

BRAKE PAD ASSEMBLY FOR MOTOR VEHICLES

**1. IDENTIFICATION OF THE PRODUCT AND OF THE COMPANY/UNDERTAKING**

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Product name BRAKE PAD ASSEMBLY FOR MOTOR VEHICLES  
Product code BR2104  
Product Use Description This non-asbestos friction material is a multi-ingredient with system resins and rubber as a binding agent in a cured and vulcanized form. There is no hazard when using the production correctly.

**2. HAZARDS IDENTIFICATION**

Emergency Overview

Appearance: Solid disc brake pad and dark gray to black in color.

Potential Health Effects

**Skin contact**

May cause mild skin irritation after contacting the power constituents

**Eye contact**

May cause mild eye irritation after contacting the power constituents

**Inhalation**

Not available

**Ingestion**

Not available

**Symptoms**

No data

**Carcinogenicity**

This material is not listed as a carcinogenicity by the International Agency for Research on Cancer (IARC), the National Toxicology Program (NTP), or the Occupational Safety and Health Administration (OSHA).

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

<b>Hazardous Components</b>	<b>CAS-No.</b>	<b>Concentration</b>
Barium sulphate	7727-43-7	10-15 %
Graphite	7782-42-5	15-20 %
Aluminum Oxide	1344-28-1	0.5-1.0 %
Para-Aramid fiber	24938-64-5	1-2 %
Cashew dust	68602-89-1	3-6 %
Magnesium Oxide	1309-48-4	4-8 %

**4. FIRST- AID MEASURES****Skin**

After contact with powder constituents, wash off thoroughly with water.

**Eyes**

After contact with powder constituents, rinse with water thoroughly

**Inhalation**

Not dangerous under normal use conditions

**Ingestion**

Not available

**Additional Information**

Use NIOSH-approved respirator if exposure to dust in concentrations exceeding PEL' s or TLV' s is possible.

**5. FIRST- FIGHTING MEASURES**

**Suitable Extinguishing media**

Water spray, Foam, ABC-powder, Carbon dioxide (CO<sub>2</sub>).

**Hazardous combustion products**

The product is stable under normal ambient temperature and pressure, At temperature higher than 300 C, depending on reaction conditions in changing composition: CO, H<sub>2</sub>, phenol-aromatic and aliphatic hydro-carbonic.

**Special protective equipment and precautions for firefighters**

Fire fighters should be equipped with NIOSH - Apparatus (SCBA) and full protective clothing.

**6. ACCIDENTAL RELEASE MEASURES**

**Personal Precautions**

For personal protection see section 8.

**Environmental Precautions**

For environmental precautions see section 7.

**Methods for cleaning up**

For methods of cleaning up see section 7.

**Other information**

Comply with all applicable federal, state, and local regulations.

**7. HANDLING AND STORAGE**

**Handling**

Avoid generating dust from this product. Clean up using methods that do not generate dust such as a HEPA vacuum or wet clean up. Avoid pneumatic removal of dust.

If dust is generated, use a NIOSH approved respirator.

Minimize dust generation and accumulation, dust removing by suitable industrial vacuum - cleaner or central exhausting.

**Storage**

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Store in a dry and ventilated storeroom. Do not store together with corrosive substances.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Exposure guidelines

#### Barium sulfate (7727-43-7 )

ACGIH: 10 mg/m3 TWA

OSHA: 10 mg/m3 TWA (total dust ); 5 mg/m3 TWA (respirable fraction).

NIOSH: 10 mg/m3 TWA (total dust ); 5 mg/m3 TWA (respirable dust ).

#### Graphite (7782-42-5)

ACGIH: 2 mg/m3 TWA (respirable fraction, all forms except graphite fibers )

OSHA: 2.5mg/m3 TWA (respirable dust ).

NIOSH: 2.5mg/m3 TWA (respirable dust ).

