

MATERIAL SAFETY DATA SHEET

In accordance with Hazard Communication standard 29 CFR 1910.1200

Version 1.0 Issue date: 22/04/2015

Revision date: 22/04/2015

1 PRODUCT AND COMPANY IDENTIFICATION

1.1 Product identifier:

Product name: SMC404-2

Identification of the product: See section 3

Identified uses: Brake pads.

1.2 Product supplier:

Hunan Boyun Automobile Brake Materials Co., Ltd.

No. 500 Lusong Road, Yuelu District, Changsha City, Hunan Province, China

Tel: + 86-731-88122568 Fax: +86-731-88115258

Email: xufei@boyunbrake.com

1.3 Emergency telephone Number: + 86-133-9751-5322

Available 24 hours?

YES

NO

2 HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

2.1.1 GHS Classification:

GHS	
Hazard classes/Hazard categories	Hazard statement
N/A	N/A

2.1.2 Label elements

Hazard Pictograms: No hazard pictogram is used.

Signal Word(S): No signal word is used.

Hazard Statement: Not applicable.

Precautionary Statement: Not applicable.

2.1.3 HMIS Classification

Health hazard: 0

Flammability: 1

Physical hazard: 1

2.1.3 NFPA Rating

Health hazard: 0

Fire: 1

Reactivity hazard: 1

2.2 Potential health hazards

The product is not classified as harmful to human health effect.

3 COMPOSITION/INFORMATION ON INGREDIENTS

Substance/Mixture: Mixture

Ingredient(s):

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Substance Name	CAS#	EC#	% by weight	Classification
Phenolic resin	9003-35-4	500-005-2	5-9%	N/A
NBR	9003-18-3	N/A	3-8%	N/A
Steel fiber	12597-69-2	N/A	20-30%	N/A
PAN fiber	N/A	N/A	3-8%	N/A
Ceramic fiber	65997-17-3	266-046-0	8-20%	N/A
Antimony trisulfide	1345-04-6	215-713-4	3-5%	N/A
Graphite	7782-42-5	231-955-3	6-10%	N/A
Friction powder	N/A	N/A	4-10%	N/A

4 FIRST AID MEASURES

4.1 Description of first aid measures:

4.1.1 In case of inhalation:

No hazard in normal industrial use. If exposed to fumes from overheating, move to fresh air. Consult a physician if symptoms persist.

4.1.2 In case of skin contact:

It is not likely to be hazardous by skin contact, but cleansing the skin after use is advisable.

4.1.3 In case of eyes contact:

If dust/fumes get in eyes, immediately flush with large amounts of running water for several minutes. Consult a physician if necessary.

4.1.4 In case of ingestion:

Not an expected route of entry with normal use of this product. No first aid is needed.

4.2 Most important symptoms and effects, both acute and delayed

The product is not classified as harmful to human health effect.

4.3 Indication of any immediate medical attention and special treatment needed

Not available.

5 FIRE-FIGHTING MEASURES

5.1 Extinguishing media:

Suitable extinguishing media: Use fire fighting methods and materials that are appropriate for surrounding fire. Use water spray or mist, dry chemical, foam or CO₂.

Unsuitable extinguishing media: N/A.

5.2 Special hazards arising from the substance or mixture

During combustion, smoke may contain carbon dioxide, carbon monoxide.

5.3 Advice for fire-fighters:

As in any fire, wear self-contained breathing apparatus pressure-demand. MSHA/NIOSH (approved or equivalent) and full protective gear.

6 ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures:

No specific usage precautions required. Keep good personal precautions. Keep products and raw

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materials are managed and stacked orderly. Work well in cleaning procedures for products and waste. Observe good industrial hygiene practices. Use personal protective equipment recommended in Section 8.

6.2 Environmental precautions:

No special environmental precautions required.

6.3 Methods for containment and cleaning up:

If spilt (bulk), keep damp with water spray to avoid generating dust. For large spills, remove spilled material with mechanical equipment (eg. front end loader, etc).

6.4 Reference to other sections:

Refer to section 8 of the SDS.

6.5 Additional information:

Not available.

