



NON ASBESTOS FRICTION MATERIAL

The product identified on this page is a resin bonded organic, and meets the OSHA definition of an article and is exempt from the Hazard Communication Standard, when used as intended. Some potential may exist when exposure to dust when grinding, drilling, milling, etc., occurs and all information contained herein should be adhered to.

The ingredients listed in this data sheet are contained in the product identified. Exact formulations are considered proprietary and confidential and as such precise product information will not be disclosed, other than to a health professional in accordance with the regulations, without and approved Secrecy Agreement.

Section 1. IDENTIFICATION

1.1. Product identifier

Trade name: As Used on Label and List:

Friction material

MV- UB -DB- HS - HST -FLOE -TS - KVT - RAYLOC

1.2. Relevant identified uses of the substance or mixture and uses advised against

Uses: This material is used in brake blocks and brake linings for the brake system of light vehicles and Heavy Duty Vehicles

1.3. Details of the supplier of the safety data sheet

Manufacturer: MARATHON BRAKE SYSTEM

Phone: (770) 607 1613

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Address: 125 Old Mill Rd.

Cartersville, GA 30120

U.S.A.

Emergency Contacts:

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Section 2. HAZARD(S) IDENTIFICATION:

2.2 Label elements

Signal Word(s)

WARNING

Pictogram(s)



Hazard Statements

Physical

Not classified

Health

H315: Causes skin irritation.

H319: Causes serious eye irritation.

H335: May cause respiratory irritation.

Environmental

Not classified.

Precautionary Statements

Prevention

P271: Use only outdoors or in well-ventilated area.

P280: Wear protective gloves/protective clothing/eye protection/face protection.

Response

• P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Storage

• No special instructions.

Disposal

• P501: Dispose of contents/container in accordance with regulatory requirements.

2.3 Other Hazards

PBT and vPvB assessment

None of the ingredients are considered to be either PBT or vPvB.

Section 3. COMPOSITION/INFORMATION ON INGREDIENTS.

3.1 Mix

Main Components

Chemical Name / Formulation	CAS-No. EC-No. Registration Number	Concentration (%)
Glass fibers	65997-17-3	Max 20.
Silica	7631-86-9	Max 10.
Coke	64741-79-3	Max 10
Graphite	7782-42-5	Max 10
Phenolic resin	9003-35-4	Max 20
Aluminum Oxide	11092-32-3	Max 5

Section 4. FIRST-AID MEASURES.

4.1 Emergency and first Aid Procedures

Eye Contact: Flush eyes with large amounts of water for 15 minutes with eye lids open, get medical attention.

Skin Contact: Wash affected area thoroughly with soap and water, launder contaminated clothing before reuse. If irritation persists, get medical attention.

Inhalation: Remove from exposure to fresh air, restore breathing, get medical attention.

Ingestion: Give large quantities of water and induce vomiting, get medical attention. Do not make an unconscious person vomit.

4.2 Main symptoms and effects, both acute and delayed

Health hazards (Acute and Chronic)

Some persons may be sensitive to phenol resins and develop dermatitis-type problems. Dust of fiber silica, tale, graphite, carbon black and coal can produce pneumoconiosis, silicosis, a progressive degenerative scarring of lung tissue and other lung damage*.

Irritation on the skin could be produce by Glass Fiber. Metal dusts can be irritants of the eyes and upper respiratory system. There is little evidence of chronic industrial poisoning from iron, aluminum dusts.

Osha regulated : Not

* IARC has concluded, volume 42, 1987, that there is sufficient evidence for the carcinogenic of crystalline silica to experimental animals and "Limit evidence" with respect to human.

Signs and Symptoms of Exposure

Phenol Resins - skin eruptions similar in appearance to poison ivy. Pneumoconiosis and silicosis -coughing, wheezing, shortness of breath, sputum production, impaired pulmonary function. Dusts in eye may cause irritation. Gastrointestinal disturbances from ingestion. Glass fiber may create irritation of the skin on some persons.

Steps to Be Taken in Case Material is Released or Spilled

Grinding, drilling, milling, etc. can release airborne dust. Wet sweep or vacuum, avoid generating airborne dust and avoid breathing dust. Measures as outlined in Section VIII should be followed if this occurs.

Waste Disposal method

Applicable State and Local regulations.

Other Precautions

Pre-employment screening for allergies and histories of skin sensitivities may be beneficial in determining persons sensitive to phenol and glass fiber materials.

4.3 Indication for immediate medical attention

Medical Conditions Generally Aggravated by Exposure

Existing respiratory problems may be aggravated by exposure to any dust.

Section 5. FIRE-FIGHTING MEASURES.