#### Aluminum oxide (1344-28-1 )

ACGIH: 10 mg/m3 TWA (as Al, particulate matter containing no asbestos and <1% crystalline silica )

OSHA: 10 mg/m3 TWA (total dust ); 5 mg/m3 TWA (respirable fraction)

#### Magnesium Oxide (1309-48-4)

ACGIH: 10 mg/m3 TWA (fume)

OSHA: 10 mg/m3 TWA (total particulate)

### Exposure limits for Particulates not other wise regulated (Nuisance dust)

OSHA: PEL: 15mg/m3 total dust ; 5 mg/m3 respirable fraction

ACGIH: TLV: 10mg/m3 total dust ; 3 mg/m3 respirable fraction

### Eye protection

Not required under normal conditions of use.

### General Measures for Protection and Hygienic

Don' t eat, drink or smoke while working.

### Hand Protection

Wash thoroughly after handling

**Body Protection**

Wear light protecting clothes

**Respiratory Protection**

Use NIOSH-approved respirator if exposure to dust in concentrations exceeding PEL' s or TLV' s is possible

**9. PHYSICAL AND CHEMICAL PROPERTIES**

Physical State	Solid
Color	Grey
Odor	No characteristic
Density @20°C	2.9 g/cm <sup>3</sup>
Solubility	Practically insoluble in water
pH @20°C	9.5

**10. STABILITY AND REACTIVITY****Substances to be avoided**

see section 7

**Chemical Stability**

the product is stable under normal ambient temperature and pressure

**Hazardous Decomposition Products**

At temperature > 300°C depending on reaction conditions in changing composition:  
CO, H<sub>2</sub>, phenol-aromatic and aliphatic hydro-carbonic.

**Possibility of Hazardous Reactions**

No data available

**11. TOXICOLOGICAL INFORMATION****component carcinogenicity**

Aluminum oxide (1344-28-1 )

ACGIH: A4 - Not Classifiable as a Human Carcinogen

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**Para- Aramid fibrils (24938-64-5 )**

ACGIH: Monograph 68, 1997(Group 3 (not classifiable))

**Acute toxicity**

**steel fiber (7439-89-6)**

Oral LD50 Rat: 30gm/kg

**12. ECOLOGICAL INFORMATION**

**Aquatic toxicity (Acute)**

Not available

**Terrestrial Toxicity**

No hazard

**Chemical Fate Information**

Not available

**Biodegradability**

Not available

**13. DISPOSAL CONSIDERATIONS**

**Waste disposal**

Disposal should be in accordance with applicable regional national and local laws and regulations. Local regulations may be more stringent than regional or national requirements.

**Recommendation**

Recover or recycle if possible

**14. TRANSPORT INFORMATION**

**Regulation**

Non - regulated by DOT , TDGR , ICAO/IATA , and IMDG

**15. REGULATORY INFORMATION****Inventory status**

United States (TSCA): para-Aramid fibrils (24938-64-5) is not on the TSCA listing. All other ingredients are on the inventory or exempt from listing .

Canada: para-Aramid fibrils (24938-64-5) is not on the DSL listing or NDSL listing, Cashew dust (68602-89-1) is on the NDSL listing , and all other ingredients are on the DSL inventory or exempt from listing .

**Other regulations, limitations and prohibitions**

SARA Title Rules	Sections 311/312 Hazard Classes
Fire hazard	no hazard
Reactive hazard	no hazard
Release of pressure	no hazard
Acute Health Hazard	no hazard
Chronic Health Hazard	no hazard

**16. OTHER INFORMATION**

Information presented herein has been compiled from information provided to us by our suppliers and other sources considered to be dependable and is accurate and reliable to the best of our knowledge and belief but is not guaranteed to be so. Nothing herein is to be construed as recommending any practice or the use of any product in violation of any patent or in violation of any law or regulation. It is the users' responsibility to determine the suitability of any material for a specific purpose and to adopt such safety precautions as may be necessary. We make no warranty as to the results to be obtained in using any material and, since conditions are not under the control, we must necessarily disclaim all liability with respect to the use of any material supplied by us.

This MSDS has been prepared by BORUI's Technical Engineering Dept(0086-546-8955239)