7 HANDLING AND STORAGE

7.1 Precautions for safe handling:

7.1.1 Protective measures:

No special measures necessary if stored and handled as prescribed. Handle in accordance with good industrial hygiene and safety practices. Prevent formation of dust.

7.1.2 Advice on general occupational hygiene:

Do not eat, drink or smoke when using this product. Wash hands thoroughly after handling. Remove contaminated clothing and protective equipment before entering eating areas.

7.2 Conditions for safe storage, including any incompatibilities:

Normal storage principles should be applied when storing and stacking rolls. Store at room temperature. Store in a dry place away from excessive heat and sources of ignition.

7.3 Specific end use(s):

Not available.

8 EXPOSURE CONTROL/PERSONAL PROTECTION

8.1 Control parameters:

8.1.1 Occupational exposure limits:

Antimony trisulfide(CAS# 1345-04-6): The 8-Hour TWA Exposure Value is: 0.5 mg/m³.

Graphite, natural respirable dust (CAS# 7782-42-5): The 8-Hour TWA Exposure Value is: 2.5 mg/m³.

Graphite, synthetic, respirable fraction (CAS# 7782-42-5): The 8-Hour TWA Exposure Value is: 5 mg/m³.

Graphite, synthetic, total dust (CAS# 7782-42-5): The 8-Hour TWA Exposure Value is: 10 mg/m³.

8.1.2 Additional exposure limits under the conditions of use: Not available.

8.1.3 DNEL/DMEL and PNEC-Values: Not available.

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8.2 Exposure controls

8.2.1 Appropriate engineering controls:

No special ventilation requirements for product as solid. Provide adequate ventilation to meet exposure guideline if fabrication operations generate dust or fumes.

8.2.2 Individual protection measures, such as personal protective equipment:

Eye/face protection: Generally does not require special eye protection equipment. In the process, it is recommended to wear safety glasses.

Hand protection: No special requirements under ordinary conditions of use. Maintain good industrial hygiene and always wash hands after use.

Body protection: Overalls general operations are recommended when handling this product.

Respiratory protection: Not required under normal conditions of use.

8.2.3 Environmental exposure controls:

Avoid discharge into the environment.

9 PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance:	Solid, brake pads
Colour:	Grey - black
Odour:	Odorless
Odour threshold:	No data available
pH:	No data available
Melting point/range :	> 600 °C(CAS#7782-42-5)
Boiling point/range (°C) :	No data available
Flash point (°C) :	No data available
Evaporation rate:	No data available
Flammability (solid, gas):	Not a highly flammable solid (CAS#7782-42-5)
Ignition temperature (°C) :	No data available
Upper/lower flammability/explosive limits:	No data available
Vapour pressure (20°C) :	No data available
Vapour density:	No data available
Density (25°C):	2.2136 g/cm ³ (CAS#7782-42-5)
Water solubility (g/l) at 20°C :	Slightly soluble(CAS#7782-42-5)
n-Octanol/Water (log Po/w) :	No data available
Auto-ignition temperature:	No data available
Decomposition temperature:	No data available
Viscosity, dynamic (20 °C) :	No data available
Molecular Formula:	Mixture (Not applicable)
Molecular Weight:	Mixture (Not applicable)

9.2 Physical hazards:

Not classified.

9.3 Other information:

Fat solubility(solvent– oil to be specified) etc	Not available
Bulk Density:	Not available

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Dissociation constant in water(pKa):	Not available
Oxidation-reduction Potential:	Not available
Specific Gravity(water=1.0):	No data available

10 STABILITY AND REACTIVITY

10.1 Reactivity:

Stable under recommended transport or storage conditions.

10.2 Chemical stability:

Stable under normal temperatures and pressures.

10.3 Possibility of hazardous reactions:

No dangerous reactions known.

10.4 Conditions to avoid:

Incompatible materials. No specific data available for this product. However, it is recommended that pressure and physical stress be avoided.

10.5 Incompatible materials:

Not available.

10.6 Hazardous decomposition products:

Not available.

11 TOXICOLOGICAL INFORMATION

11.1 Toxicokinetics, metabolism and distribution

Not available.

