

The New Game Changer For The Brake Industry



Progressive

Global

On the Move

Customer Focused

Speed

Innovative

Brake Experts



Raybestos
The best in brakes®

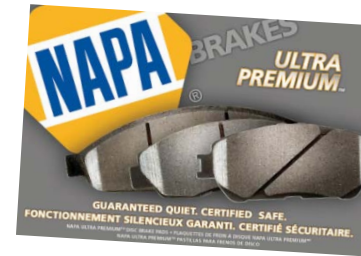


Confidential

Today's Brake Friction Marketplace



"SEA OF SAMENESS"



Ceramic vs. Semi-Met



Ceramic

Advantages

- Quiet Operation
- Low Dust And Lighter Color
- High Consumer Awareness

Disadvantages

- Prone To Rust Jacking On The Inboard Rotor Surface When Paired With Ceramic Friction
- Although Improved Over Time, Still Second Best For Performance, Especially In Severe Use Environments
- New Regulations Forcing Copper Reduction (Most Formulas Have 15% - 25% Copper)

Semi-Met

Advantages

- Still Best For All Out Performance, Especially In Severe Use, High Heat Environments
- Does A Better Job Of Scrubbing And Cleaning The Rotor Than Ceramic Friction
- BPI Semi-Mets Not Impacted By New Environmental Regulations

Disadvantages

- Past Reputation For Noise
- Darker Dust
- Higher Rotor Wear



Legislation – Game Changer



- ~~Semi-Metallic~~
- ~~Ceramic~~
- New Hybrid
 - New Formulations Will Meet All Mandates Up To 2025!



Brake Manufacturers C

An industry-wide self-certification program has been developed to comply with new laws in Washington and California. The Brake Friction Materials Self Certification Compliance Program confirms that friction material suppliers comply with the applicable legislation, regulations and requirements in those states in a phased approach.

PHASE 1

January 1, 2013

HERE'S THE LAW

As required by law, BPI provided baseline data to NSF International (an independent third party industry-sponsored registrar) before the deadline. Then, NSF Int'l provided the data to the WA Dept. of Ecology, in compliance with the Washington Better Brake Rule.

HERE'S WHAT WE'RE DOING
Brake Parts Inc has taken its first step and is fully compliant with Phase 1 of the certification program.

PHASE 2

January 1, 2014

HERE'S THE LAW

Phase 2 limits heavy metals such as Cadmium, Chromium, Mercury, Lead and Asbestiform fibers. This happens in 2014 for California, and in 2015 for Washington.

HERE'S WHAT WE'RE DOING
All BPI brake friction materials will be tested and certified compliant by NSF International. By doing so, BPI will meet the second phase of the legislation.



PHASE 3

January 1, 2021

HERE'S THE LAW

The laws further limit copper to less than 5% by weight in Phase 3 on or after January 1, 2021.

HERE'S WHAT WE'RE DOING
All BPI friction formulations will comply with Phase 3 requirements.



PHASE 4

January 1, 2025

HERE'S THE LAW

On January 1, 2025, California will limit copper to 0.5% by weight in Phase 4. That same requirement becomes effective in Washington on January 1, 2032 unless an advisory committee determines that alternatives brake friction materials are available.

HERE'S WHAT WE'RE DOING
All BPI friction formulations will comply with Phase 4 requirements. BPI is actively developing the next generation of low and no-copper friction materials at its R&D center in Winchester, KY. BPI has no copper ceramic formulas in production, and all semi-metallic brake pads meet 2025 requirements.



Per SAE J866, each brake friction formulation or material that is tested and found compliant will be given an edge code. It will include an A, B or N suffix as in the example shown. **BPI-123-FF-N14**
In sequence, this code indicates: **manufacturer-friction formula-friction rating-compliance level/year of manufacture.**

The "LeafMark" indicates a manufacturer's level of environmental regulatory compliance.



