



Brake Manufacturers Council

**The Motor & Equipment Manufacturers Association
and the
Brake Manufacturers Council of the Automotive Aftermarket Suppliers Association
Comments to the
State of California Environmental Protection Agency
Department of Toxic Substance Control**

**RE: Informal Draft Proposed Rule, Motor Vehicle Brake Friction Materials
September 5, 2014**

Introduction & Background

The Motor & Equipment Manufacturers Association (MEMA) represents more than 1,000 companies that manufacture motor vehicle parts for use in the light- and heavy-duty vehicle original equipment and aftermarket industries. Motor vehicle parts manufacturers are the nation's largest manufacturing sector, directly employing more than 734,000 people across the country. MEMA represents its members through four divisions: Automotive Aftermarket Suppliers Association (AASA), Heavy Duty Manufacturers Association (HDMA), Motor & Equipment Remanufacturers Association (MERA) and Original Equipment Suppliers Association (OESA).

The Brake Manufacturers Council (BMC), which is a product council of the AASA, represents manufacturers of brake systems, components and friction materials.

In recent years, the States of California and Washington have each passed laws¹ to require abatement of copper and other constituents found in motor vehicle brake friction material (also known as brake pads) as a way to reduce copper levels in waterways. Debris from brake pads on roadway surfaces is one source of pollutants in storm water discharges. Copper is used in brake pads for functional reasons like fading and friction properties, thermal conductivity and amount of wear. The California and Washington laws have effectively created an industry *de facto* standard, leading brake friction material manufacturers to change all of their U.S. product lines to be compliant with those laws. The changes will ultimately benefit the entire nation's watersheds and waterways.

Manufacturers of brake pads are researching and developing substitutes that have similar attributes and performance properties, but it is quite a complex process. Because of the high safety relevance, suitable substitutes to copper still have to be identified and technically feasible. Additionally, substitutes must then be confirmed through intensive testing such that the

¹ California SB 346 (Ch. 307, Sept. 25, 2014); Washington SB 6557



substitute(s) can be used in a variety of applications, provide equivalent safety and exhibit desired performance characteristics.

Over the past several years, brake system manufacturers, friction material manufacturers, vehicle manufacturers, parts distributors and service providers, have all engaged and worked collaboratively with States, non-governmental organizations, and other interested stakeholders to address concerns related to copper and to comply with the requirements. For example, MEMA and BMC actively participated with other stakeholders in the rulemaking process promulgated by the State of Washington’s Department of Ecology to implement Washington’s “Better Brakes Law.” Most recently, MEMA and BMC have engaged with and participated in the State of California’s Department of Toxic Substance Control (“DTSC” or “Department”) informal rulemaking process and public workshops about its proposed draft rule² to implement California’s law to regulate copper in motor vehicle brake friction materials.

In reaction to the testing and marking requirements in both laws, SAE International revised an existing voluntary industry standard for the marking of brake friction materials (SAE J866)³ and created a new testing standard to evaluate the level of copper and other constituents in friction materials (SAE J2975).⁴ The SAE marking system standard, more commonly referred to as the “edge code,” was revised to also include the environmental compliance mark required by both states.

In between the States’ rulemaking activities, the MEMA, BMC and multiple other industry stakeholders, including the vehicle manufacturers, have worked with the U.S. Environmental Protection Agency on a Memorandum of Understanding to establish a voluntary agreement to carry out practices and approaches under a framework called the “Copper-free Brake Initiative,” modeled on the existing laws in California and Washington. Other states and entities representing different state agencies, were also engaged in the development of the MOU. The purpose of this endeavor is to bring various industry and government stakeholders under a national framework. It is anticipated that a final, signed MOU will be completed in the next few months.

Overview of California Law

The California law prohibits the sale of motor vehicle brake friction materials as follows:

Material	Legal Maximum as of:		
	Jan. 1, 2014	Jan. 1, 2021	Jan. 1, 2025
Cu	No limit	5.00 wt%	0.50 wt%
Asbestos, Cr(VI), Pb, Hg	0.10 wt%	0.10 wt%	0.10 wt%
Cd	0.01 wt%	0.01 wt%	0.01 wt%

NOTE: Inventory depletion sell-through date is Dec. 31, 2023

² Informal Proposed Draft Rule, Division 4.5, California Code of Federal Regulations, Title 22, Chapter 25. Hazardous Materials: Motor Vehicle Brake Friction Materials

³ “Friction Coefficient Identification and Environmental Marking System for Brake Lining”

⁴ “Measurement of Copper and Other Elements in Brake Friction Materials”

Under the law, the brake friction material manufacturer or importer of record must certify compliance by marking only the brake friction material with an environmental compliance mark and must file compliance test records with a testing certification agency. There are some exemptions permitted (several different from Washington State). Enforcement of the law enables the State to issue warnings to and levy civil fines against violators. The law also requires an alternatives screening to identify potential alternatives to copper that pose less potential hazard to the public health and environment.

