually expressed as a percent.

“Total Solar Transmittance” means the ratio of the amount of total solar energy in the full solar wavelength range (300-2100 nanometers) that is allowed to pass through a paint or glazing system to the amount of total solar energy falling on that paint or glazing system. Value is usually expressed as a percent.

“Ultraviolet Transmittance” means the ratio of the amount of total UV solar energy (300-380 nanometers) that is allowed to pass through a paint or glazing system to the amount of total UV solar energy falling on the paint or glazing system.

“Visible Light Reflectance” means the percent of total visible solar energy (380-780 nanometers) reflected by a paint or glazing system.

“Visible Light Transmittance” means the ratio of the amount of total visible solar energy (380-780 nanometers) that is allowed to pass through a glazing system to the amount of total visible solar energy falling on the glazing system. Value is usually expressed as a percent.

“Windows” means on all glass or other transparent or translucent portions of the body of the vehicle, including the windshield, sidelites, backlite, and any roof component that transmits light,

Note: Authority cited: Sections yyy, zzz,xxx, Health and Safety Code. Reference: Sections aaa,bbb,ccc, 43013, 14018, Health and Safety Code.