Flash Point (Method used)	NA
Flammable limits	NA
Extinguish media	Water (Class A, B, C)

Special Fire Fighting Procedures. Positive pressure self-contained breathing apparatus should be used, personal not having suitable respiratory protection should leave the area to prevent significant exposure to toxic combustion gases from any source.

Unusual Fire and Explosion Hazards: Powder will smolder and burn.

5.1. Extinguishing media

Suitable extinguishing media Extinguish with powder, foam, carbon dioxide or water mist. Use water or water mist to cool non-ignited stock.

Unsuitable extinguishing media. Do not use water stream, as it may spread the fire.

5.2. Special hazards arising from the substance or mixture

Not flammable, but combustible. The product decomposes when combusted and the following toxic gases can be formed: Carbon monoxide and carbon dioxide.

5.3. Advice for firefighters

Move containers from danger area if it can be done without risk. Avoid inhalation of vapour and flue gases – seek fresh air. Wear Self-Contained Breathing Apparatus (SCBA) with chemical resistant gloves.

Section 6. ACCIDENTAL RELEASE MEASURES.

Land Spill: Scoop up material and put into suitable container for disposal as a nonhazardous waste.

Water Spill: This material will sink and disperse along the bottom of waterways and ponds. It can not easily be removed after it is waterborne; however, the material is non-hazardous in water.

Air Release: This material will settle out of the air. If concentrated on land it can then be scooped up for disposal as a non-hazardous waste.

6.1. Personal precautions, protective equipment and emergency procedures

For non-emergency personnel: Stop leak if this can be done without risk. Wear gloves. Wear safety goggles if there is a risk of eye splash.

For emergency responders: In addition to the above: Normal protective clothing equivalent to EN 469 is recommended.

6.2. Environmental precautions

Avoid unnecessary release to the environment.

6.3. Methods and material for containment and cleaning up

Contain and absorb spill with sand or other absorbent material and transfer to suitable waste containers. Wipe up minor spills with a cloth.

6.4. Reference to other sections

None

Section 7. HANDLING AND STORAGE.

7.1. Precautions for safe handling

Use the product under well-ventilated conditions. Running water and eye wash equipment should be available. Wash hands before breaks, before using restroom facilities, and at the end of work.

7.2. Conditions for safe storage, including any incompatibilities

The product should be stored safely, out of reach of children and away from food, animal

Storage Temperature: Not applicable.

Storage Pressure: Not applicable.

General: No special storage or handling procedures are required for this material.

Section 8. EXPOSURE CONTROLS/PERSONAL PROTECTION.

8.1. Control parameters

Component	Exposure Limit	Type of exposure limit	Origen
Fiber Glass	1 fiber /cm ³	8 h	OSHA
Fiber Glass	1 fiber /cm ³	8 h	ACGIH
Fiber Glass	3 fiber /cm ³	8 h	NIOSH
Coal	2.5 mg / m ³	8 h	ACGIH
Barium Sulfate	5 mg / m ³	8 horas	ACGIH

8.2. Exposure controls

Work and Hygienic Practices:

Handle using good industrial hygiene and safety practices. Avoid unnecessary contact with dusts and fibers by using good local exhaust ventilation. Remove material from the skin and eyes after contact.

Remove material from clothing using vacuum equipment (never use compressed air and always wash work clothes separately from other clothing. Wipe out the washer or sink to prevent loose glass fibers from getting on other clothing).

Keep the work area clean of dusts and fibers made during fabrication by using vacuum equipment to clean up dusts and fibers (avoid sweeping or using compressed air as these techniques re-suspend dusts and fibers into the air.)

Have access to safety showers and eye wash station

Respiratory Protection (specify Type)

NIOSH approved for pneumoconiosis - fibrosis produced by dust with TLV not less than 0.05 mg/M3.

Hands Protection

Recommended. Protective Gloves

Eye Protection

Should not be needed for normal handled of product. Eye protection is good practice where dust is propelled by grinding or drilling activities

Other Protective Clothing or Equipment

Long sleeved shirts or the protective clothing may be beneficial to prevent skin contact of persons sensitive to phenol resins and glass fibers.

Section 9. PHYSICAL AND CHEMICAL PROPERTIES.

9.1. Information on basic physical and chemical properties

Physical State:	Solid
Appearance:	Solid
Colour:	Grey
Odour	Friction material characteristic odor, dust
Odour threshold	No data
pH (solution for use)	No data
pH (concentrate)	No data
Melting point/freezing point	No data
Initial boiling point and boiling range:	No data
Flash point: (open cup) ≥ 200 °C	No data
Evaporation rate	No data
Flammability (solid, gas)	No data
Upper/lower flammability limits	No data

Vapour pressure	No data
Vapour density	No data
Density	1.8 – 2.3
Relative density: 0,89 g/cm ³ (20 °C)	No data
Solubility	Insoluble in the following: Water and other disolvents.
Partition coefficient n-octanol/water	No data
Auto-ignition temperature	No data
Decomposition temperature	No data
Viscosity: (kinematic) 40 °C (104 °F)	No data
Explosive properties	No data
Oxidising properties	No data

9.2. Additional Information

None

Section 10. STABILITY AND REACTIVITY.