California DTSC Informal Proposed Rule

MEMA acknowledges that DTSC had to weigh and consider a variety of interests when drafting their proposed rule – the requirements of the law, the needs of the citizens, the regulations in the State of Washington, and the burdens on the industry. MEMA and BMC recognize California’s attempts to be as consistent as possible with existing regulations in the State of Washington. However, there are still some important hurdles that must be addressed. The overall financial and resource compliance burden of the California and Washington requirements on the brake manufacturers, specifically, and on the vehicle industry, generally, is quite significant. California DTSC must measure and weigh these burdens and make every attempt to unify and harmonize while maintaining the shared goal to reduce copper in brake friction materials. As such, MEMA urges the DTSC to carefully consider the following recommendations and comments.

Summary of Concerns

- **Disparities between California and Washington Laws Must be Alleviated**
Despite the shared goals of the two states to mitigate copper and other constituents in storm water runoff by restricting their use in brake friction materials, the slight variation and differences between the laws will create redundant burdens and result in unnecessary complications. MEMA and BMC are seriously concerned about this issue and request the State of California to consider a reciprocity agreement such that the two states would agree to recognize and allow for the uniform use of the marks, labels and documentation.
- **Product Marking and Package Labeling Must Be Consistent**
Because brake friction material manufacturers are changing all of their U.S. product lines to be compliant with these states’ laws, the marking of brake pads and the packaging will happen universally regardless. Thus, the changes will be seen throughout the nation’s supply chain. MEMA urges the State of California to adopt and harmonize with the State of Washington’s friction material marking and package labeling requirements.
- **Key Subjects Missing from California’s Proposal**
The informal draft proposal was missing significant sections of regulatory text – particularly on the subjects of processes for exemptions, enforcement and alternatives assessments. MEMA and BMC request that DTSC include these very important sections in its revised draft proposal so that we and other stakeholders can adequately review and respond to the proposal.



- **Implications of Specifying Industry Standards by Year of Publication**

MEMA and BMC strongly urge the State not to reference an industry standard's specific year in the text of the rule, when incorporating by reference. MEMA believes that doing so limits the State's regulation only to that specific year. Consequently, future publications of that particular SAE International Standard would not be valid under the State's rule.

Disparities between California and Washington Laws Must be Alleviated

Despite the shared goals of the two states to mitigate copper and other constituents in storm water runoff by restricting their use in brake friction materials, the slight variation and differences between the laws will create redundant burdens and result in unnecessary complications. MEMA and BMC have serious concerns about the impact of these subtle but important differences between the states' laws. We understand that complete harmonization may not be possible. The differences impact several key aspects of these requirements for brake friction material manufacturers (and throughout the supply and distribution chain) – but particularly:

- friction material edge code and proof of environmental compliance markings,
- friction material packaging labeling, and
- compliance documentation.

We discuss some of these elements in more detail below, but the overarching issue is that we believe these differences can be alleviated if California and Washington entered into a reciprocity agreement. MEMA and BMC urge California to consider a reciprocity agreement such that the two states would agree to recognize and allow for the uniform use of the marks, labels and documentation.

Product Marking and Package Labeling Must Be Consistent

Among the differences between the California and Washington laws are the marking requirements. Both states require that the brake friction material – the brake pad – is marked with proof of certification. However, only the Washington statute requires that the brake pad packaging is marked with a registered trademark.

