

MOTOR VEHICLE BRAKE FRICTION MATERIALS – SENATE BILL 346

DISCLAIMER NOTICE: The following is an accessible outline of the Motor Vehicle Brake Friction Materials presentation provided at the BAR Advisory Group meeting on January 28, 2021. A webcast recording of the presentation is also available on the [BAR Advisory Group](#) page at www.bar.ca.gov.

Slide 1: Motor Vehicle Brake Friction Materials – Senate Bill 346
California's Copper in Brake Pads Law Implementation
January 2021

Slide 2: Brake Friction Material Law

- 2010 - SB 346
- 2014 - Cd, Cr VI, Hg, Pb, Abestiform fibers - De Minimus
- 2021 – Copper – 5.0 wt %
- 2025 – Copper 0.5 wt %

Slide 3: Implementation

- California Regulations
 - Marked Proof of Certification (Product Labeling)
 - Certification Requirements
- Environmentally Preferred Purchasing
- Working with Stakeholders

Slide 4: Regulations Established

- California Brake Friction Material Requirements (California Code of Regulations (CCR), title 22, sections 66387.1 through 66387.9)
 - Reporting Requirements for Brake Friction Material (BFM) Manufacturers
 - Requirements for Testing Certification Agencies
 - Analytical Laboratory Certification
 - Testing Methodology for Brake Friction Materials
 - Marked Proof of Certification
 - Extension Process for 2025 Requirement (< 0.5% copper by weight)

Slide 5: Reporting Requirements for BFM Manufacturers

- Requires a signed self-certification form be submitted and signed by the BFM manufacturer stating their registered products meet the compliance level requirements of “A”, “B”, or “N”
- Requires the BFM manufacturer to include a marked proof of certification on the brake pads and packaging
- Requires the BFM manufacturer to register their products with a testing certification agency recognized by DTSC
 - NSF International
 - Automotive Manufacturers Equipment Compliance Agency, Inc. (AMECA)

Slide 6: Marked Proof of Certification (on Brake)

Image of a diagrammed Proof of Certification code. The example certification code shown is SCB115FF1660A16. SCB is the manufacturer ID; 115 is the formulation ID; FF is the coefficient of friction; 1660 is the batch code; A16 is the environmental compliance marking. The

manufacturer ID, formulation ID, and environmental compliance marking are mandatory. The coefficient of friction and batch code identification are optional.

Slide 7: Example of Environmental Compliance Marking Locations on a Brake Pad

Brake pad diagrams showing the acceptable marking locations.

Slide 8: Marked Proof of Certification (on Box)

Table showing the certification mark that will appear on the package along with effective date, environmental compliance level, and a description of the environmental compliance level.

- On and after January 1, 2014, new vehicles sold in California and their replacement brakes must meet the “A” environmental compliance level (refer to CCR, title 22, § 66387.8(b)). Brakes that meet this level will have a three-leaf logo where one leaf is black. The “A” level means the brake friction material contains the compounds below the following concentrations: 0.01% by weight of cadmium and its compounds; 0.1% by weight of chromium (VI) salts; 0.1% by weight of lead and its compounds; 0.1% by weight of mercury and its compounds; 0.1% by weight asbestiform fibers.
- On and after January 1, 2021, new vehicles sold in California and their replacement brakes must meet the “B” environmental compliance level (refer to CCR, title 22, §66387.8(c)). Brakes that meet this level will have a three-leaf logo where two leaves are black. The “B” level means the brake friction material contains less than 5.0% by weight of copper and also meets the conditions listed for an “A” level.
- On and after January 1, 2025, new vehicles sold in California and their replacement brakes must meet the “N” environmental compliance level (refer to CCR, title 22, §66387.8(d)). Brakes that meet this level will have a three-leaf logo where three leaves are black. “N” level means the brake friction material contains less than 0.5% by weight of copper and also meets the conditions listed for an “A” level.

Slide 9: Certification Requirement

- “Testing certification agency”
 - Third-party testing certification agency;
 - Utilized by a vehicle brake friction materials manufacturer;
 - Has an accredited laboratory program that provides testing in accordance with the certification agency requirements that are approved by the department.

Slide 10: California Brake Friction Material Certification Process

- Step 1. TESTING: Test brake friction material per the SAE Standard J2975:2013 at a laboratory approved by the testing certification agency (a.k.a., registrar).
- Step 2. CERTIFICATION: Certify brake friction material with the testing certification agency. Under the California Brake Pad law, the certification of brake friction material is performed by the testing certification agency which is NSF International or AMECA.
- Step 3. MARK of PROOF: Mark certified product with a marked proof of certification per California Code of Regulations, title 22, section 66387.7.

Slide 11: What Do I Need to Do to Comply?

- Consumers
 - Do not need to replace their brakes before the end of their useful life to comply with this law
- Auto Repair Shops
 - Need to replace brakes with compliant brakes
 - Some exceptions exist for older vehicles made before January 1, 2021

Slide 12: Compliance Level vs. Vehicle Manufacture Date

Table summarizing the requirements under the law based on the vehicle's manufacture date.

- For vehicles manufactured before January 1, 2014, the law allows the use of unmarked brakes. "A" compliant. Level "B" and "N" compliant brakes may also be used on these vehicles.
- For vehicles manufactured between January 1, 2014 and January 1, 2021, the law allows the use of level "A" compliant brakes. Level "B" and "N" compliant brakes may also be used on these vehicles.
- For vehicles manufactured on and after January 1, 2021, the law requires level "B" compliant brakes be installed on the vehicle or replaced with level "B" or "N" compliant aftermarket brakes.

Slide 13: Environmentally Preferred Purchasing

- Working with Department of General Services to develop mandated Environmentally Preferable Purchasing Requirements
- Started with vehicle purchasing
- Goal is to reward those products that exceed the minimum legal requirements.
 - Such as, fuel efficiency, greenhouse gas emissions, recycled content, Environmental Management System

Slide 14: Working with Stakeholders

- Industry
 - Society of Automotive Engineers - Brake Materials Environmental Task Force
- Other States
 - Washington Department of Ecology
- Other Stakeholders
 - Air Resources Board
 - State Water Resources Control Board
 - Department of General Services
 - California Stormwater Quality Association (CASQA)

Slide 15: Next Steps

- Focus on education, outreach, and compliance assistance
- Continue working with industry, state agencies, and stakeholders to implement this law

Slide 16: Additional Guidance

- Brake Pad Webpage available
 - <https://dtsc.ca.gov/scp/limiting-copper-in-brake-pads/>
 - [FAQ section for repair shops](#)
- [eList available](#)
- Links to SAE standards available
- Other

Slide 17: Questions or Comments?

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