10.1 Stability and Chemical Reactivity

Stable

10.2 Dangerous Reactions

None

10.3 Conditions to Avoid:

None

10.5 Incompatible Materials

Oxidizing agents

10.6 Hazardous Decomposition Products:

Incomplete combustion will create carbon Monoxide and Dioxide.

10.7 Hazardous Polymerization:

Will not occur.

Section 11. TOXICOLOGICAL INFORMATION.

11.1. Information on Toxicological effects

Acute toxicity - oral: Ingestion of large quantities may cause discomfort. The product does not have to be classified. Test data are not available.

Acute toxicity - dermal: The product does not have to be classified. Test data are not available.

Acute toxicity - inhalation: The product does not have to be classified. Test data are not available.

Skin corrosion/irritation: May cause slight irritation. The product does not have to be classified. Test data are not available.

Serious eye damage/eye irritation: Temporary irritation. The product does not have to be classified. Test data are not available.

Respiratory sensitivity or skin sensitivity: The product does not have to be classified. Test data are not available.

Germ cell mutagenicity: The product does not have to be classified. Test data are not available.

Carcinogenic properties: The product does not have to be classified. Test data are not available.

Reproductive toxicity: The product does not have to be classified. Test data are not available.

Single STOT exposure: The product does not have to be classified. Test data are not available.

Repeated STOT exposure: The product does not have to be classified. Test data are not available.

Aspiration hazard: The product does not have to be classified. Test data are not available.

Other toxicological effects: The product does not have to be classified. Test data are not available.

Section 12. ECOLOGICAL INFORMATION

12.1 Toxicity

Toxicity to fish : LC 50 (96 h): 49.800 mg/l (Phenolic Resin)

Toxicity to aquatic invertebrates: EC 50 (48 h): 36.000 mg/l dafnia magna (Phenolic Resin)

Toxicity to aquatic plants : IC 50 (14 días) : 2.500 mg/l selenastrum capricornutum (Phenolic Resin)

12.2. Persistence and degradability

Biodegradability	No biodegradable
Stability in water	Stable
Stability in the soil	Very Stable

12.3. Bioaccumulative potential

Test data are not available.

12.4. Mobility in soil

Test data are not available

12.5. Results of PBT and vPvB assessment

The product does not contain any PBT or vPvB substances.

12.6. Other adverse effects

Section 13. DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Avoid discharge to drain or surface water. Contact the local authorities.

EWC code: Depends on line of business and use, for instance 13 02 08* other engine, gear and lubricating oils.

Absorbent/cloth contaminated with the product: EWC code: 15 02 03 Absorbents, filter materials, wiping cloths and protective clothing other than those mentioned in 15 02 02.

Uncleansed packaging is to be disposed of via the local waste-removal scheme. Empty, cleansed packaging should be disposed of for recycling.

Section 14. TRANSPORT INFORMATION

The products friction material of glass fiber are not considered as hazardous goods by transport regulations. They are not part of the hazardous classes listed in international regulations. They do not need special procedures under any regulations. For international transport in the USA (DOT) by land, sea, or air or to Canada (TDG), they are not shown as a risk category nor qualified by a UNO number or a packing group.

14.1. UN number Not apply

14.2. UN proper shipping name Not apply

14.3. Transport hazard class(es) Not apply

14.4. Packing group Not apply

14.5. Environmental hazards Not apply

14.6. Special precautions for user Not apply

Section 15. REGULATORY INFORMATION

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture
Special provisions:

None.

15.2. Chemical safety assessment

Chemical safety assessment has not been performed.

Section 16. OTHER INFORMATION

The information presented herein is based on available data from reliable sources and revised to the best of Marathon's knowledge. Marathon makes no warranty, express or implied, regarding the accuracy of the data or the results obtained from the use of this product. Nothing herein may be construed as recommending any practice or any product in violation of any law regulations. The user is solely responsible for determining the suitability of any material or product for a specific purpose and for adopting any appropriate safety precautions.

This Safety data Sheet (SDS) serves different purposes than and DOES NOT REPLACE OR MODIFY THE EPA APPROVED PRODUCT LABELING /attached to and accompanying the product container). This SDS provides important health, safety, and environmental information employers, employees, emergency responders and others handling large quantities of the product in activities generally other than product use, while the labeling provides that information specifically for product use in the ordinary course.