AMECA Better Brakes Friction Material Registration Program

General Public FAQ

Automotive Manufacturers Equipment Compliance Agency (AMECA) serves as a registrar for the automotive industry to certify their compliance with the environmental regulations of California and with Washington State's Better Brakes Laws. This FAQ is to assist the General Public in understanding the role we play, the broader context of this service we provide, and how it affects them.

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1. **What is Brake Friction Material?**

   A key component in the brake system of most vehicles is the brake pad. The brake pad generates friction when engaged to facilitate the braking function of the vehicle. The material that is used in the brake pad is a formulation of different constituent elements that generate friction to reduce the speed of the vehicle when engaged. For more information in general on brake systems, we recommend visiting howacarworks.com for excellent diagrams and resources.

2. **What is a formulation?**

   A formulation is the unique combination of raw materials that are processed into friction material. There are usually many constituent elements that are combined to create each unique friction formulation in the material of each brake pad. Each formulation has its own edge code(s)

that represent its unique composition. Of the constituents of each composition, only some are required to be tested as part of environmental reporting requirements. The following constituents: Asbestos, Antimony, Cadmium, Chromium (total)*, Copper, Lead, Mercury, Nickel, and Zinc are tested **3 times** for each formulation.

*Chromium (VI) is tested 3 times if the average Cr total is greater than 0.10wt%.

3. **Why are only some elements tested for?**

   According to Washington State, "as brake friction material wears down, copper and other metals are deposited on roadways, where they are washed into our streams and rivers. Copper is highly toxic to fish and other aquatic species. Young salmon are especially susceptible to the effects of copper. Removing copper and other toxic metals from brake materials will help to clean up water bodies." The purpose of Washington State's Better Brakes Law is to "phase out of the use of copper, asbestos, and several heavy metals in brake friction material that is sold or offered for sale in Washington state."

   The elements that are tested for in brake friction formulation correspond to this law as well as to the laws of California State.

4. **Where can I find more information about these regulations?**

   More information can be found at:

   – AMECA Friction Material Testing / Registration services

   – List of edge codes registered as compliant with the California and Washington laws

   – California legislation

   – Washington legislation

   – Washington Better Brake Rules

   – Washington guidance for marking friction materials

   Additionally, AMECA provides further information on safety registration for brakes at:

   – Vehicle Equipment Safety Commission (VESC)

   – Handbook of Compliant Safety Devices

5. **What is an edge code?**

An edge code is the identifier printed, stamped, or ink jetted onto the side of friction material or the back of the pressure plate. The edge code identifies the friction material company identification code, the formulation, and friction coefficient/environmental rating information. Edge codes are defined in SAE J866/VESC V3. The list of registered edge codes is here. Washington has issued a guideline for marking edge codes on friction materials.

AMECA contains the master list of all company edge code identifications back to 1967. *Before* using a company identification code, a company *must* check with AMECA that the identification is available. We have many company edge codes which are not currently in use but were involved with asbestos liability or other legal proceedings.

6. **Can a single formulation have multiple edge codes?**

Yes, a single formulation can have multiple edge codes. Formulations often have multiple edge codes associated with them when the same formulation is known by multiple names. For example, a formulation may internally be called "AMC-A1". The edge codes which use the "AMC-A1" formulation are "AMC-AC1", "AMC-AC2", "AMECAeca", and "AMM A2Z". All 4 edge codes are unique but all 4 edge codes use the same formulation. This is acceptable in the Friction Material Registration and Testing programs.

7. **What role does AMECA play?**

AMECA is a third-party registrar that works in partnership with an independent lab, Link Engineering, for testing. Link performs the third-party testing and AMECA can register a complying material, allowing it to be accurately marked and legally sold. AMECA is able to rely on fast and accurate testing through Link Engineering while offering the fastest and most cost-effective registration available.

8. **What experience does AMECA have with auto parts testing and registration?**

Formed in 1994 to continue the Equipment Compliance Program which was conducted by the American Association of Motor Vehicle Administrators (AAMVA) since 1967. AAMVA transferred all program documents, files, agreements and all information regarding the Vehicle Equipment Safety Commission to AMECA.

Automotive Manufacturers Equipment Compliance Agency, Inc. (AMECA) is the agent for various states of the United States to provide safety equipment compliance services. The AMECA program is the only program of its type in the United States. This Equipment Compliance Program is centralized, one-stop, and notifies government, industry and the general public about compliant motor vehicle safety equipment. Our Notice of Equipment Compliance is recognized as evidence of compliance with the regulatory requirements with our representative jurisdictions.

Every item listed by AMECA has been tested by an AMECA-accredited laboratory and found to be in compliance with applicable United States standards. Our clients are the national and international automotive industry, the standards-setting community, numerous state governments, as well as some foreign governments.

9. What are LeafMarks?

The LeafMarks are trademarks owned by the Automotive Aftermarket Suppliers Association (AASA) which AMECA sublicenses to manufacturers when they complete the registration process. LeafMarks must be put on the packaging of friction material which complies with the laws. Permission to use the LeafMarks is only granted when the agreement between the manufacturer and MEMA has been signed and any fees due to MEMA have been paid. To review the LeafMark identification and guidelines, please visit AASA here.

10. Where is the list of AMECA registered edge codes?

The searchable public list of registered edge codes is here. You have the option to search by manufacturer, edge code, compliance level, expiration date, and related exception data.

11. What if I can't find the edge code I am looking for on AMECA's website?

It is possible the edge code you are looking for was registered with a different registrar, namely NSF. You may find their public list of registered edge codes is here. If you still cannot find the edge code you are searching for an would like assistance, please email us at support@ameca.org

12. Is there anything else I should know?

AMECA seeks transparency and to serve as an effective resource for the general public to learn more about automotive parts and their safety compliance. All of the same information we offer to manufacturers and labs is available to the general public as well. Please feel free to read more on our landing page for manufacturers at Brake Friction Material Environmental Certification | AMECA | Safety Equipment Compliance Services and please also see the embedded FAQ on that page as well. For assistance in using our resources or if you can't readily find an answer to a question you have, please email us at support@ameca.org