11.2 Information on toxicological effects

Acute toxicity:

Graphite (CAS#7782-42-5)

LD50 (Oral, Rat): > 2000 mg/kg bw

LD50 (Dermal, Rabbit): Not available

LC50 (Inhalation, Rat): > 2000 mg/m³ air 4h

Skin corrosion/Irritation: No data available.

Serious eye damage/irritation: No data available.

Respiratory or skin sensitization: No data available.

Germ cell mutagenicity: No data available.

Carcinogenicity: No data available.

Reproductive toxicity: No data available.

STOT- single exposure: No data available.

STOT-repeated exposure: No data available.

Aspiration hazard: No data available.

12 ECOLOGICAL INFORMATION

Toxicity:

Ceramic fiber(CAS#65997-17-3)

<i>Acute toxicity</i>	<i>Time</i>	<i>Species</i>	<i>Method</i>	<i>Evaluation</i>	<i>Remarks</i>
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LC50	> 1000 mg/L	96h	Fish	OECD 203	N/A	N/A
EC50	N/A	48h	Daphnia	OECD 202	N/A	N/A
EC50	> 1000 mg/L	72h	Algae	OECD 201	N/A	N/A

Graphite (CAS#7782-42-5)

<i>Acute toxicity</i>	<i>Time</i>	<i>Species</i>	<i>Method</i>	<i>Evaluation</i>	<i>Remarks</i>
LC50	> 100 mg/L	96h	Fish	OECD 203	N/A
EC50	> 100 mg/L	48h	Daphnia	OECD 202	N/A
EC50	> 100 mg/L	72h	Algae	OECD 201	N/A

Persistence and degradability: No data available.

Bioaccumulative potential: No data available.

Mobility in soil: No data available.

Results of PBT&vPvB assessment: No data available.

Other adverse effects: No data available.

13 DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Contact a licensed professional waste disposal service. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber. Contaminated packing must be emptied of all residues and, following appropriate cleaning, may be sent to a recycling plant. Uncleaned packaging must be disposed of in the same manner.

14. TRANSPORT INFORMATION

	<i>Land transport (ADR/RID)</i>	<i>Sea transport (IMDG)</i>	<i>Air transport (ICAO/IATA)</i>
<i>UN-Number:</i>	Not regulated	Not regulated	Not regulated
<i>UN Proper shipping name:</i>	Not regulated	Not regulated	Not regulated
<i>Transport hazard Class:</i>	Not regulated	Not regulated	Not regulated
<i>Packaging group:</i>	Not regulated	Not regulated	Not regulated
<i>Environmental hazards:</i>	No	No	No
<i>Special precautions for user:</i>	See section 2.2	See section 2.2	See section 2.2
<i>Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code</i>	Not regulated	Not regulated	Not regulated

15 REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

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US federal regulations

Drug Enforcement Administration (DEA). List 2, Essential Chemicals (21 CFR 1310.02(b) and 1310.04(f)(2) and Chemical Code Number

Not listed

Drug Enforcement Administration (DEA). List 1 & 2 Exempt Chemical Mixtures (21 CFR 1310.12(c))

Not regulated.

DEA Exempt Chemical Mixtures Code Number

Not regulated.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

CERCLA (Superfund) reportable quantity

Not regulated.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories

Immediate Hazard - No

Delayed Hazard - No

Fire Hazard - No

Pressure Hazard - No

Reactivity Hazard - No

Section 302 extremely hazardous substance

No

SARA 311/312 Hazardous chemical

No

Inventory status

Country(s) or region

Inventory name

On inventory (yes/no)*

United States & Puerto Rico

Toxic Substances Control Act (TSCA) Inventory

No

US state regulations

US - New Jersey RTK - Substances: Listed substance

Graphite (CAS 7782-42-5)

Listed.

US. Massachusetts RTK - Substance List

Graphite (CAS 7782-42-5)

US. Pennsylvania RTK - Hazardous Substances

Graphite (CAS 7782-42-5)

Listed.

US. Rhode Island RTK

Not regulated.

16 OTHER INFORMATION

16.1 Indication of changes

Revised in accordance with Hazard Communication standard 29 CFR 1910.1200.

16.2 Legal Disclaimer:

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The company shall not be held liable for any damage resulting from handling or from contact with the above product.

- End -