



# Friction Material Testing/ Registration Programs: FAQs





## Contents

General Program Questions: .....	4
1. What does NSF do for this program? .....	4
2. What is the effective timeline for constituent limitations?.....	4
3. What information will I need to submit?.....	4
4. Where can I find all of the NSF electronic forms?.....	4
5. What is the penalty for not complying with the laws?.....	5
6. What experience does NSF have with auto parts testing and registration? ...	5
7. What is a “formulation”?.....	5
8. What is an “edge code”? .....	5
9. Can a single formulation have multiple edge codes?.....	5
10. Where is more information about these regulations?.....	5
Testing Questions:.....	6
11. What standards are used for testing friction materials? .....	6
12. Is testing performed on each unique formulation or each unique edge code? 6	6
13. What friction material constituents are tested and how many times are they tested?.....	6
14. What are the advantages to testing through NSF? .....	6
15. Can other third-party labs besides NSF perform the testing?.....	7
16. What is the cost to test friction materials through NSF? .....	7
17. What is the first step to testing through NSF? .....	7
Registration Questions:.....	7
18. What is the baseline information that must be submitted to Washington?....	7
19. What is the cost to use NSF as the registrar for submitting baseline data to Washington?.....	7
20. Is registration performed on each unique formulation or each unique edge code? .....	8
21. If multiple edge codes use the same formulation, how many test reports do I need to submit?.....	8
22. How long does registration last? .....	8
23. Does NSF receive the test reports directly from the manufacturer?.....	8
24. I have already registered an edge code through NSF. But, now I want to register a new edge code which uses the same formulation as my first edge code. Do I need to retest the same formulation?.....	8
25. What are the LeafMarks? .....	8



26. After registration, does my edge code change?..... 8

27. Where is the list of NSF registered edge codes? ..... 8

28. What is the cost to register edge codes through NSF?..... 9

29. What is the first step to registering through NSF? ..... 9

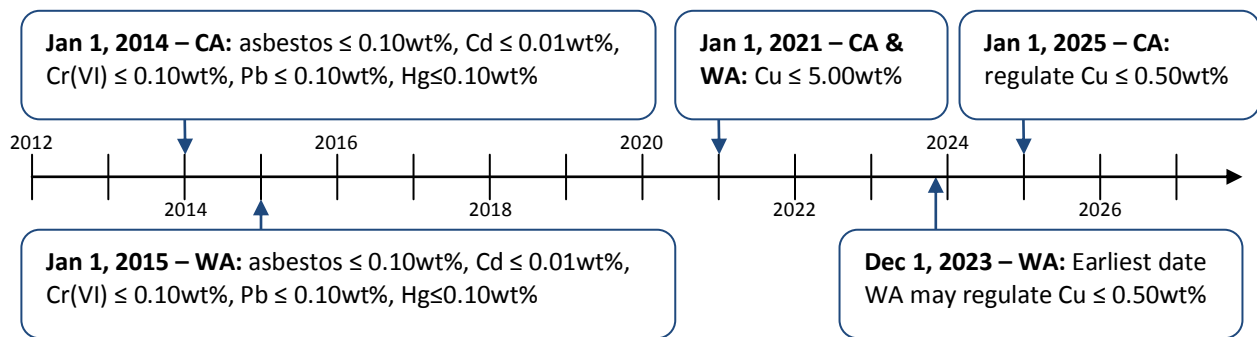


## General Program Questions:

### 1. What does NSF do for this program?

NSF is both a third-party registrar and test lab. Thus, NSF can perform the third-party testing required for this program and NSF can register a complying material allowing it to be properly marked and legally sold. By combining both the registrar and test lab functions, NSF is able to offer fast and accurate testing along with cost effective registration.

### 2. What is the effective timeline for constituent limitations?



### 3. What information will I need to submit?

We will guide you through the entire testing and registration process. Eventually, you will submit:

- A contract to perform testing and/or registration
- Samples to be tested
- Completed test reports
- Baseline data
- A self-certification form listing all registered edge codes

### 4. Where can I find all of the NSF electronic forms?

Here is a list of all the electronic forms you can submit to NSF and what they are used for:

- [Application to join the Friction Material Registration and Testing Programs](#)
  - Formally apply to test and/or register through NSF
- [Test Request Form to test friction material formulations through NSF](#)
  - Gives NSF the necessary information to test friction materials
- [Baseline Data Submission Form](#)
  - Fulfill the requirement that manufacturer submit baseline data to registrar to be submitted to Washington
- [Authorization to Request Reports & Edge Code Information Form](#)
  - Authorizes NSF to request test reports from other labs and gives NSF the information on what edge codes should be registered



- [Edge Code Modification Form](#)
  - o Specifies what edge codes should be added or removed from reports that NSF has previously been authorized to receive

**5. What is the penalty for not complying with the laws?**

The states may assess a fine up to \$10,000 per violation. Every single brake pad being out of compliance can be an individual violation.

**6. What experience does NSF have with auto parts testing and registration?**

NSF has tested and certified products for more than 70 years. Through NSF's [Automotive Collision Replacement Parts Certification](#), aftermarket collision parts and lights are compared to their OEM equivalents to determine if they are equivalent. Certified parts are then posted on a public website. NSF also performs random in-market testing of parts and random audits to determine that the highest levels of quality are maintained throughout the lifetime of that part. Additionally, NSF is one of the largest US ISO/TS registrars of automotive manufacturing facilities in North America.

**7. What is a “formulation”?**

A formulation is the unique combination of raw materials that are then processed into friction material.