A – heavy metal and asbestiform fiber concentrations are below required levels



B – copper is limited to less than 5% by weight



N – copper is limited to less than .5% by weight



© Copyright 2013, Brake Parts Inc. LLC. All rights reserved. / Raybestos trademarks used under license from Affiliated International, Inc.



Confidential



Introducing...

A Revolutionary “FIRST” In Brake Pad Technology



*Combine The Key Attributes From Ceramic And Semi-Metallic Into
One Brake Pad Formulation With BPI's **Enhanced Hybrid Technology***

The NEW Raybestos **EHT** Premium Brake Pads

- **EHT** Is The Latest Innovation In Brake Pad Technology From BPI
- **EHT** Is Our BEST Performing Friction Formulation Ever For A Wide Array Of Vehicle Applications
- **EHT** Delivers The BEST Wear, Quiet Operation And Safe Stopping Performance Needed For Each Vehicle Application
- **EHT** Meets The New Legislation For The Elimination Of Hazardous Materials And Copper Reduction Up To Year 2025



Confidential

Raybestos
The best in brakes

New Raybestos EHT Line Content Strategy



- 322 Part Numbers, 85% Coverage Based On Sales
- Concentration On Passenger Cars, SUVs And Light Duty Trucks Up To ¾ Ton
- Popular Applications And Vehicles Less Than 10 Years Old With Front & Rear Combinations
- Exclusive Quiet Steel® Noise Damping Shim
- Hardware Included In The Box For Most Vehicle Apps. (Promotes Proper Installation And Helps Prevent Comebacks)
- Competitively Priced



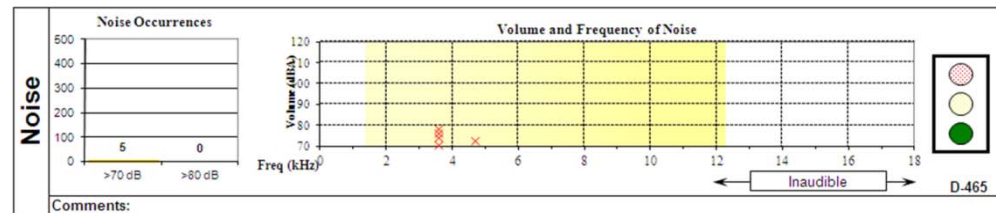
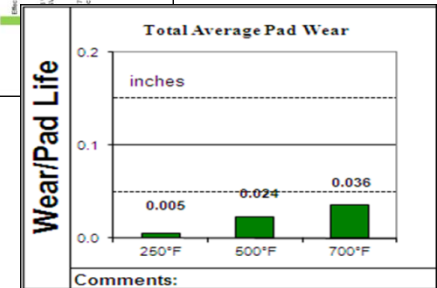
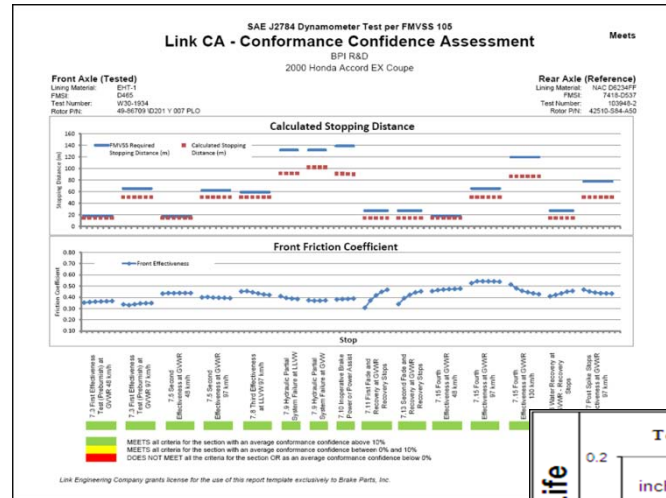
Confidential

Raybestos
The best in brakes

Multi-Faceted R&D And Testing Protocol



- Over 1 Million Miles Of Testing On The Roads: Domestic, FNP, Light Trucks, Fleets. Problematic Apps
- Extended Range Of Dyno Validation Tests On Performance, Wear And Noise Completed
- Improved Stopping Distance 20-25% With EHT Formulations
- Over 35% Improved Wear And Cost Per Mile ROI



Confidential

Raybestos
The best in brakes

Introducing A New Raybestos Brand



THE Game Changer!!