Sections WAC 173-901-090 and WAC 173-901-100 of Washington's regulation established the nomenclature for the mark proof of certification on brake friction material. The requirements use alpha characters to convey the level of compliance "A", "B", "N" (as well as "X" or "WX" for exempted materials) followed by a two-digit date indicating the year of manufacture. This reflects the requirements for brake friction material marking standard SAE J866.⁵

California's law does not explicitly require package labeling. During the DTSC workshops, there were many concerns raised by representatives of the retailer and installer communities about end-user awareness and visibility of the markings. The BMC developed the LeafMark™ to meet the package marking needs via a 3-leaf logo that includes the alpha character designating the

⁵ "Friction Coefficient Identification and Environmental Marking System for Brake Lining" SAE International



environmental compliance mark. It is intended to be in an easy-to-understand format for the end user (such as, service providers and consumers). The LeafMark™ logo that was developed to meet the package labeling requirements for the State of Washington, is being applied by manufacturers on all products nationwide. MEMA and BMC strongly urges California to view the term “marking” in the California law broadly to include package labeling and, as a result, the state should adopt, allow and accept package labeling requirements

Over the past few years, the brake friction material manufacturers have made significant investments and applied multiple resources to make the necessary marking and labeling changes to all of its products – nationally – to meet the State of Washington requirements. This included revising and creating industry standards and test methods as well as developing trademarked materials for packages. These are not insignificant alterations. Any deviation in marking requirements, marking nomenclature would be unacceptable to the industry. MEMA and BMC urge California to adopt and harmonize with the Washington friction material marking and package labeling requirements.

Key Subjects Missing from California’s Proposal

Exemptions -- Another major difference between the California and Washington laws are the permitted exemptions. Some are shared, but there are several major differences that may create complications and confusion among the impacted entities as well as the end-user. The DTSC proposed rule did not propose language about the State’s exemptions requirements. A recent workshop revealed that there are not any current proposals or solutions being considered by the Department. We stress that there needs to be a clear differentiation for original equipment service brake friction materials and aftermarket brake friction materials (see comments on Definitions Sec. 66275.1). However, the industry has agreed to work together to see if a proposal can be put forth that fits in a regulatory framework.

MEMA repeats the need for the State of California to harmonize as much as possible with the State of Washington and to find a way to manage these differences that does not add extra burden or product development costs to comply – including unnecessary reporting requirements or recordkeeping or different marking requirement. It is important that the inventory run-off is also consistent between both states. We propose the following:

Brake friction materials manufactured under the following conditions are excluded:

- Brake friction material manufactured prior to January 1, 2021 containing greater than 5.0% copper and its compounds by weight may be sold for use or offered for sale in light duty motor vehicles until January 1, 2031;
- Brake friction material manufactured prior to January 1, 2025 containing greater than 0.5% copper and its compounds by weight may be sold for use or offered for sale in light duty motor vehicles until January 1, 2035;
- Brake friction material manufactured prior to January 1, 2021 as part of an original equipment service contract.



Alternatives assessment / Screening analysis -- Manufacturers of brake friction materials are researching and developing substitutes that have similar attributes and performance properties, but it is quite a complex process. Because of the high safety relevance, suitable substitutes to copper still have to be identified and technically feasible.

DTSC did not include any proposed regulatory text regarding this subject required in Ch. 307 Sec 25250.56. It is the impression that DTSC has not developed the appropriate guidance needed to inform the impacted entities about what the State expects for an “alternatives screening.” The proposal only broadly mentions using the Toxics Information Clearinghouse and screening analysis, which is addressed in the California law under Ch. 307 Sections 25250.50 through 25250.65, but there are no details provided in the proposed rule. During one of the DTSC public webinars about the proposal, DTSC staff indicated the reason was because the Alternatives Assessment process for the Safer Consumer Products Regulation was still in early stages and could not be used to inform the guidance on the alternative screening process. The SCP is beyond the scope of a “screening analysis” as required in the statute. DTSC should not defer to the SCP process. There is no process or detail prescribed in the proposal, therefore the impacted parties would not be able to provide supporting documentation per Section 66275.8(1)(D) if there is no assessment process established.

MEMA and BMC request that DTSC provide a thorough and detailed Alternatives Assessment process and as part of a proposed rule subject to the notice and comment rulemaking procedure so that stakeholders can review and respond adequately.

Enforcement -- DTSC also did not include any proposed regulatory text on enforcement required in Ch. 307 Section 25250.62. MEMA requests that future proposed text include detailed information so that stakeholders can review and respond adequately.