**8. What is an “edge code”?**

An edge code is the identifier printed, stamped, or inkjetted onto the side of friction material or the back of a pressure plate. The edge code identifies the friction material manufacturer, the formulation, and other information.

Edge codes are defined in [SAE J866](#). The [list of registered edge codes is here](#). [Washington has issued a guideline for marking edge codes on friction materials](#).

**9. 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 “NSF-F1”. The edge codes which use the “NSF-F1” formulation are “NSF-EC1”, “NSF-EC2”, “ManuECA”, and “FMM ECZ”. 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.

**10. Where is more information about these regulations?**

More information can be found at:

789 N. Dixboro Road, Ann Arbor, Michigan 48105-9723 USA  
T + 1 734 769 8010 F + 1 734 769 0109  
[www.nsf.org](http://www.nsf.org)



- [NSF 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](#)

## Testing Questions:

### 11. What standards are used for testing friction materials?

The law requires that either [SAE J2975](#) or an alternate test method (proven to be as effective as SAE J2975) which the states have approved be used for testing friction materials. NSF uses SAE J2975:2013 to perform all friction material testing.

NSF is an ISO 17025 accredited lab with SAE J2975 on our scope of accreditation and is qualified to perform the required testing.

### 12. Is testing performed on each unique formulation or each unique edge code?

Each unique formulation must be individually tested. Even if a single formulation is used for multiple edge codes, a single test report can be used to register all edge codes which use that formulation.

### 13. What friction material constituents are tested and how many times are they tested?

Constituent	# of Times Tested	Constituent	# of Times Tested
Asbestos	3	Copper	3
Antimony	3	Lead	3
Cadmium	3	Mercury	3
Chromium (total)	3	Nickel	3
Chromium (VI)	0 (3 if average Cr(total)>0.10wt%)	Zinc	3

### 14. What are the advantages to testing through NSF?

The two biggest advantages to testing through NSF are:

789 N. Dixboro Road, Ann Arbor, Michigan 48105-9723 USA

T + 1 734 769 8010 F + 1 734 769 0109

[www.nsf.org](http://www.nsf.org)



- Eliminate 3 entire steps from the registration process. This will:
    - Reduce your paperwork
    - Improve turn-around-timeSee the flowchart on page 6 of the [Information Packet](#) for more details on testing through NSF.
  - Only communicate with 1 company. This makes it easier to keep track of the status of all your tests and registration requests.
- And, as an ISO 17025 accredited lab you can be sure that NSF's test results are accurate and acceptable to the states.

**15. Can other third-party labs besides NSF perform the testing?**

Yes, other third-party labs can perform the friction material testing. To use a lab other than NSF, it must be NSF approved. NSF approval requires that a lab pass an annual audit and participate in proficiency test. This allows manufacturers, state enforcement bodies, and NSF to know that all of the data being used for registration has been correctly generated and is accurate.

**16. What is the cost to test friction materials through NSF?**

For cost information or a quote to perform testing email [FrictionMaterialTest@nsf.org](mailto:FrictionMaterialTest@nsf.org).

**17. What is the first step to testing through NSF?**

[Complete this application](#) and then NSF will contact you about the next steps.

---

## Registration Questions:

**18. What is the baseline information that must be submitted to Washington?**

Manufacturers must submit “baseline” information on all friction materials they manufactured in 2011. Baseline data includes:

- Manufacturer contact information
- Concentrations of antimony, copper, nickel, and zinc for each friction material manufactured in 2011
- If the formulation was used for [light vehicles, heavy vehicles, or both light & heavy vehicles](#)

NSF provides [a form to submit baseline data](#).

**19. What is the cost to use NSF as the registrar for submitting baseline data to Washington?**

For information on cost or a quote to submit baseline data, email [FrictionMaterial@nsf.org](mailto:FrictionMaterial@nsf.org).



**20. Is registration performed on each unique formulation or each unique edge code?**

Registration is performed for each individual edge code.

**21. If multiple edge codes use the same formulation, how many test reports do I need to submit?**

Only 1 test report is needed to register all the edge codes which use the same formulation.

**22. How long does registration last?**

Per the requirements of the laws, registration expires after 3 years. Therefore, testing and registration must be redone every 3 years.

**23. Does NSF receive the test reports directly from the manufacturer?**

No – according to the law NSF must receive the test reports directly from the test lab. To release test reports to NSF [complete an Authorization & Edge Code Information Form](#).

**24. I have already registered an edge code through NSF. But, now I want to register a new edge code which uses the same formulation as my first edge code. Do I need to retest the same formulation?**

No – you do not need to retest.

If NSF already has the test report you want to use for registering a new edge code, then just [complete the Edge Code Modification Form](#).

**25. What are the LeafMarks?**

The LeafMarks are trademarks owned by the AASA which NSF sublicenses to manufacturers when they complete the registration process. LeafMarks must be put on the packaging of friction material which complies with the laws.

**26. After registration, does my edge code change?**

Once you've completed the registration process, then the last part of your edge code must be the "environmental marking".

The environmental marking is your compliance level ("A", "B", or "N") and 2-digit year of manufacture. For example, a level B friction material manufactured in 2018 would have an environmental marking of B18.

[Go here for examples of where the environmental marking can be placed.](#)

**27. Where is the list of NSF registered edge codes?**

[The public list of registered edge codes is here.](#)





- 28. What is the cost to register edge codes through NSF?**  
For cost information or a quote to register edge codes contact [FrictionMaterial@nsf.org](mailto:FrictionMaterial@nsf.org)
- 29. What is the first step to registering through NSF?**  
[Complete this application](#) and then NSF will contact you about the next steps.