ELEMENT 3

ENHANCED HYBRID TECHNOLOGY

AUTOMOTIVE BRAKE PADS

Semi-Metallic
Ceramic
Hybrid

**Innovation
Performance
Stopping Power**



Confidential

Raybestos
The best in brakes

Element3 with EHT is:



Unprecedented... Braking Control!



ELEMENT3
ENHANCED HYBRID TECHNOLOGY
AUTOMOTIVE BRAKE PADS

Enhanced Hybrid Technology
Our premium blend of friction compounds supports optimal performance, improves pad wear and durability and increases stopping power during aggressive braking.

Tecnología híbrida mejorada
Nuestra combinación de compuestos de fricción premium mantiene un rendimiento óptimo, mejora el desgaste de la pastilla, la durabilidad y aumenta el poder de frenado durante el frenado agresivo.

Tecnologie hybride améliorée
Notre mélange de composés de friction de qualité supérieure favorise une performance optimale, améliore l'usure et la durabilité des plaquettes et accroît la puissance de freinage dans des conditions de freinage brusque.

Quiet Steel® Shim
Noise reducing shims use a damping system construction to promote quiet stopping.

Lamina Quiet Steel®
Las laminas de reducción de ruido usan un sistema de construcción amortiguado que aumenta el frenado silencioso.

Cadre Quiet Steel®
Les cales de réduction du bruit sont dotées d'un système d'amortissement qui favorise un freinage silencieux.

Brake Hardware
For a complete repair, loose brake hardware and attached electronic wear sensors are included (where applicable).

Hardware de Freno
Para una reparación completa, hardware de freno suelto y sensores electrónicos de desgaste incluidos (donde sea aplicable).

Quintessence de frenos
Pour compléter la réparation, de la quincaillerie de frein et des capteurs électroniques d'usure sont déjà installés (s'il y a lieu).

Clear Spring Coating
Cold Metal Shield
Modified Nitride Padback
Cold Metal Shield
Vibracut

www.RaybestosBrakes.com

Confidential

Raybestos
The best in brakes

Brand Positioning Umbrella



Element3
UNPRECEDENTED
BRAKING CONTROL

Brand Essence

Brand Driver

Enhanced Hybrid Technology (EHT)

Brand Attributes



Innovation

- world's first enhanced hybrid brake pad
- best attributes of ceramic and semi-metallic



Performance

- long life
- better wear and durability
- no noise
- reduced dust



Stopping Power

- maximum braking control
- total safety confidence
- improved pedal feel



Confidential

Raybestos
The best in brakes

The Game Changer...



ELEMENT 3

ENHANCED HYBRID TECHNOLOGY

AUTOMOTIVE BRAKE PADS

The World's First Enhanced Hybrid Brake Pad, Element3 Incorporates Enhanced Hybrid Technology (EHT) To Deliver The Best Attributes Of Ceramic And Semi-Metallic In One Brake Pad. A Breakthrough Innovation Providing The Ultimate Performance And Stopping Power--The Keys To Gaining Unprecedented Braking Control Of Your Vehicle.



THE ULTIMATE IN BRAKING CONTROL.

Element3™ brake pads with Enhanced Hybrid Technology (EHT™) deliver a new level of control and confidence.



Innovation

Enhanced Hybrid Technology combines the best attributes of ceramic and semi-metallic in one pad



Performance

Formulated for long life, less noise, reduced dust, and better wear and durability



Stopping Power

Engineered for maximum control in aggressive stopping situations

ELEMENT 3
ENHANCED HYBRID TECHNOLOGY
AUTOMOTIVE BRAKE PADS

Find out more at www.raybestosbrakes.com/element3



Confidential

Raybestos
The best in brakes