Implications of Specifying Industry Standards by Year of Publication

SAE International developed a test methodology to evaluate components of brake friction materials in a way that is meaningful, repeatable and reliable and revised an existing standard to mark brake friction material in a manner that can readily identify compliant product. The endeavor resulted in the development of a new testing standard, “Measurement of Copper and Other Elements in Brake Friction Materials” (SAE J2975) and revised an existing standard “Friction Coefficient Identification and Environmental Marking System for Brake Lining” (SAE J866) – commonly referred to as the “edge code” – to incorporate the additional alpha-numeric characters, which meet the needs of the California environmental compliance mark required in Section 66275.7 of the DTSC proposed rule. (As addressed previously, it is imperative that California align the alpha-numeric nomenclature for the environmental compliance mark so that the same characters are utilized and accepted as are currently in the State of Washington.)

The SAE International protocol is to review standards every five years -- or sooner, if needed. When a standard is up for review – whether it is revised and updated to reflect improvements in the test protocols or is reconfirmed in its present condition – the standard is published to reflect



that year (a fictional example may look like J866:2018). Considering the SAE standards development protocol and the State’s reliance on incorporating by reference specific SAE standards into its regulatory framework, MEMA strongly urges DTSC to not reference the standard’s specific year in the text of the rule. MEMA believes that doing so limits the State’s regulation only to that specific year. Consequently, future publications of that particular SAE International Standard would not be valid under the State’s rule.

SECTION BY SECTION COMMENTS

In consideration of the broader concerns raised thus far, below are the MEMA comments to the proposed rule section-by-section and corresponding number.

Purpose & Applicability

In the informal draft proposed rule, it is unclear if DTSC intends to include either a “General” and/or a “Purpose and Applicability” section(s) in the regulation because such language was not presented for comment. Certainly, MEMA understands that DTSC is likely in the process of developing its “Initial Statement of Reasons” (“ISOR”), which may be used to develop such sections. While it is presumed that this is the future intent of DTSC, MEMA recommends that future drafts include language for this section in order to address the purpose, applicability, scope at the beginning of the regulation.

Definitions [66275.1]

For regulatory clarity, MEMA recommends that DTSC add definitions that were not in the informal draft proposed rule, but were in the State of California law Section 25250.50. Those terms are:

- “manufacturer” (1) except where otherwise specified, means both of the following: (A) A manufacturer or assembler of motor vehicles or motor vehicle equipment. (B) An importer of motor vehicles or motor vehicle equipment for resale. (2) A manufacturer includes a vehicle brake friction materials manufacturer.
- “motor vehicle” and “vehicle” means a device by which any person or property may be propelled, moved, or drawn upon a highway, excepting a device moved exclusively by human power or used exclusively upon stationary rails or tracks.⁶
- “testing certification agency” means a third-party testing certification agency that is utilized by a vehicle brake friction materials manufacturer and that has an accredited laboratory program that provides testing in accordance with the certification agency requirements that are approved by the department.

⁶ Per Section 670 of the Vehicle Code of the State of California



MEMA also identified other terms that require DTSC's attention to either add or remove the following terms for regulatory clarity. (NOTE: Not in alphabetical order.)

- “Brake friction material manufactured as part of an original equipment service contract” means brake friction material that: (a) Is provided as service parts originally designed for and using the same brake friction material formulation sold with a new motor vehicle and there have been no changes to the original design of the service part's brake friction formulation; or (b) Is manufactured as part of a contract between a vehicle manufacturer and a brake friction material manufacturer that requires the brake friction material manufacturer to provide brakes with the identical brake friction material formulation to those that originally came with a new motor vehicle, and the brake friction material manufacturer only sells these parts directly to the vehicle manufacturer.
- “Brake friction material manufactured for the vehicle aftermarket” means brake friction material that meets the environmental compliance requirements and is installed on a vehicle as a replacement part that may not be the same brake formulation as the original equipment manufacturer or original equipment service contract brake friction material.
- “Edge Code” MEMA and BMC do not believe this term should be included or defined in the context of the DTSC regulation. We do not take issue with *how* DTSC defined “edge code” – but we are concerned that throughout the proposed regulatory text DTSC uses the term interchangeably with other terms that are related but not the same – these are: “environmental compliance mark,” “mark of proof,” and “proof of certification.” But the edge code is an existing industry term and part of a long-standing industry standard that encompasses a broader scope – to identify hot and cold coefficients and other manufacturer-specific information by marking the brake friction material. The existing industry standard was indeed revised to incorporate the states’ compliance marking requirements, however we strongly urge California DTSC and other stakeholders to not use the term interchangeably. Therefore, MEMA and BMC ask that DTSC remove the term “edge code” from the Definitions section because it is not necessary, is already defined by referencing the SAE standard, and it is not in the scope of the DTSC authority to include it.
- “Accredited laboratory” While DTSC does define “alternative laboratory accreditation” there is no definition for what an accredited laboratory is in the State of California. We ask that DTSC define this term in the proposal so it can be reviewed and responded to by stakeholders.
- “Wholesaler, distributor, retailer, installer” DTSC did not propose a definition for these entities; MEMA suggests the definition used by the State of Washington in its rule at WAC-173-901-040
- “Inventory Run-Off” means is a period of time (10 years) that the Aftermarket brake friction materials in inventory may be sold in California and Washington state after the 2014, 2021 and 2025 timelines.



References [66275.2]

These industry standards are periodically reviewed and can be revised and updated to meet changing needs and test methods. By incorporating by reference the specific standard by its year, then the State's regulation is bound to that version of the industry standard. To avoid this unnecessary complication, MEMA urges the DTSC not to specify the date/year of the respective standards and just refer to the standards alpha numeric identifier and the title. Interested parties can obtain the latest versions of the industry standards through the publishing organizations. In the case of the proposed rule, ISO and SAE International.

Self-certification of compliance [66275.3]

Step 5. RE: Authorized Representative – DTSC says “the statement should include the following language” – it is a very specific and lengthy declaration statement (“I, the undersigned ...”). Currently, as part of the testing certification agency's form, there is a similar but shorter declaration statement that the manufacturer signs already when submitting their testing and related documentation information to certify the friction materials. Furthermore, DTSC goes on to say:

“A manufacturer may use the same certification document to certify compliance with other state's laws regulating the content of brake friction material. If a manufacturer chooses to create a single certification document for multiple states, they may add additional language to the statement, as required by those states, however any additions shall not alter the meaning or effect of the statement above.”

These seem to be conflicting approaches. First, DTSC must clarify whether the language proposed in Step 5 is suggested text or if it is unchangeable text. Second, MEMA and BMC question if DTSC has the authority to dictate in the context of this regulation what documentation can or cannot be used in another State to confirm compliance. Overall, this section requires clarification so that stakeholders can appropriately review and respond.

Testing Certification Agency for Brake Friction Material [66275.4]

- 66275.4(d) – DTSC does not offer any timetables within which they will provide approval notification. MEMA and BMC recommend using 90 days; this is consistent with the State of Washington's timetables.

Certified Laboratories of Brake Friction Materials [66275.5]

- 66275.5(a)(1) through (3) –The proposed language only has the word “or” between items (2) and (3). MEMA and BMC asks DTSC to clarify if the word “or” should also be used between each items (1) and (2).
- 66275.5(d) – DTSC does not offer any timetables within which they will provide approval notification. MEMA and BMC recommend using 90 days; this is consistent with the State of Washington's timetables.



Testing Methodology for Brake Friction Materials [66275.6]

- 66275.6(d) and (f) – MEMA and BMC recommend that DTSC use the tenth decimal place for all percentages just so that it is very clear. Therefore, 66275.6(d)(1)(C) should read “**5.0%** by weight of copper ...”

Marked Proof of Certification [66275.7]

- The State of Washington’s regulation had a separate sections in its regulation that describe the marked proof of certification and environmental mark (WAC 173-901-090 and WAC 173-901-100, respectively). We ask DTSC to add similar sections to its proposed rule and reinforce that any marking nomenclature must be harmonized with Washington.

Extension Process [66275.8]

- 66275.8(1)(B)(2) – The California law says, “An extension application submitted pursuant to this section shall be submitted based on vehicle model, class, platform, or other vehicle-based category, and not on the basis of the brake friction material formulation.” DTSC uses the term “brake pads and/or brake drums” in this section but it is not the appropriate terminology. Therefore, to be clear and consistent with the definitions and for regulatory clarity, MEMA and BMC urge DTSC to not use these terms and instead use the term “brake friction material” not only in this section, but throughout the regulatory text.
- 66275.8(2) –DTSC does not include the timetables that were specified in the statute at Ch. 307 Section 25250.54. We recommend that DTSC use these timetables to be consistent with the law.

Conclusion

MEMA looks forward to providing additional feedback to all stakeholders as the Department moves forward with these regulations. If there are any questions, please contact me at (202) 312-9249 or lmerino@mema.org.

Respectfully submitted,

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